

**TURCK**  
*works*

Industrial  
Automation

**PROXIMITY  
SENSORS**



## Proximity Sensors



### weldguard®

- Resists high heat, weld slag build-up and abrasion
- Up to 500 times more durable than other sensors
- Embeddable or non-embeddable
- Available in weld-field immune **Uprox®** and standard ferrite core versions
- **armorguard™** protection for sensors in impact-prone locations



### Capacitive Sensors

- Non-contact sensing of metallic and non-metallic materials
- Ideal for level detection
- Available in DC, AC and IS models
- Solid-state output, high switching frequency, no moving parts

## Inductive Sensors

- **amphibian™** washdown versions
- High and low temperature
- Harsh duty (IP 67, 68, 69K)
- Die protection
- Ring and slot versions



### Uprox+

- Detect all metal types extended sensing ranges
- Inherently weld-field immune
- Up to 350% more range than conventional sensors
- Wide -30°C (-22°F) to +85°C (+185°F) temperature range

### picoprox®

- Tiny 3, 4, 5, 6.5 and 8 mm diameter stainless steel housings
- Extended sensing range up to 4 mm



### Q-pak®

- Compact size fits in confined areas where other sensors can't
- Superior 3 mm (0.01") to 50 mm (0.20") range
- Models from 5 mm to 80 mm size with embeddable versions.

## Intrinsically Safe Systems



### excom® Remote I/O for Hazardous Areas

- Eliminate need for conventional IS barriers
- Modular backplane bus with integrated voltage supply for 18, 9 or 5 modules
- Modules can be exchanged "hot swapped" during operation

### multimodul® IS Barriers

- Complete line features isolated design with no need for dedicated ground
- Hazardous circuits are galvanically isolated from non-hazardous circuits
- DIN-rail or Eurocard styles
- FM, CSA and CENELEC certified



### NAMUR Sensors and Junctions

- Class I, Class II, Class III, Division 1 and Division 2 FM approved
- Full line of inductive, capacitive and magnet operated inductive sensors
- Numerous sizes and styles are available
- Eliminates multiple cable runs for wiring IS applications



### ZENER Barriers

- FM, CSA, BASEEFA/ CENELEC certified
- Shunt-diode intrinsic safety barriers feature narrow 7 mm width
- Meet worldwide standards for use in classified atmospheres

# Measurement, Monitoring and Position Sensing



## Kübler by TURCK Encoders

- Incremental and absolute, shaft and hollow-shaft models
- Single and multi-turn absolute models in shaft and hollow-shaft styles
- Temperature and aging compensation



## Linear Analog Sensors

- Voltage and or current output proportional to target distance from sensor
- Available in limit switch, barrel or **Q-pak**® rectangular styles
- Remote amplifiers available with adjustable switching points



## Rotational Controls

- Speed meters & monitors (overspeed/underspeed detector)
- Analog output and direction discriminators
- DIN 19 234 and intrinsically-safe NAMUR sensor input

## Valve Position Sensors

- Dual inductive solid state sensors
- Monitor valve position on rotary actuators



## Relays

- Unique design provides higher reliability and longer relay life
- Integral mounting bracket and pin numbering on the socket for faster wiring

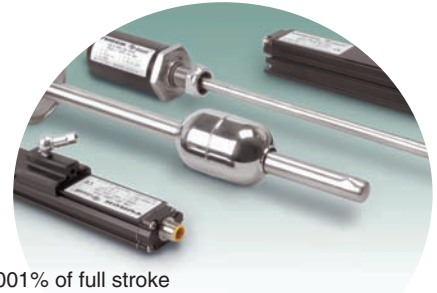


## Pressure Sensors

- Bar or PSI measuring units and peak pressure memory function
- 13 pressure ranges from Vacuum to 600 bar
- Standard hysteresis mode for over/under pressure

## EZ-Track™ Linear Displacement Transducers

- Magnetostrictive non-contact sensing
- Absolute position sensing
- +/-0.01% accuracy and repeatability of up to +/-0.001% of full stroke



## Cylinder Position Sensors

- **permaprox**®
- provides a precise sensing point anywhere along the stroke
- Ultra-miniature 5 mm BIM-INT fits into grooves of new-style cylinders
- Intrinsically safe models

## Flow Monitors

- Insertion and in-line styles, self-contained or remote amplifier
- Omnidirectional stainless steel, plastic or Teflon® housings



## Ultrasonic Sensors

- Epoxy-potted units with adjustable sensing ranges
- Accurate over long sensing ranges for all types of objects
- Digital and analog outputs are available with sensing ranges of 762 mm to 4572 mm (3" to 18")
- High noise immunity



# RFID, Network Devices and Interfaces



## BL ident Radio Frequency Identification Systems (RFID)

- Simple and reliable connection to ensure fault-free data communication
- Easily integrated into existing systems
- High temperature TAGs 210°C (410°F)

## Network Devices and Interfaces



- Intelligent bus stations with built-in bus electronics interface with existing devices and provide diagnostics, short-circuit protection and automatic baud rate detection

# Connectivity Solutions

## 3 to 5-pin Standard Cordsets

- Industry standard cordsets and connectors
- *eurofast*<sup>®</sup>, *picofast*<sup>®</sup>, *minifast*<sup>®</sup>, *microfast*<sup>®</sup>, *multifast*<sup>®</sup>, *pentafast*<sup>™</sup> and *V\*fast*<sup>®</sup>



## Custom Solutions

- Jacket options for any environment
- Diameters from 4.4 mm to 13.2 mm
- From 16 to 26 AWG, 2 to 19 conductors, braided or foil shields

## OEM Connectors

- Components for buses, networks, panels, circuit boards, enclosures and machines in *eurofast*, *picofast*, *minifast*, *microfast*, *multifast*, *pentafast*, and *V\*fast* style connectors
- Front mount, rear mount, feed-through with solder cups, leads, or PCB pins in straight or right angle styles



## Rugged Junction Boxes

- *multibox*<sup>®</sup> junction boxes and splitters enable wiring consolidation from sensors and other devices
- Die-cast aluminum or industrial hardened plastic housings
- Choice of cable or a quick-disconnect *multifast*<sup>®</sup> homerun cable

## *flexlife-20*<sup>®</sup> Continuously Flexible Cable

- Performance to 20 million continuous flexing cycles
- Ideal for power and signals to factory automation equipment
- Available with molded cordsets using industry standard connections
- UL recognized and CSA approved, with operating temperatures up to 105°C (221°F) and cold flexibility to -40°C (40°F)



## *multifast*<sup>®</sup> 5-28 Conductor Solutions



- Solid metal connector shell and fully molded connectors
- Receptacles in standard or long thread lengths
- NAMUR cordsets and extensions in blue PVC and PLTC rated

## *reelfast*<sup>®</sup> Bulk Cable

- Spooled cable in 30 m, 100 m or 200 m lengths in self-feeding packages
- 170+ different PUR, PVC and rubber cables to choose from PLTC, high-flex and more
- 2-day drop-ship delivery available



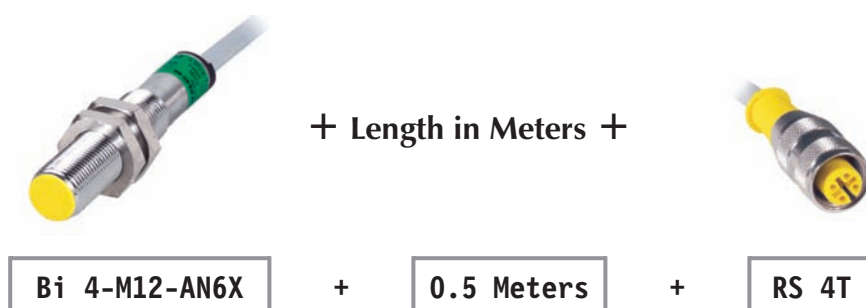
## ***Innovative Sensor and Connector Solutions***

**TURCK** is the market leader in providing innovative sensor and connectivity solutions for industrial automation. Combine **TURCK's** high quality, high performance sensors with our ability to quickly mold multiple styles of cordsets give our customers an infinite selection of unique connectorized sensing solutions.

All **TURCK** sensors with potted-in cable are available with customized cable length and connector options. The broadest selection of connector options provides custom sensing solutions for the most diverse industrial applications.

Because it is **TURCK**, you can expect the same fast, flexible support. Even with custom configurations, YOUR sensor can often be made within several days. Best of all, minimum quantity for YOUR sensor; ONE!

Part numbers are developed through your **TURCK** representative or application support.  
 In general, the formula below illustrates how to configure a custom, connectorized **TURCK** sensor.



**New Part Number = Bi 4-M12-AN6X-0.5-RS 4T**

### ***Sensors with Connector Examples:***



Bi 5-MT18-AN6X

-

0.2M

-

RS 4T

Cable Sensor

Cable Length  
(meters)

**euromast**<sup>®</sup>  
Male  
Connector



Bi 2-EG08K-AP6X

-

0.5M

-

RS 4T

Cable Sensor

Cable Length  
(meters)

**euromast**  
Male  
Connector

## Innovative Sensor and Connector Solutions

### Sensors with Connector Examples:



**Bi 2-Q8SE-AN6X**

Cable Sensor

**0.3M**

Cable Length  
(meters)

**PSG 3**

*picofast*<sup>®</sup>  
Male  
Connector



**Bi 8-M18-AN6X**

Cable Sensor

**0.1M**

Cable Length  
(meters)

**RSM 40**

*minifast*<sup>®</sup>  
Male  
Connector



**Bi10U-EM30-AP6X**

Cable Sensor

**0.2M**

Cable Length  
(meters)

**RS 4T**

*eurofast*  
Male  
Connector



**Bi 2-Q10S-AN6X**

Cable Sensor

**0.4M**

Cable Length  
(meters)

**PSG 3**

*picofast*  
Male  
Connector



**Bi 5-GT18-ADZ30X2**

Cable Sensor

**0.2M**

Cable Length  
(meters)

**SB 3T**

*microfast*<sup>®</sup>  
Male  
Connector

**PLUG & PLAY.** *Work* What's New at TURCK ..

### Stainless Steel Front Face Sensors

- Available in 12, 18 and 30 mm barrels
- Single piece machined 316 stainless steel barrel
- Senses all metals including stainless steel
- High impact tolerance

Details on pages D55 (12 mm), D91 (18 mm) and D149 (30 mm)



### Q12 Uprox+ Sensor

- Offers a full 5 mm sensing range when flush mounted
- Compact design facilitates mounting possibilities
- Available with quick disconnect or potted-in cable

Details on page B5



# PLUG & PLAY. *work*

## High Temp Inductive Proximity Sensor

- Operates up to 250°C (482°F)
- Separate sensing head and amplifier to facilitate quick change out
- Low replacement cost compared to single piece units
- Aluminum encased Teflon cables

Details on page J21





# SIGN UP FOR TURCK'S E-NEWSLETTER TODAY!



The image shows a preview of the TURCK TIMES e-newsletter. At the top, it features the slogan "...Sense It!...Connect It!...Bus It!" and the TURCK logo with the tagline "Industrial Automation". Below this, the title "TURCK TIMES" is displayed along with the website "www.turck.com". The main content area is titled "WHAT'S NEW" and features an article about "TURCK's NEW Proximity Sensors for High Temperatures". The article includes technical details, a comparison table, and a photograph of a sensor. To the right, there is a section for "Next issue..." with a preview of the February 2007 issue, listing topics like "Alternative methods for SCADA" and "Connectivity questions to ask before your next install". Below that, "NEW PRODUCTS" are listed, including intelligent temperature sensors, IP 67 power supply, and low-cost I/O management. At the bottom, a "TIPS FROM TURCK" section discusses retractile cables. The entire newsletter preview is set against a background of technical drawings and diagrams.

**...Sense It!...Connect It!...Bus It!**

**TURCK**  
*works*

Industrial  
Automation

**TURCK TIMES** [www.turck.com](http://www.turck.com)

Issue 4 | Feb. 2007

**WHAT'S NEW**

**TURCK's NEW Proximity Sensors for High Temperatures**

TURCK's high temperature proximity sensors operate at up to 250°C (482°F), and are perfect for drying and curing ovens found in automotive painting systems.



Sensors of this type can be replaced as often as once per year in the auto industry. TURCK sensors are unique in that the more vulnerable sensing head is separate from the electronic amplifier. This means only the sensing head, not the electronic amplifier, needs replacement upon failure, resulting in a huge cost savings. Take, for example, 10 sensors in an installation:

Competitor's high temp. sensor	= \$1,000 x 10 sensors per year	= \$10,000
TURCK's high temp. sensor	= \$899* x 10 sensors per year	= \$8,990
<b>Savings incurred by using TURCK in the first year</b>		<b>= \$1,010</b>

\* \$242 for TURCK's electronic module + \$657 for the sensing head

Competitor's high temp. sensor year 2	= \$10,000
TURCK's high temp. sensor year 2	= \$6,570 (will only need new sensing heads)
<b>Saving incurred in year 2</b>	<b>= \$3,430</b>

Using TURCK sensors for two years essentially results in 6 free sensing heads! Your third year purchasing TURCK sensors is essentially cut in half.

**TIPS FROM TURCK**

Retractile cables function for more than just robotic applications. A great place to use retractile cables is on conveyors. When the conveyor needs to be moved for maintenance and other reasons, cables connected to the assembly must be disconnected and reconnected later on.

The much easier option: retractile cables that simply extend and retract with the conveyor.



**Next issue...**

*Alternative methods for SCADA.*

*Connectivity questions to ask before your next install.*

**NEW PRODUCTS**

- \* Intelligent temperature sensors
- \* IP 67 power supply
- \* Low-cost I/O management

## Register to receive the TURCK TIMES...

Our interactive e-newsletter full of exclusive insights, tips and tools to help make your manufacturing processes run smoothly. The TURCK Times is your source for news about TURCK products and industry updates.

Registering is easy and only requires your e-mail address. You are not obligated for future contact or purchase, and you may opt-in or out of the e-mail list at any time! We value your time and privacy, and will not share your information with another party.

Sign up today at [www.turck.com/elist](http://www.turck.com/elist)!

TURCK's USA website is your most complete and up-to-date source for product documentation, CAD files and more. Search results produce downloadable documentation or request for quote (RFQ). Additional product information or CAD files are easily requested and promptly filled.

Visit our site for new product releases, approvals, white papers, application support and more.

**Access to all TURCK catalogs, press releases, white papers and tutorials**

**Search for products by part number, ID number or key word**

**Complete category listing of TURCK products**

**Access to CAD, wiring and pinout diagrams**

**Download or e-mail files, request for quote**

**Contact a TURCK representative**

**Option to e-mail pages**

The screenshots show the TURCK USA website interface. The top screenshot displays the main navigation menu with categories like Connectivity, Encoders, and Interfaces. A search bar is visible on the left. The bottom screenshot shows a 'Documentation Search Results' page with a table of search results. The table includes columns for Part Number, ID Number, Catalog Page, Manual, Date, CAD, Configs, Wiring, Download, and Request. A 'Key:' section at the bottom provides options for downloading files or requesting quotes.

Part Number	ID Number	Catalog Page	Manual	Date	CAD	Configs	Wiring	Download	Request
8110-030-ANEX 10M	T4647397								
8110-030-ANEX 15M	T4647398								
8110-030-ANEX 20M	T4647399								
8110-030-ANEX 30M	T4647400								
8110-030-ANEX 7M	T4647397								
8110-030-ANEX 7M	T4647398								
8110-030-ANEX 7M	T4647399								
8110-030-ANEX 7M	T4647400								

[www.turck.com](http://www.turck.com)

### Introduction to Sensor Products

#### In this catalog ...

Nearly 600 pages of our TURCK's innovative line of proximity sensors for industrial automation. The sensors are detailed in the following chapters:

- Specifications
- Rectangular Inductive Sensors
- Inductive Barrel Sensors
- Capacitive Sensors
- Analog Sensors
- Cylinder Position Sensors
- Ultrasonic Sensors
- Specialty Sensors
- Standard Sensors Cordsets
- Sensor Accessories
- Index

#### Structure of this catalog

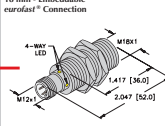
All sections have the same basic structure. A selection table introduces each section which is classified by the following:

1. Principle and Style (Ex. Inductive Barrel Sensors)
2. Sensor Size and Shape - Smallest to Largest
3. Connection Style
  - Quick Disconnect
  - Potted-In Cable
  - Terminal Chamber
4. Color Coding
  - Green = DC Output
  - Red = AC Output
  - Blue = NAMUR

In addition to the selection guide, each chapter contains technical information giving specific details on the particular product group. Each product is described on two facing pages, the structure is shown below in reduced size.

All Parts in Housing Style      Special Features      Output

Housing Style




Housing Style	Part Number	ID Number	Features	Operating Range (mm)	Output	
18 mm - Embeddable eurofast® Connection	B1 5-M18-AD4X-H1141	T4414500		5	2-Wire DC	
	B1 7-M18-AD4X-H1141	T4414541	Extended Range	7		
	B1 5-EM18-AN6X-H1141	T4614601		5	3-Wire DC NPN	
	B1 5-M18-AN6X-H1141	T4614600		5		
	B1 5U-EM18-AN6X-H1141	M1635350	Uprox	5		
	B1 5U-M18-AN6X-H1141	M1635350	Uprox	5		
	B1 7-EM18D-AN6X-H1141	M4614534	Washdown	7		
	B1 8-M18-AN6X-H1141	T4615100	Extended Range	8		
	B1 5-EM18-AP6X-H1141	T4614501		5		3-Wire DC PNP
	B1 5-M18-AP6X-H1141	T4614500		5		
B1 5U-EM18-AP6X-H1141	M1635340	Uprox	5			
B1 5U-M18-AP6X-H1141	M1635340	Uprox	5			
18 mm - Embeddable eurofast® Connection	B1 7-EM18D-AP6X-H1141	M4614531	Washdown	7	3-Wire DC PNP	
	B1 8-EM18-AP6X-H1141	T4615000	Ext. Range	8		
B1 8-M18-AP6X-H1141	T4615094	Ext. Range	8	4-Wire DC NPN		
B1 8-EM18H-AP6X-H1141/S1389	T4615099	Weldguard	8			
18 mm - Embeddable eurofast® Connection	B1 5-EM18-VN4X-H1141	T4614699	Comp. Output	5	4-Wire DC NPN	
	B1 5-M18-VN4X-H1141	T1571800	Comp. Output	5		
	B1 8-M18-VN4X-H1141	T4590702	Ext. Range	8		
18 mm - Embeddable eurofast® Connection	B1 5-M18-VP4X-H1141	T1561800	Comp. Output	5	4-Wire DC PNP	
	B1 8-M18-VP4X-H1141	T4590701	Ext. Range	8		
18 mm - Embeddable eurofast® Connection	B1 5-M18-Y1X-H1141	M4015200		5	2-Wire NAMUR	

For detailed sensor specifications see Section A.  
Normally Closed versions available upon request, consult factory.

C87      TURCK Inc. 3000 Campus Drive Minneapolis, MN 55441 Application Support: 1-800-544-PROX Fax: (763) 553-0708 www.turck.com

General Specifications

Industrial Automation



Voltage	Switching Power (VA)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Power LED	Output LED	Mounting Method	Wiring Diagram #
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4.2T+*	1
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4.2T+*	1
10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE RK 4T+*	3
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4T+*	2
	2500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE RK 4T+*	3
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE RK 4T+*	2
	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE RK 4.4Z+*/S90	2
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4T+*	2
10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE RKV 4T+*	3
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4T+*	3
	2500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE RKV 4T+*	3
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE RKV 4T+*	3
	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE RK 4.4Z+*/S90	3
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4T+*	3
10-65 VDC	1000	≤200	-25 to +70	IP 67	SS	SF	N/A	YE RKV 4T+*	3
	1000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE RKV 4T+*	3
10-65 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE RKV 4.4T+*	4
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4.4T+*	4
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4.4T+*	5
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4.4T+*	5
5-30 VDC	1000	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	YE RK 4.2T1+*	6

\* Length in meters.

Recommended Cordsets      Wiring Diagrams

For material descriptions see page A34.

TURCK Inc. 3000 Campus Drive Minneapolis, MN 55441 Application Support: 1-800-544-PROX Fax: (763) 553-0708 www.turck.com      C88

<b><i>What's New</i></b>	Section A	<b>Intro</b>
<b><i>Uprox+ Sensors</i></b>	Section B Selection Guide - B1	<b><i>Uprox+</i></b>
<b><i>Rectangular Inductive Sensors</i></b> Single Range Sensing for all Metals General Information, Part Number Key and Product Selection	Section C Selection Guide - C1-C2	<b>Rectangular</b>
<b><i>Inductive Barrel Sensors</i></b> Single Range Sensing for all Materials General Information, Part Number Key and Product Selection	Section D Selection Guide - D1-D4	<b>Barrels</b>
<b><i>Capacitive Sensors</i></b> All Material Sensing General Information, Part Number Key and Product Selection	Section E Selection Guide - E1-E2	<b>Capacitive</b>
<b><i>Analog Sensors</i></b> Linear Analog and Frequency Output General Information, Part Number Key and Product Selection	Section F Selection Guide - F1-F2	<b>Analog</b>
<b><i>Cylinder Position Sensors</i></b> Inductive Magnet and Magneto Resistive Sensing General Information, Part Number Key and Product Selection	Section G Selection Guide - G1-G2	<b>Cylinder</b>
<b><i>Ultrasonic Sensors</i></b> All Material Sensing, Long Range General Information, Part Number Key and Product Selection	Section H Selection Guide - H1-H2	<b>Ultrasonic</b>
<b><i>Specialty Sensors</i></b> Valve Position, Rotational Speed, Ring, Slot General Information, Part Number Key and Product Selection	Section J Selection Guide - J1-J2	<b>Specialty</b>
<b><i>Cordsets and Accessories</i></b> Mating Cordsets, Sensor Accessories Mounting Brackets, Teflon Caps and other Accessories	Section K and L Selection Guide - K1, L1-L2	<b>Cord - Acc</b>
<b><i>Specifications</i></b> Introduction, Glossary, Wiring Instructions, Compliances, Enclosure Ratings and Materials	Section M Selection Guide - M1	<b>Specs</b>
<b><i>Index</i></b> Conversions, Indexes, Warranty Terms and International Service and Consulting	Section N	<b>Index</b>

**Sensor Quick Selection Guide**

**Uprox+ Sensors**



<u>Body Style</u>	<u>Page</u>
Barrel . . . . .	B5 - B15
Rectangular . . . . .	B7, B17

**Inductive Sensors**



<u>Rectangular Style</u>	<u>Page</u>
5.5 mm - 12 mm . . . . .	C13 - C25
14 mm - 34 mm. . . . .	C27 - C39
40 mm - 130 mm . . . . .	C41 - C65



<u>Barrel Style</u>	<u>Page</u>
3-8 mm . . . . .	D13 - D47
11 mm . . . . .	D49
12 mm . . . . .	D51 - D87
18 mm . . . . .	D91 - D145
20 mm . . . . .	D147
30 mm . . . . .	D165 - D183
40 mm . . . . .	D185
47 mm . . . . .	D189

For Detailed Selection Guides, go to the front of each section.

Capacitive Sensors



<u>Body Style</u>	<u>Page</u>
Rectangular Style . . . . .	E19 - E27
Barrel Style . . . . .	E29 - E47

Analog Sensors



<u>Body Style</u>	<u>Page</u>
Rectangular Style . . . . .	F7 - F13
Barrel Style . . . . .	F15 - F21
Ring Style . . . . .	F21 - F25

**Cylinder Sensors**



<u>Groove Mount or Clamp-On Style</u>	<u>Page</u>
INR. . . . .	G23
INT. . . . .	G25 - G29
<u>Clamp-On or Strap-On Style</u>	<u>Page</u>
IKE/IKT. . . . .	G35 - G37
IKM . . . . .	G39
<u>Strap-On Style</u>	<u>Page</u>
PST. . . . .	G31
PSM . . . . .	G31
KST. . . . .	G33
<u>Clamp-On Style</u>	<u>Page</u>
QST . . . . .	G33
AKT . . . . .	G35
A23. . . . .	G39 - G41
NST . . . . .	G43
<u>Barrel Style</u>	<u>Page</u>
8 mm Barrel . . . . .	G45
12 mm Barrel . . . . .	G47
<u>Cylinder Rotatable Style</u>	<u>Page</u>
CRS . . . . .	G49 - G51
<u>Body Style</u>	<u>Page</u>
Worldclamp . . . . .	G53 - G55
Powerclamp . . . . .	G57

**Ultrasonic Sensors**



	<u>Page</u>
Barrel Style. . . . .	H9 - H13
Rectangular Style . . . . .	H15

For Detailed Selection Guides, go to the front of each section.

Specialty Sensors



	<u>Page</u>
Valve Style . . . . .	J5 - J15
Rectangular Style . . . . .	J21
Rotational Speed Style . . . . .	J23 - J25
Ring Style . . . . .	J27 - J31
Slot Style . . . . .	J33 - J35

Cordsets



<u>Cordset Style</u>	<u>Page</u>
M12x1 <i>eurofast</i> ® . . . . .	K7 - K14
M8x1 <i>picofast</i> ® . . . . .	K15 - K18
7/8-16 UN <i>minifast</i> ® . . . . .	K19 - K22
1/2-20 UNF <i>microfast</i> ® . . . . .	K23 - K26

Sensor Accessories



Brackets . . . . .	L7 - L22
Tank Wells . . . . .	L21 - L23



# Inductive Sensors

## Uprox+ Sensor Selection Guide



### Barrel Style Sensors

Housing	6.5 mm	12 mm	8 mm	12 mm	18 mm	30 mm
Sensing Range	6 mm	5 mm	6 mm	4 - 10 mm	8 - 15 mm	15 - 30 mm
Pages	B5	B5	B7	B9	B11	B15



### Potted-In Cable Style Sensors

Housing	8 mm	12 mm	18 mm	30 mm
Sensing Range	6 mm	4 - 10 mm	8 - 15 mm	15 - 30 mm
Pages	B7	B9	B13	B15



### Rectangular Style Sensors

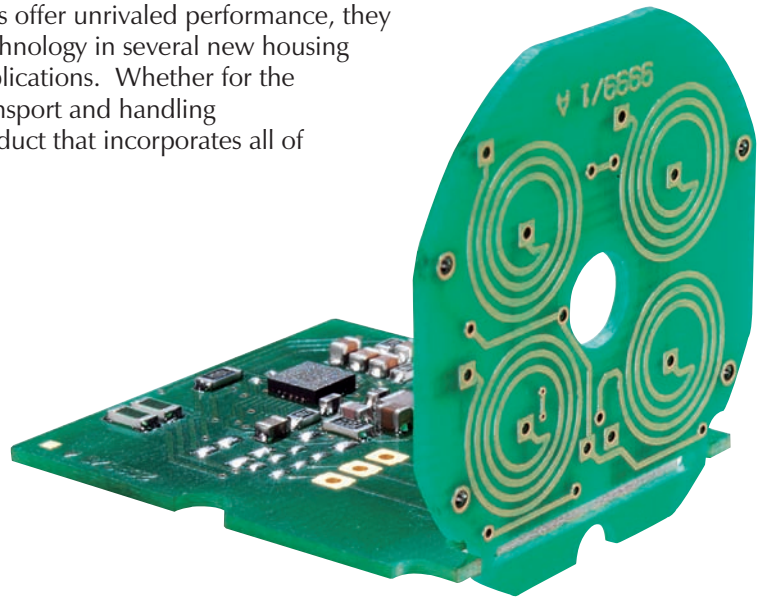
Housing	Tube Sensing	CK40	CP40	Q80
Sensing Range	20 mm	20 - 50 mm	20 - 50 mm	50 - 70 mm
Pages	B7	B17	B17	B17

## Factor 1 is Redefined!

**Uprox+**® sensors utilize the proven performance of our original **Uprox**® sensors to detect materials such as steel, iron, copper, aluminum, stainless steel and brass without a reduction in the rated sensing distance of the sensor. However, the **Uprox+** sensors incorporate a variety of design enhancements that will set new standards for metal detection.

**TURCK** has developed a newly patented multicoil system for the **Uprox+** product line that replaces the conventional wound coil system used in the previous generation of sensors. This results in extraordinary sensing distances (up to 250 percent higher than conventional ferrite core inductive sensors) in a Factor 1 sensor. In addition to the extended sensing ranges, all **Uprox+** sensors have an environmental rating of IP 68.

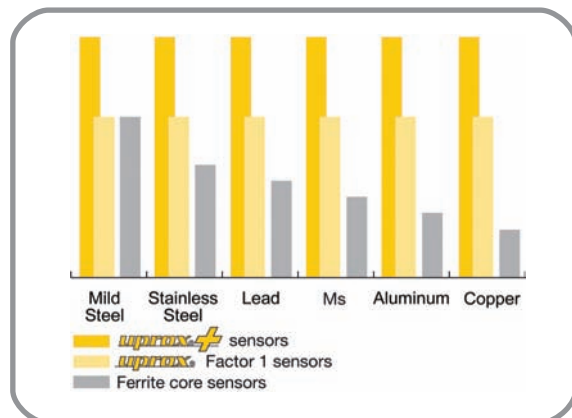
Not only does the new generation of **Uprox+** sensors offer unrivaled performance, they also give **TURCK** the flexibility to incorporate this technology in several new housing designs that solves a number of unique customer applications. Whether for the automotive industry, machine engineering, or for transport and handling applications, our new **Uprox+** sensors provide a product that incorporates all of your sensing requirements.



Uprox+

## Factor 1 Redefined

Based on their novel coil concept, **Uprox+** sensors offer unrivaled performance. The core component of the new sensor generation is a unique, patented multicoil system, which replaces the conventional wound coil. The extraordinarily high switching distances and the unique housing concept make **Uprox+** by far the best sensor available.



## Inductive Sensors

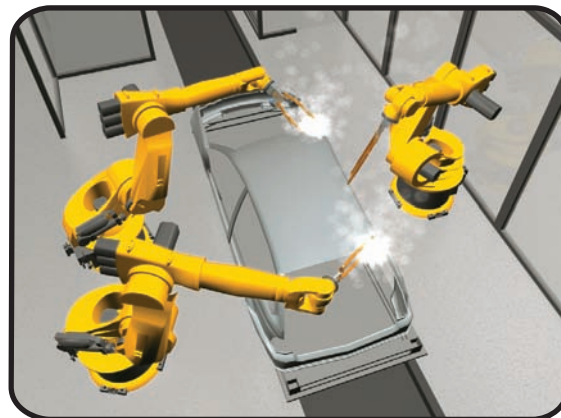
### Stands up to Harsh Industrial Environments

#### Partial Embedding of Non-Flush Mounted Sensors

**Uprox+**® sensors feature an integrated predamping protection function to reduce the metal free mounting area in an application. This allows traditionally flush mounted barrel style sensors to be recessed in metal by half a turn for increased mechanical protection. It also allows non-embeddable barrel style sensors to be embedded in metal up to the outer edge of the thread, and non-flush rectangular style sensors to be embedded in metal on all four sides with only a slight reduction in sensing distance.

#### Immunity to High Levels of EMI

All **Uprox+** proximity sensors adhere to the present EN50082-2 standard, yet they also exceed the strict provisions required by EN61000-4-6, which will be an integral part of the industry standard from 2006 on. This standard protects against conducted interference from frequency converters and other sources that produce high levels of EMI.



#### Weld Field Immune

Since the **Uprox+** line does not incorporate a ferrite core, it is not susceptible to strong magnetic fields that occur in resistance welding processes, making it inherently weld field immune.

#### Wash Down Applications

**TURCK** has also expanded this new **Uprox+** line to include a number of sensors designed specifically for washdown environments. These sensors have a newly designed front cap, and a polypropylene connector insert to protect the electronics from water ingress. This added protection provides the sensor with an environmental rating of IP 69K, in addition to the standard IP 68 due to the enhanced pressure rating associated with the **Uprox+** sensors. The stainless steel barrel and Liquid Crystal Polymer (LCP) front cap also make these sensors ideal for extremely wet environments found in carwash, breweries, and other high pressure washdown applications.



## New Innovative Designs

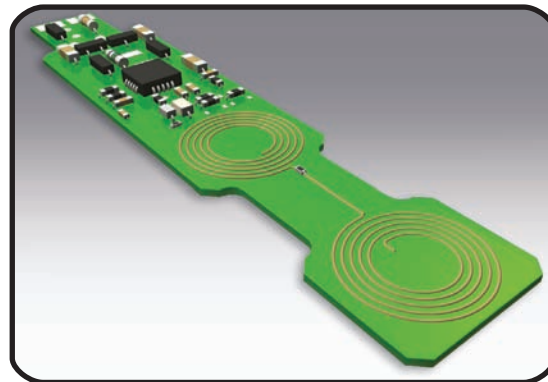
### Flexible Coil Technology Offers Unlimited Possibilities

With the arrival of the patented multicoil design we are able to offer our customers the freedom to incorporate non-traditional housing styles to fit a variety of applications. One example is the new Ni20U-TS12-A(N/P)6X2-V1131. This small rectangular style housing allows our customers to utilize this sensor in small part detection applications without the need to use traditional ring style proximity sensors. Other potential housing designs include a flat sensor for use in conveyor type applications. Unique applications are no longer a problem with the new **Uprox+**® multicoil concept.

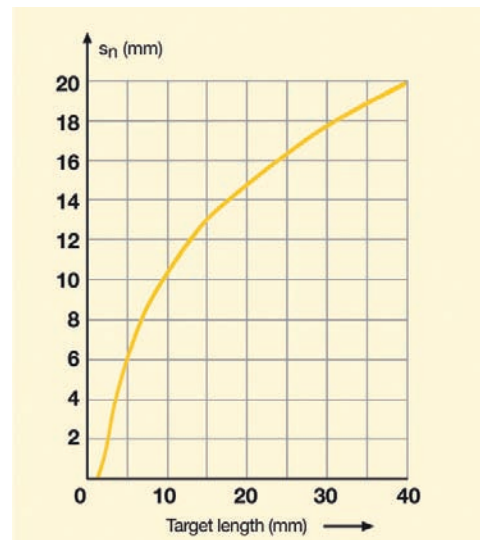
Uprox+

### Patented Coil Technology

Since the design of the new **Uprox+** sensors does not include a ferrite core and a wound coil, you can profit from a maximum degree of flexibility in the housing design - without any mechanical restrictions.



TS12: Sensing Distance vs. Target Size



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>6.5 mm - Nonembeddable, Miniature Smooth, picofast® Quick Disconnect</b> 	Ni 6U-EH6.5-AP6X-V1131	S4631510	Uprox+	6	3-Wire DC PNP
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 5U-Q12-AN6X2	M1635523	Uprox+	5	3-Wire DC NPN
	Bi 5U-Q12-AP6X2	M1635522	Uprox+	5	3-Wire DC PNP
<b>12 mm - Embeddable, eurofast® Connection</b> 	Bi 5U-Q12-AN6X2-H1141	M1635527	Uprox+	5	3-Wire DC NPN
	Bi 5U-Q12-AP6X2-H1141	M1635526	Uprox+	5	3-Wire DC PNP
<b>12 mm - Embeddable, picofast Connection</b> 	Bi 5U-Q12-AN6X2-V1131	M1635525	Uprox+	5	3-Wire DC NPN
	Bi 5U-Q12-AP6X2-V1131	M1635524	Uprox+	5	3-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤150	0 to +70	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 68	PA 12	LCP	GN	YE	2M/PVC	2	<p><b>Diagram 2</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 68	PA 12	LCP	GN	YE	2M/PVC	3	<p><b>Diagram 3</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 68	PA 12	LCP	GN	YE	RK 4T-*	4	<p><b>Diagram 4</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 68	PA 12	LCP	GN	YE	RK 4T-*	5	<p><b>Diagram 5</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 68	PA 12	LCP	GN	YE	PKG 3Z-*	6	<p><b>Diagram 6</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 68	PA 12	LCP	GN	YE	PKG 3Z-*	1	

Uprox+

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Nonembeddable, Miniature Threaded, Potted-In Cable</b> 	Ni 6U-EG08-AN6X	S4635803	<i>Uprox+</i>	6	3-Wire DC NPN
	Ni 6U-EG08-AP6X	S4635800	<i>Uprox+</i>	6	3-Wire DC PNP
<b>8 mm - Nonembeddable, Miniature Threaded, eurofast® Quick Disconnect</b> 	Ni 6U-EG08-AN6X-H1341	S4635805	<i>Uprox+</i>	6	3-Wire DC NPN
	Ni 6U-EG08-AP6X-H1341	S4635802	<i>Uprox+</i>	6	3-Wire DC PNP
<b>8 mm - Nonembeddable, Miniature Threaded, picofast® Quick Disconnect</b> 	Ni 6U-EG08-AN6X-V1131	S4635804	<i>Uprox+</i>	6	3-Wire DC NPN
	Ni 6U-EG08-AP6X-V1131	S4635801	<i>Uprox+</i>	6	3-Wire DC PNP
<b>Tube Sensing Nonembeddable, picofast Connection</b> 	Ni20U-TS12-AN6X2-V1131	M1625822	<i>Uprox+</i>	20	3-Wire DC NPN
	Ni20U-TS12-AP6X2-V1131	M1646640	<i>Uprox+</i>	20	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤150	0 to +70	IP 68	SS	LCP	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤150	0 to +70	IP 68	SS	LCP	N/A	YE	2M/PUR	2	<p><b>Diagram 2</b></p>
10-30 VDC	1000	≤150	0 to +70	IP 68	SS	LCP	N/A	YE	RK 4T-*	5	<p><b>Diagram 3</b></p>
10-30 VDC	1000	≤150	0 to +70	IP 68	SS	LCP	N/A	YE	RK 4T-*	6	<p><b>Diagram 4</b></p>
10-30 VDC	1000	≤150	0 to +70	IP 68	SS	LCP	N/A	YE	PKG 3M-*	3	<p><b>Diagram 5</b></p>
10-30 VDC	1000	≤150	0 to +70	IP 68	SS	LCP	N/A	YE	PKG 3M-*	4	<p><b>Diagram 6</b></p>
10-30 VDC	8	≤200	-25 to +75	IP 68	PBT	PBT	GN	YE	PKG 3M-*	3	<p><b>Diagram 7</b></p>
10-30 VDC	8	≤200	-25 to +75	IP 68	PBT	PBT	GN	YE	PKG 3M-*	4	<p><b>Diagram 8</b></p>

Uprox+

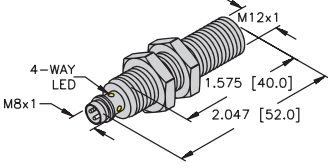
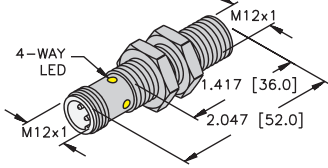
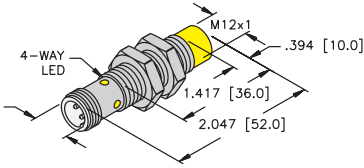
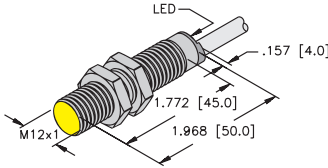
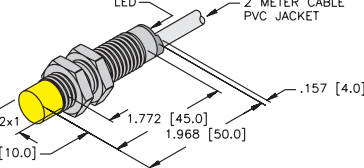
\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>12 mm - Embeddable, picofast® Connection</b> 	Bi 4U-M12-AP6X-V1131	M1634780	<i>Uprox+</i>	4	3-Wire DC PNP	
<b>12 mm - Embeddable, eurofast® Connection</b> 	Bi 4U-EM12-AN6X-H1141	M1634827	<i>Uprox+</i> , Stainless Steel	4	3-Wire DC NPN	
	Bi 4U-EM12WD-AN6X-H1141	M1634841	<i>Uprox+</i> , Washdown	4		
	Bi 4U-M12-AN6X-H1141	M1634824	<i>Uprox+</i>	4		
	Bi 4U-MT12-AN6X-H1141	M1634829	<i>Uprox+</i> , Teflon	4		
	3-Wire DC PNP	Bi 4U-EM12-AP6X-H1141	M1634807	<i>Uprox+</i> , Stainless Steel	4	
		Bi 4U-EM12WD-AP6X-H1141	M1634812	<i>Uprox+</i> , Washdown	4	
		Bi 4U-M12-AP6X-H1141	M1634804	<i>Uprox+</i>	4	
		Bi 4U-MT12-AP6X-H1141	M1634809	<i>Uprox+</i> , Teflon	4	
		Bi 4U-MT12E-AP6X2-H1141*	M1644742	<i>Uprox+</i> , Dual LED's	4	
		<b>12 mm - Nonembeddable, eurofast Connection</b> 	Ni 10U-EM12-AN6X-H1141	M1634828	<i>Uprox+</i> , Stainless Steel	10
Ni 10U-EM12WD-AN6X-H1141	M1634837		<i>Uprox+</i> , Washdown	10		
Ni 10U-M12-AN6X-H1141	M1634826		<i>Uprox+</i>	10		
Ni 10U-MT12-AN6X-H1141	M1634830		<i>Uprox+</i> , Teflon	10		
3-Wire DC PNP	Ni 10U-EM12-AP6X-H1141		M1634808	<i>Uprox+</i> , Stainless Steel	10	
	Ni 10U-EM12WD-AP6X-H1141		M1634814	<i>Uprox+</i> , Washdown	10	
	Ni 10U-M12-AP6X-H1141		M1634806	<i>Uprox+</i>	10	
	Ni 10U-MT12-AP6X-H1141		M1634810	<i>Uprox+</i> , Teflon	10	
	Ni 10U-MT12E-AP6X2-H1141*		M1634844	<i>Uprox+</i> , Dual LED's	10	
	<b>12 mm - Embeddable, Potted-in Cable</b> 		Bi 4U-EM12WD-AN6X	M1634842	<i>Uprox+</i> , Washdown	4
Bi 4U-M12-AN6X		M1634823	<i>Uprox+</i>	4		
3-Wire DC PNP		Bi 4U-EM12WD-AP6X	M1634811	<i>Uprox+</i> , Washdown	4	
		Bi 4U-M12-AP6X	M1634803	<i>Uprox+</i>	4	
<b>12 mm - Nonembeddable, Potted-in Cable</b> 		Ni 10U-EM12WD-AN6X	M1634838	<i>Uprox+</i> , Washdown	10	3-Wire DC NPN
		Ni 10U-M12-AN6X	M1634825	<i>Uprox+</i>	10	
	3-Wire DC PNP	Ni 10U-EM12WD-AP6X	M1634813	<i>Uprox+</i> , Washdown	10	
		Ni 10U-M12-AP6X	M1634805	<i>Uprox+</i>	10	

\* MT12E = extended barrel length 62mm.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	PKG 3Z-*	5	<p><b>Diagram 1</b></p>
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	<p><b>Diagram 2</b></p>
	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	2000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	<p><b>Diagram 3</b></p>
	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 68	TC	LCP	GN	YE	RK 4.4T-*	2	
10-30 VDC	1000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	<p><b>Diagram 4</b></p>
	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	1000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	1000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	<p><b>Diagram 5</b></p>
	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-30 to +85	IP 68	TC	LCP	GN	YE	RK 4T-*	2	
10-30 VDC	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	
10-30 VDC	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
10-30 VDC	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	

Uprox+

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>18 mm - Embeddable, eurofast® Connection</b> 	Bi 8U-EM18-AN6X-H1141	M1644738	<i>Uprox+</i> , Stainless steel	8	3-Wire DC NPN	
	Bi 8U-EM18WD-AN6X-H1141	M1634839	<i>Uprox+</i> , Washdown	8		
	Bi 8U-M18-AN6X-H1141	M1644737	<i>Uprox+</i>	8		
	Bi 8U-MT18-AN6X-H1141	M1644739	<i>Uprox+</i> , Teflon	8		
		Bi 8U-EM18-AP6X-H1141	M1644734	<i>Uprox+</i> , Stainless steel	8	3-Wire DC PNP
		Bi 8U-EM18WD-AP6X-H1141	M1634816	<i>Uprox+</i> , Washdown	8	
		Bi 8U-M18-AP6X-H1141	M1644731	<i>Uprox+</i>	8	
		Bi 8U-MT18-AP6X-H1141	M1644730	<i>Uprox+</i> , Teflon	8	
		Bi 8U-MT18M-AP6X2-H1141*	M1644740	<i>Uprox+</i> , Dual LED's	8	
		Ni 15U-EM18-AN6X-H1141	M1635336	<i>Uprox+</i> , Stainless steel	15	
Ni 15U-EM18WD-AN6X-H1141	M1634835	<i>Uprox+</i> , Washdown	15			
Ni 15U-M18-AN6X-H1141	M1635335	<i>Uprox+</i>	15			
Ni 15U-MT18-AN6X-H1141	M1635337	<i>Uprox+</i> , Teflon	15			
<b>18 mm - Embeddable, eurofast Connection</b> 	Ni 15U-EM18-AP6X-H1141	M1635332	<i>Uprox+</i> , Stainless steel	15	3-Wire DC PNP	
	Ni 15U-EM18WD-AP6X-H1141	M1634818	<i>Uprox+</i> , Washdown	15		
	Ni 15U-M18-AP6X-H1141	M1635331	<i>Uprox+</i>	15		
	Ni 15U-MT18-AP6X-H1141	M1635333	<i>Uprox+</i> , Teflon	15		
	Ni 15U-MT18M-AP6X2-H1141*	M1635338	<i>Uprox+</i> , Dual LED's	15		
	Bi 8U-EM18E-AP6X-H1141	M1634865	<i>Uprox+</i> , Stainless steel	8	3-Wire DC PNP	
	Bi 8U-M18M-VP44X-H1141	M1634877	<i>Uprox+</i>	8	4-Wire DC PNP	

\* MT18M = Barrel length 62 mm.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1500	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Diagram 1</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Diagram 2</b> </div> <div style="border: 1px solid black; padding: 5px;"> <b>Diagram 3</b> </div>
	1500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	1500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	1500	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	1500	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	
	1500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	1500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	1500	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	1500	≤200	-25 to +75	IP 68	TC	LCP	GN	YE	RK 4T-*	2	
10-30 VDC	1000	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	
	1000	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	1000	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	1000	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	1000	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-25 to +75	IP 68	TC	LCP	GN	YE	RK 4T-*	2	
10-30 VDC	1000	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	
10-55 VDC	1500	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4,4T-*	3	

Uprox+

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, Potted-in Cable</b> 	Bi 8U-EM18WD-AN6X	M1634840	<i>Uprox+</i> , Washdown	8	3-Wire DC NPN
	Bi 8U-M18-AN6X	M1644736	<i>Uprox+</i>	8	
	Bi 8U-MT18-AN6X	M1634907	<i>Uprox+</i>	8	
	Bi 8U-EM18WD-AP6X	M1634815	<i>Uprox+</i> , Washdown	8	3-Wire DC PNP
	Bi 8U-M18-AP6X	M1644733	<i>Uprox+</i>	8	
	Bi 8U-MT18-AP6X	M1644754	<i>Uprox+</i>	8	
<b>18 mm - Nonembeddable, Potted-in Cable</b> 	Ni 15U-EM18WD-AN6X	M1634836	<i>Uprox+</i> , Washdown	15	3-Wire DC NPN
	Ni 15U-M18-AN6X	M1635334	<i>Uprox+</i>	15	
	Ni 15U-EM18WD-AP6X	M1634817	<i>Uprox+</i> , Washdown	15	3-Wire DC PNP
	Ni 15U-M18-AP6X	M1635330	<i>Uprox+</i>	15	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Diagram 3</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Diagram 4</b> </div>
	1500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
	1500	≤200					LCP	N/A	YE	3	
10-30 VDC	1500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	
	1500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	
	1500	≤200				LCP	N/A	YE	4		
10-30 VDC	1000	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	
	1000	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
10-30 VDC	1000	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	
	1000	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	

Uprox+

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, eurofast® Connection</b> 	Bi 15U-EM30-AN6X-H1141	M1636737	Uprox+, Stainless steel	15	3-Wire DC NPN
	Bi 15U-EM30WD-AN6X-H1141	M1634834	Uprox+, Washdown	15	
	Bi 15U-M30-AN6X-H1141	M1636736	Uprox+	15	
	Bi 15U-MT30-AN6X-H1141	M1636738	Uprox+, Teflon	15	
	Bi 15U-EM30-AP6X-H1141	M1636733	Uprox+, Stainless steel	15	3-Wire DC PNP
	Bi 15U-EM30WD-AP6X-H1141	M1634820	Uprox+, Washdown	15	
	Bi 15U-M30-AP6X-H1141	M1636732	Uprox+	15	
	Bi 15U-MT30-AP6X-H1141	M1636734	Uprox+, Teflon	15	
	Bi 15U-MT30-AP6X2-H1141	M1644741	Uprox+, Dual LED's	15	
	<b>30 mm - Nonembeddable, eurofast Connection</b> 	Ni 30U-EM30-AN6X-H1141	M1644636	Uprox+, Stainless steel	30
Ni 30U-EM30WD-AN6X-H1141		M1634832	Uprox+, Washdown	30	
Ni 30U-M30-AN6X-H1141		M1644635	Uprox+	30	
Ni 30U-MT30-AN6X-H1141		M1644637	Uprox+, Teflon	30	
Ni 30U-EM30-AP6X-H1141		M1646632	Uprox+, Stainless steel	30	3-Wire DC PNP
Ni 30U-EM30WD-AP6X-H1141		M1634822	Uprox+, Washdown	30	
Ni 30U-M30-AP6X-H1141		M1646631	Uprox+	30	
Ni 30U-MT30-AP6X-H1141		M1646633	Uprox+, Teflon	30	
Ni 30U-MT30-AP6X2-H1141		M1646635	Uprox+, Dual LED's	30	
<b>30 mm - Embeddable, Potted-in Cable</b> 	Bi 15U-EM30WD-AN6X	M1634843	Uprox+, Washdown	15	3-Wire DC NPN
	Bi 15U-M30-AN6X	M1636735	Uprox+	15	
	Bi 15U-EM30WD-AP6X	M1634819	Uprox+, Washdown	15	3-Wire DC PNP
	Bi 15U-EM30-AP6X	M1636741	Uprox+	15	
	Bi 15U-M30-AP6X	M1636731	Uprox+	15	
<b>30 mm - Nonembeddable, Potted-in Cable</b> 	Ni 30U-EM30WD-AN6X	M1634833	Uprox+, Washdown	30	3-Wire DC NPN
	Ni 30U-M30-AN6X	M1644634	Uprox+	30	
	Ni 30U-EM30WD-AP6X	M1634821	Uprox+, Washdown	30	3-Wire DC PNP
	Ni 30U-M30-AP6X	M1646630	Uprox+	30	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	750	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
	750	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	750	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	750	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	750	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
	750	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	750	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	750	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	750	≤200	-25 to +75	IP 68	TC	LCP	GN	YE	RK 4T-*	2	
10-30 VDC	500	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	<p><b>Diagram 3</b></p>
	500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	500	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	500	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	<p><b>Diagram 4</b></p>
	500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	500	≤200	-25 to +75	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	500	≤200	-25 to +75	IP 68	TC	LCP	GN	YE	RK 4T-*	2	
10-30 VDC	750	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	
	750	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
10-30 VDC	750	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	
	750	≤200	-25 to +75	IP 68	SS	LCP	N/A	YE	2M/PUR	4	
	750	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	
10-30 VDC	500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	
	500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
10-30 VDC	500	≤200	0 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	
	500	≤200	-25 to +75	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	

Uprox+

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>CK40 - Embeddable/Nonembeddable, eurofast® Connection</b> 	Bi20U-CK40-AN6X2-H1141 W/BS 2.1	M1627231	<i>Uprox+</i>	20	3-Wire DC NPN
	Bi30U-CK40-AN6X2-H1141 W/BS 4	M1625820	<i>Uprox+</i>	30	
	Ni50U-CK40-AN6X2-H1141 W/BS 4	M1625823	<i>Uprox+</i>	50	
	Bi20U-CK40-AP6X2-H1141 W/BS 2.1	M1627288	<i>Uprox+</i>	20	3-Wire DC PNP
	Bi30U-CK40-AP6X2-H1141 W/BS 4	M1625829	<i>Uprox+</i>	30	
	Ni50U-CK40-AP6X2-H1141 W/BS 4	M1625837	<i>Uprox+</i>	50	
Ni50U-CK40-VN4X2-H1141 W/BS 4	M1625806	<i>Uprox+/Comp. Outputs</i>	50	4-Wire DC NPN	
Ni50U-CK40-VP4X2-H1141 W/BS 4	M1538302	<i>Uprox+/Comp. Outputs</i>	50	4-Wire DC PNP	
<b>CP40 - Embeddable/Nonembeddable, Terminal Chamber</b> 	Bi20U-CP40-AN6X2	M1625828	<i>Uprox+</i>	20	3-Wire DC NPN
	Bi20U-CP40-AP6X2	M1625826	<i>Uprox+</i>	20	3-Wire DC PNP
	Bi30U-CP40-AN6X2	M1625827	<i>Uprox+</i>	30	3-Wire DC NPN
	Bi30U-CP40-AP6X2	M1625825	<i>Uprox+</i>	30	3-Wire DC PNP
	Ni50U-CP40-AN6X2	M1625824	<i>Uprox+</i>	50	3-Wire DC NPN
	Ni50U-CP40-AP6X2	M1625842	<i>Uprox+</i>	50	3-Wire DC PNP
<b>Q80 - Embeddable/Nonembeddable, eurofast® Connection</b> 	Bi50U-Q80-AN6X2-H1141	M1608944	<i>Uprox+</i>	50	3-Wire DC NPN
	Ni70U-Q80-VN4X2-H1141	M1625821	<i>Uprox+/Comp. Outputs</i>	70	4-Wire DC NPN
	Bi50U-Q80-AP6X2-H1141	M1608940	<i>Uprox+</i>	50	3-Wire DC PNP
	Ni70U-Q80-VP4X2-H1141	M1625833	<i>Uprox+/Comp. Outputs</i>	70	4-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	250	≤200	-20 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	1	<b>Diagram 1</b> 
	250	≤200	-10 to +60	IP 68	PBT	PBT	GN	YE	RK 4T-*	1	
	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	1	
10-30 VDC	250	≤200	-20 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	2	<b>Diagram 2</b> 
	250	≤200	-10 to +60	IP 68	PBT	PBT	GN	YE	RK 4T-*	2	
	250	≤200	-20 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	2	
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4.4T-*	3	<b>Diagram 3</b> 
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4.4T-*	4	
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	N/A	5	<b>Diagram 4</b> 
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	N/A	6	
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	N/A	5	<b>Diagram 5</b> 
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	N/A	6	
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	1	<b>Diagram 6</b> 
10-65 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4.4T-*	3	
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	2	<b>Diagram 6</b> 
10-65 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4.4T-*	4	

Uprox+

\* Length in meters.

For material descriptions see page M22.

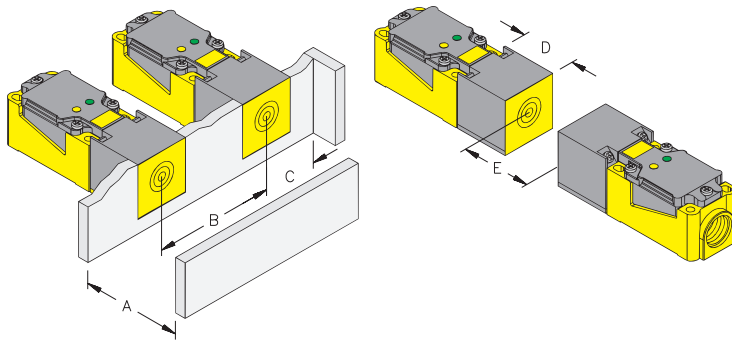
# Inductive Sensors

## Mounting

TURCK inductive proximity sensors are manufactured with a shielded coil, designated by “Bi” in the part number, and a nonshielded coil, designated by “Ni” in the part number. Embeddable (shielded) units may be safely flush-mounted in metal. Nonembeddable (nonshielded) units require a metal free area around the sensing face. Because of possible interference of the electromagnetic fields generated by the oscillators, minimum spacing is required between adjacent or opposing sensors.

It is good engineering practice to mount sensors horizontally or with the sensing face looking down. Avoid sensors that look up wherever possible, especially if metal filings and chips are present.

## Embeddable Mounting Characteristics Rectangular Housings

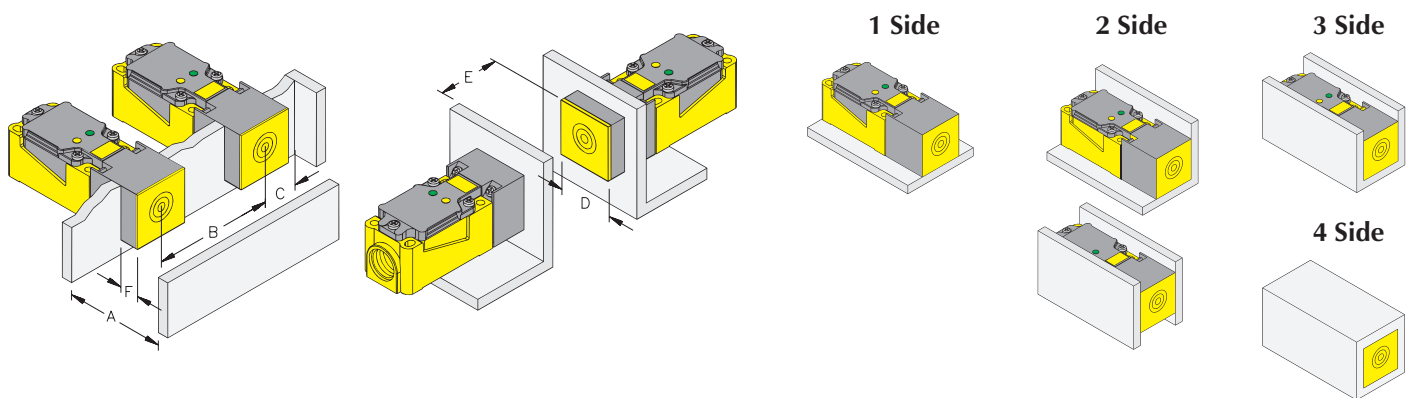


### Flush Mountable - CK40 and CP40

Housing	Sensor	A	B	C	D	E
CP40/CK40	Bi20U	60.00	80.00	40.00	40.00	120.00
CP40/CK40	Bi30U	90.00	80.00	40.00	40.00	180.00

Dimensions are in mm.

## Nonembeddable Mounting Characteristics Rectangular Housings



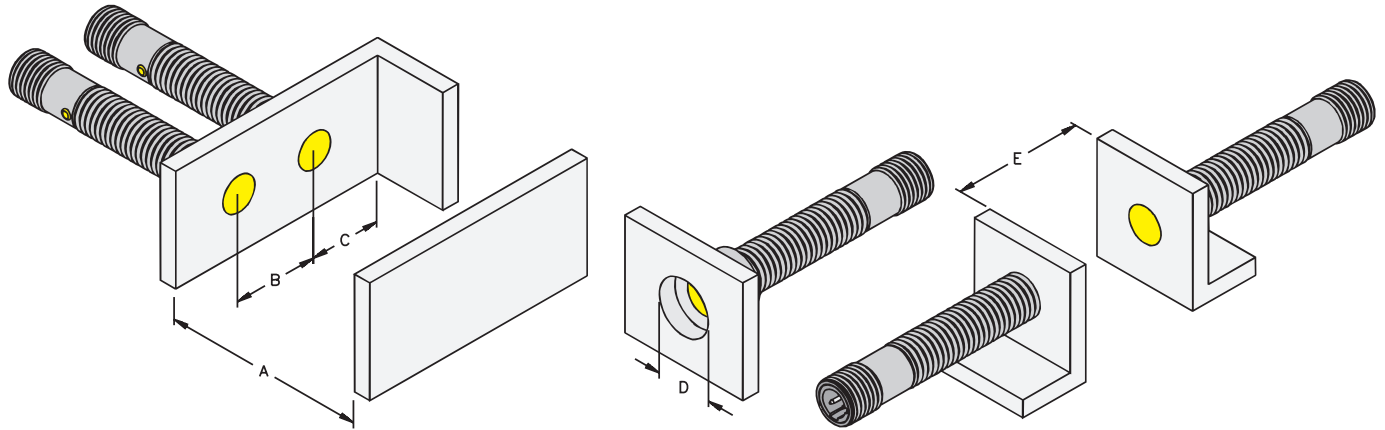
### Non-Flush Mountable - CK40 and CP40

Housing	Sensor	A	B	C	D	E	F	1 Side	2 Side	3 Side	4 Side
CP/CK40	Ni50U	150.00	240.00	60.00	40.00	300.00	40.00	Sr=35mm*	Sr=25mm*	Sr=20mm*	Sr=17mm*

Dimensions are in mm.

\* Only DC versions

**Embeddable Mounting Characteristics**

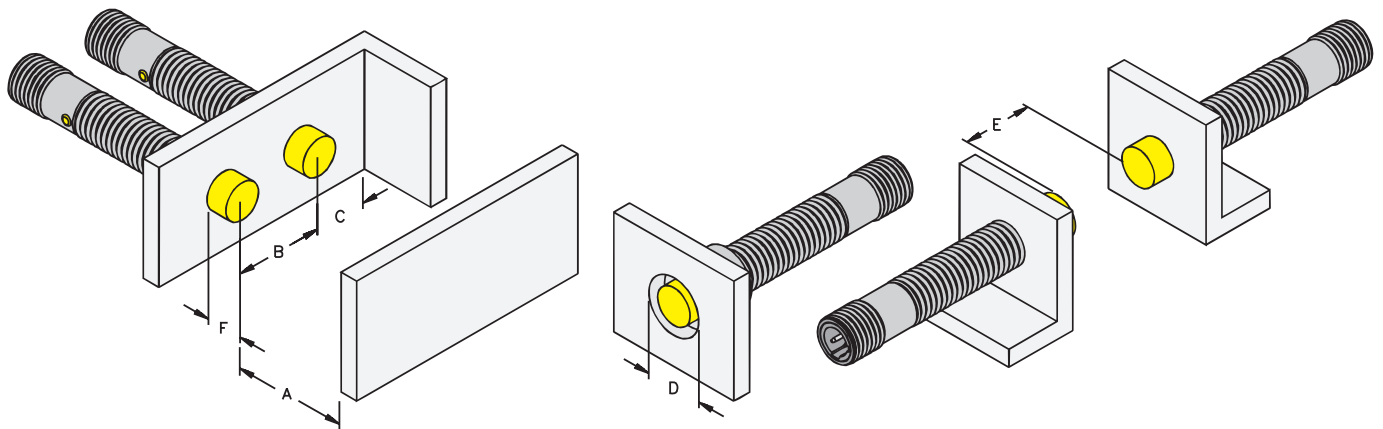


Uprox+

**Embeddable, Barrel Sensors**

Part Number	A	B	C	D	E
Bi4U (12 mm)	12	24	18	36	24
Bi8U (18 mm)	24	36	27	54	48
Bi15U (30 mm)	45	60	45	90	90

Dimensions are in mm.



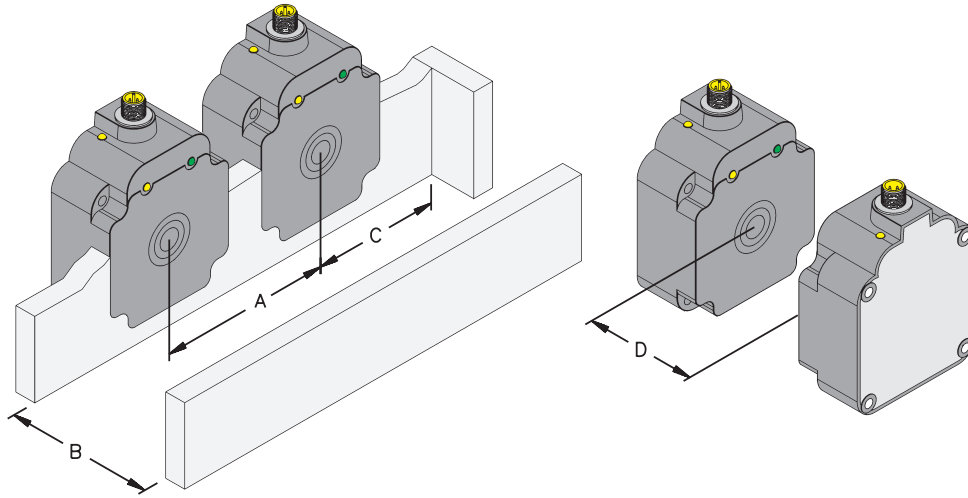
**Nonembeddable, Barrel Sensors**

Part Number	A	B	C	D	E	F
Ni10U (12 mm)	30	36	18	36	60	16
Ni15U (18 mm)	45	54	27	54	90	20
Ni30U (30 mm)	90	90	45	90	180	25

Dimensions are in mm.

# Inductive Sensors

## Embeddable Mounting Characteristics

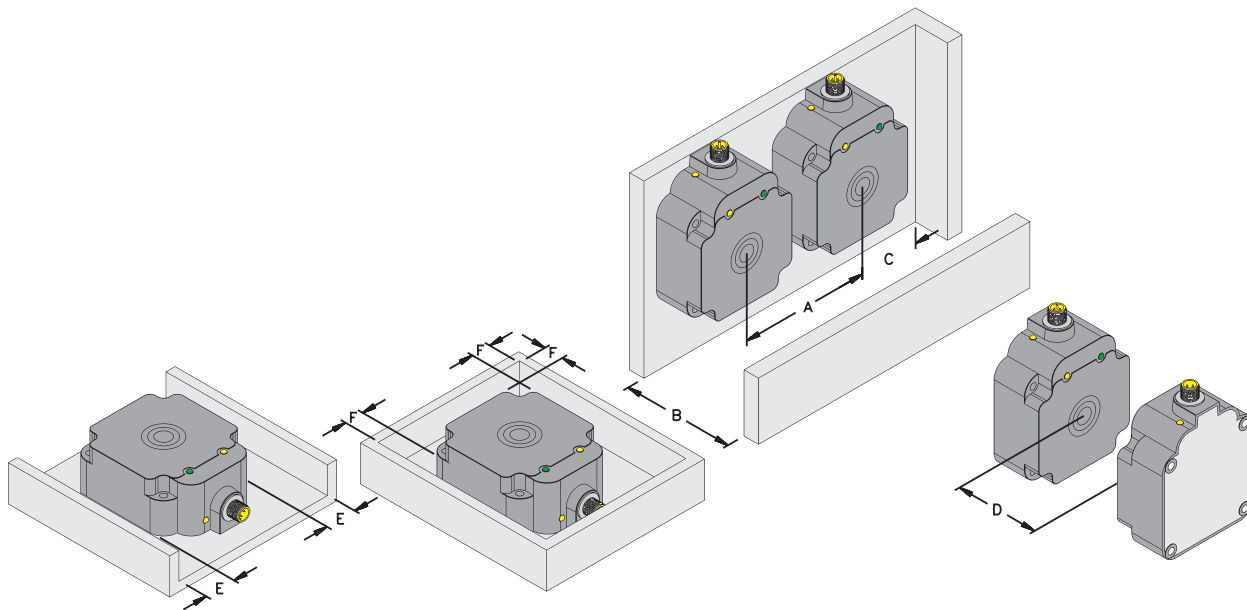


### Embeddable, Square Sensors

Part Number	A	B	C	D
Bi50U-Q80 (80 mm)	180	150	80	300

Dimensions are in mm.

## Nonembeddable Mounting Characteristics



### Nonembeddable, Square Sensors

Part Number	A	B	C	D	E	F
Ni70U-Q80 (80 mm)	180	210	80	420	70	140

Dimensions are in mm.

**Notes:**



**Uprox+**

# Inductive Sensors

## Rectangular Sensor Selection Guide



Rectangular Style Sensors							
Housing	5.5 mm	6 mm	6.5 mm	8 mm	8 mm	9.5 mm	10 mm
Sensing Range	2 - 3 mm	3 mm	1 - 2 mm	5 - 8 mm	3 mm	2 mm	2 mm
Pages	C13	C13	C13	C15 - C19	C19	C21	C23



Rectangular Style Sensors							
Housing	26 mm	30 mm	34 mm	40 mm	40 mm	40 mm	4080 mm
Sensing Range	10 mm	15 mm	10 mm	20 mm	15 - 35 mm	15 - 40 mm	20 mm
Pages	C37	C37	C39	C41	C47 - C49	C51 - C53	C45

Rectangular Sensor Selection Guide



Rectangular Style Sensors							
Housing	10 mm	11 mm	12 mm	14 mm	18 mm	20 mm	25 mm
Sensing Range	8 mm	2 - 4 mm	2 - 4 mm	10 - 20 mm	5 mm	15 - 25 mm	10 mm
Pages	C21	C23	C25	C27	C29	C31 - C33	C35

Rectangular



Rectangular Style Sensors						
Housing	40130 mm	50 mm	80 mm	80 mm	90 mm	130 mm
Sensing Range	20 mm	20 mm	40 - 75 mm	50 - 70 mm	60 - 100 mm	30 mm
Pages	C45	C55	C57	C59	C61 - C63	C65



# Inductive Sensors

## Inductive Sensor Part Number Key

**B** **i** **15** **U** - **CK** **40** - **A** **N** **6** **X2** **Wiring Options** **Special Option Codes**

### Mounting

- B = Embeddable
- N = Nonembeddable

### Principle of Operation

- i = Inductive

### Rated Operating Distance (mm)

### Sensing Characteristics

- F = Front Sensing on Q26 and Q34 Sensor
- NF = Nonferrous Only
- S = Side Sensing on Q26 Sensor
- T = Side Sensing on Q34 Sensor
- U = *Uprox*<sup>®</sup> Sensor

### Housing Material Modifier

- E = Stainless Steel

### Housing Style

#### Rectangular

- Q = Metal or Plastic, Various Rectangular Styles

#### Limit Switch

- CA = *stubby*<sup>®</sup>, Short Aluminum Housing, Connector
- CK = *stubby*<sup>®</sup>, Short Plastic Housing, Connector
- CP = *combiprox*<sup>®</sup>, Plastic Housing, Terminal Chamber Base with Removable Sensor

### Number of LEDs

Examples:

- Blank = No LEDs
- X2 = 2 LEDs

### Voltage Range

#### AC/DC: (No SCP)\*\*

- 3 = 20-250 VAC, 10-300 VDC
- 14 = 20-132 VAC, 10-140 VDC
- 31 = 20-250 VAC, 10-300 VDC, Plastic Barrel
- 33 = 35-250 VAC, Grounded Metal Barrel

#### AC/DC: (Latched SCP)

- 30 = 20-250 VAC, 10-300 VDC
- 32 = 20-250 VAC, 10-300 VDC
- 40 = 20-140 VAC/DC, High Off-State Current

#### DC:

- 4 = 10-65 VDC, Polarity Protected, Pulsed SCP\*\*
- 6 = 10-30 VDC, Polarity Protected, Pulsed SCP
- 7 = 10-30 VDC, TTL Compatible
- 8 = 20-30 VDC, Polarity Protected, Pulsed SCP
- 41 = 10-65 VDC, Polarity Protected, Pulsed SCP
- 61 = 10-30 VDC, Polarity Protected, Pulsed SCP

\*\*SCP = Short-Circuit and Overload Protection

### Output

- D = 2-Wire DC (Transistor Output)
- DZ = 2-Wire AC/DC, (Power MOSFET Output)
- LF = Frequency Output
- G = 2-Wire DC, Low Voltage Drop
- N = NPN Transistor (Current Sinking)
- P = PNP Transistor (Current Sourcing)
- R = Relay Output
- Z = 2-Wire AC or 2-Wire AC/DC

### Output Function

- A = Normally Open (N.O.)
- DA = Dynamic Output (Ring Sensor), Normally Open
- F = Connection Programmable (N.O. or N.C.)
- R = Normally Closed (N.C.)
- U = Jumper Programmable (N.O. or N.C.)
- V = Complementary Outputs: One N.O., One N.C.
- Y0 = NAMUR Output, Requires Switching Amplifier
- Y1 = NAMUR Output, Requires Switching Amplifier

Housing Diameter/Height (mm) or CRS Probe Length (mm = Number/10)

## Wiring Options

### A) Connectorized Sensor

Bi15-Q20-AN6X2- **H1 1 4 1**

#### Connector Family

B1 = *minifast*®, Metal, Male  
 B2 = *minifast*®, Plastic, Male  
 B3 = *microfast*®, Metal, Male  
 H1 = *eurofast*®, Metal or Plastic, Male  
 V1 = *picofast*®, Metal, Male  
 V2 = *picofast*®, Snap and M8x1, Male (Q08 Only)

#### Connector / Sensor Transition

1 = Straight

#### Wiring Configuration

Example:  
 1 = Standard  
 3 = N.C. DC Output on Pin 4 (for US)

#### Number of Pins

Rectangular

### B) Potted Cable

Bi15-Q20-AN6X2- **7M**

#### Cable Length

Blank = 2 Meter cable  
 7M = 7 Meter cable

## Special Option Codes

Bi 5-Q08-AN6XS- **/S34**

#### Option Code

Example:  
 /S34 = Weld Field Immune  
 /S97 = -40°C (-40°F) Operating Temperature  
 /S100 = +100°C (+212°F) Operating Temperature  
 /S1590 = CA40 sensors with *weldguard* laminate  
 /S1591 = CA40 sensors with *weldguard* and *armorguard*  
 /S1669 = CA40 sensors with *stoneface* cap

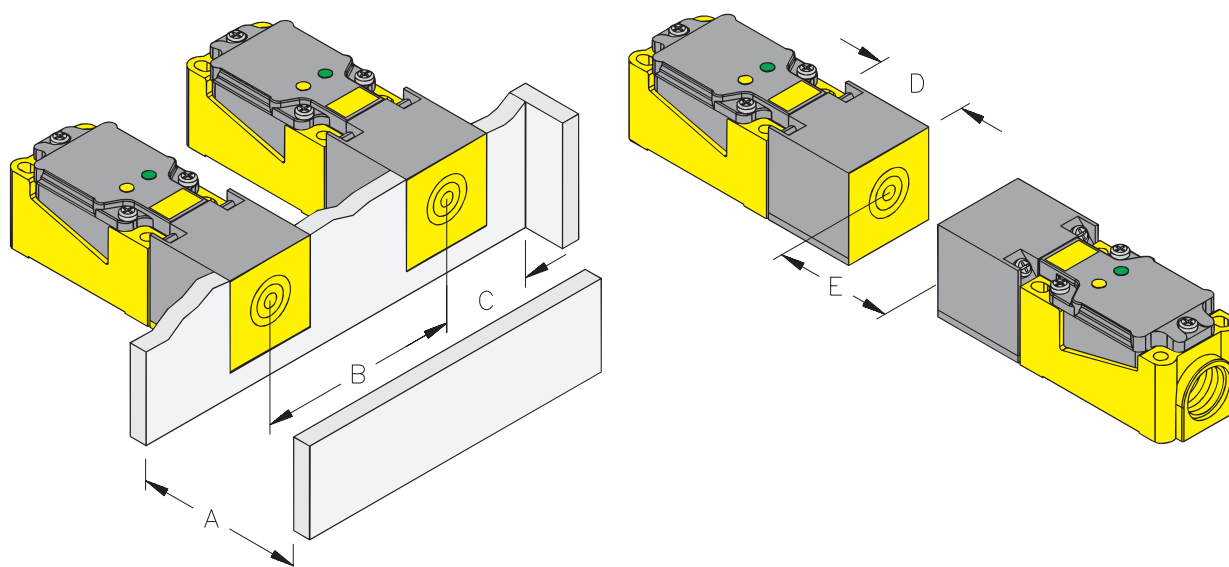
# Inductive Sensors

## Mounting

TURCK inductive proximity sensors are manufactured with a shielded coil, designated by “Bi” in the part number, and a nonshielded coil, designated by “Ni” in the part number (See page B6). Embeddable (shielded) units may be safely flush-mounted in metal. Nonembeddable (nonshielded) units require a metal free area around the sensing face. Because of possible interference of the electromagnetic fields generated by the oscillators, minimum spacing is required between adjacent or opposing sensors.

It is good engineering practice to mount sensors horizontally or with the sensing face looking down. Avoid sensors that look up wherever possible, especially if metal filings and chips are present.

## Embeddable Mounting Characteristics - Rectangular Housings

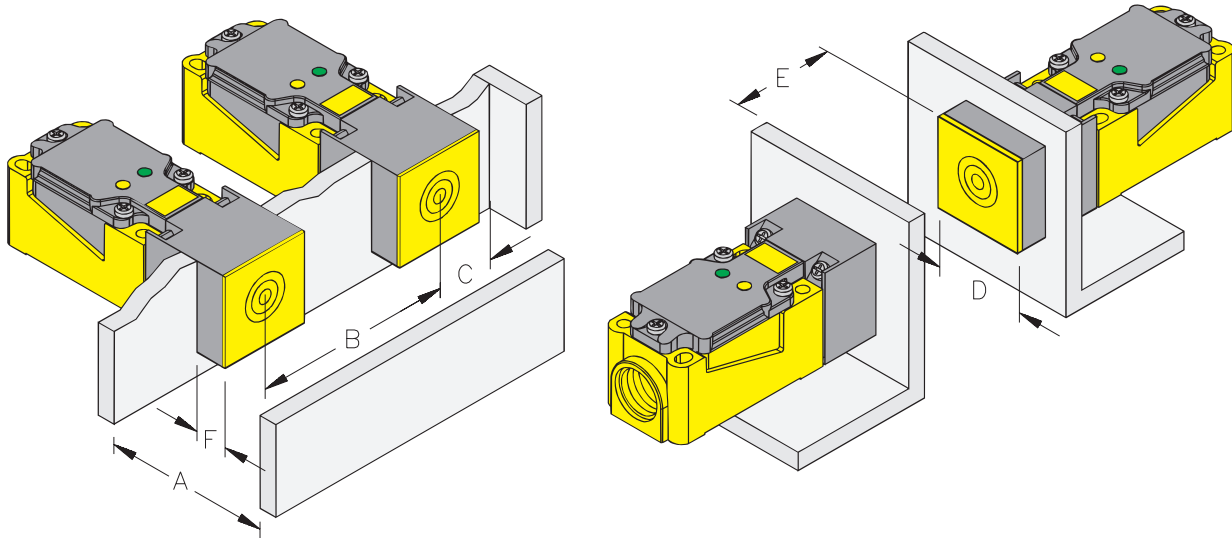


### Flush Mountable - CA25, CK40 and CP40

Housing Type	Sensor Type	A	B	C	D	E
CA25	Bi10U	30.00	50.00	25.00	25.00	60.00
CP40/CK40	Bi15U	45.00	80.00	40.00	40.00	90.00
CP40/CK40	Bi15	45.00	80.00	40.00	40.00	90.00
CP40/CK40/CA40	Bi20U	60.00	80.00	40.00	40.00	120.00
CP40	Bi20	60.00	80.00	40.00	40.00	120.00
CP40/CK40	Bi30U	90.00	80.00	40.00	40.00	180.00

Dimensions are in mm.

**Nonembeddable Mounting Characteristics - Rectangular Housings**

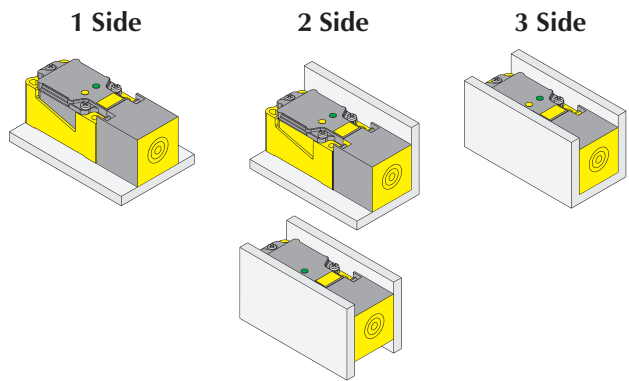


**Rectangular**

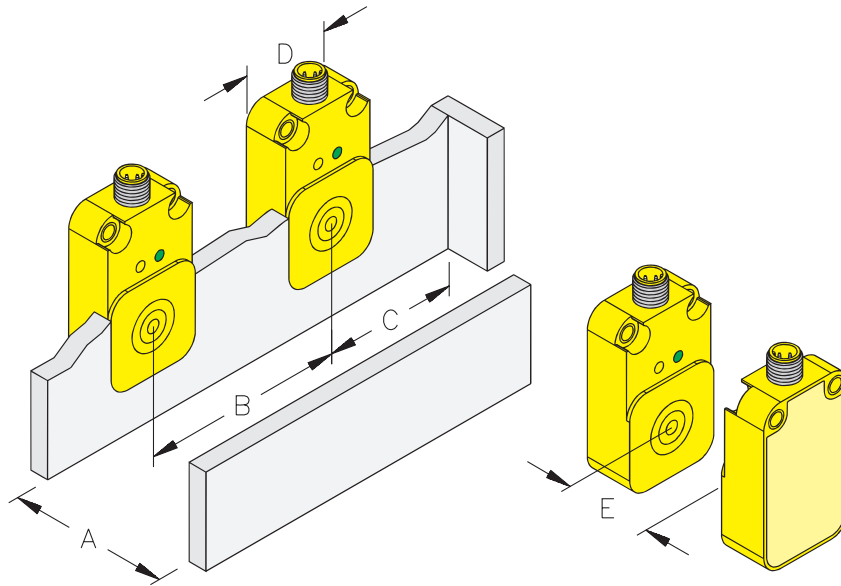
**Non-Flush Mountable - CA25, CK40 and CP40**

Housing Type	Sensor Type	A	B	C	D	E	F	1 Side	2 Side	3 Side
CA25	Ni15U	45.00	75.00	38.00	25.00	90.00	25.00			
CA25	Ni15	45.00	75.00	38.00	25.00	90.00	25.00	Sr=15 mm*		
CP/CK40	Ni20	60.00	120.00	60.00	40.00	120.00	20.00			
CP/CK40	Ni25U	75.00	240.00	60.00	40.00	150.00	30.00	Sr=22 mm*	Sr=20 mm*	Sr=17 mm*
CP/CK40	Ni25	75.00	120.00	60.00	40.00	150.00	40.00			
CP/CK40	Ni35U	105.00	240.00	60.00	40.00	210.00	30.00	Sr=28 mm*	Sr=24 mm*	Sr=19 mm*
CP/CK40	Ni35	105.00	180.00	60.00	40.00	210.00	40.00			
CP/CK40	Ni40U	120.00	240.00	60.00	40.00	240.00	40.00			
CP/CK40	Ni40	120.00	180.00	60.00	40.00	240.00	40.00			
CP/CK40	Ni50U	150.00	240.00	60.00	40.00	300.00	40.00	Sr=35 mm*	Sr=25 mm*	Sr=20 mm*

Dimensions are in mm.  
\* Only DC versions



## Embeddable Mounting Characteristics - Rectangular Housings

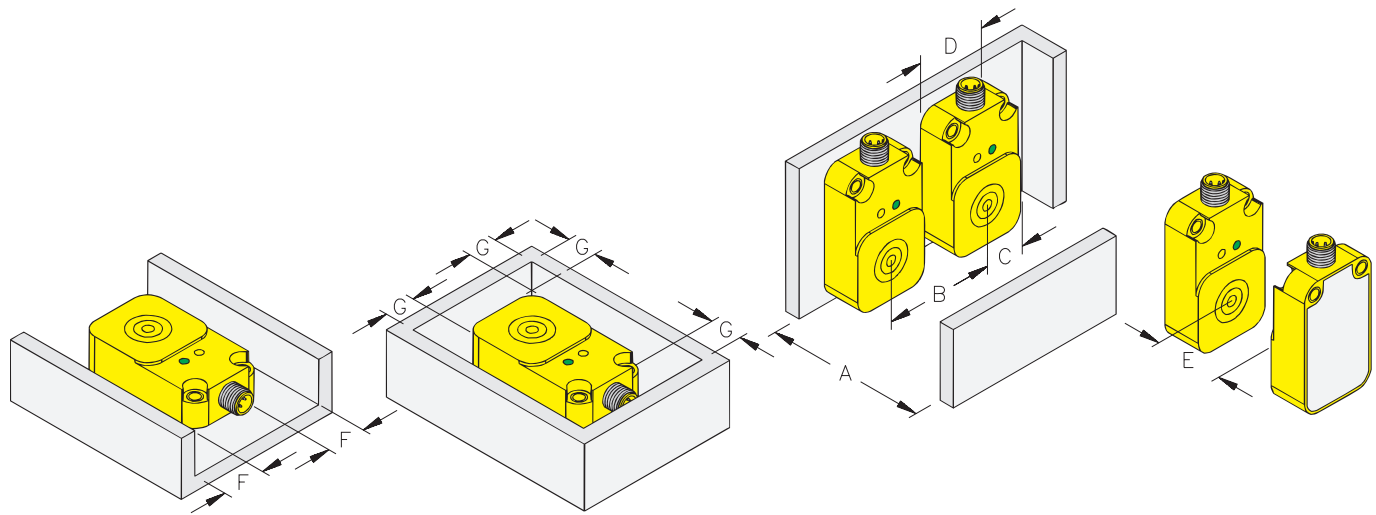


### Flush Mountable

Housing Type	Sensor Type	A	B	C	D	E
Q5.5	Bi 2	6.00	16.00	8.00	8.00	12.00
Q06	Bi 3	9.00	35.00	17.00	17.30	18.00
Q08	Bi 5	15.00	40.00	20.00	20.00	30.00
Q08	Bi 5U	15.00	40.00	20.00	20.00	30.00
Q08	Bi 7	21.00	40.00	20.00	20.00	42.00
Q10	Bi 8	24.00	50.00	25.00	25.00	48.00
Q10	Bi 8U	24.00	50.00	25.00	25.00	48.00
Q14	Bi10	30.00	45.00	30.00	30.00	60.00
Q14	Bi10U	30.00	45.00	30.00	30.00	60.00
Q20	Bi15	45.00	60.00	40.00	40.00	90.00
Q20	Bi15U	45.00	60.00	40.00	40.00	90.00
CP80	Bi40	120.00	160.00	80.00	80.00	240.00
Q80	Bi50U	150.00	160.00	80.00	80.00	300.00

Dimensions are in mm.

**Embeddable Mounting Characteristics - Rectangular Housings**

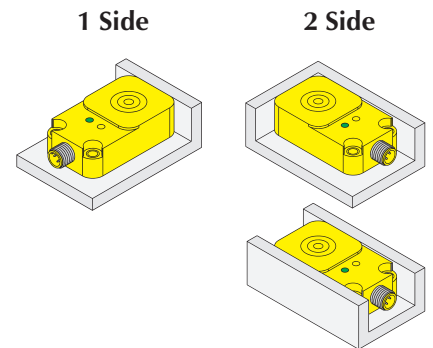


**Rectangular**

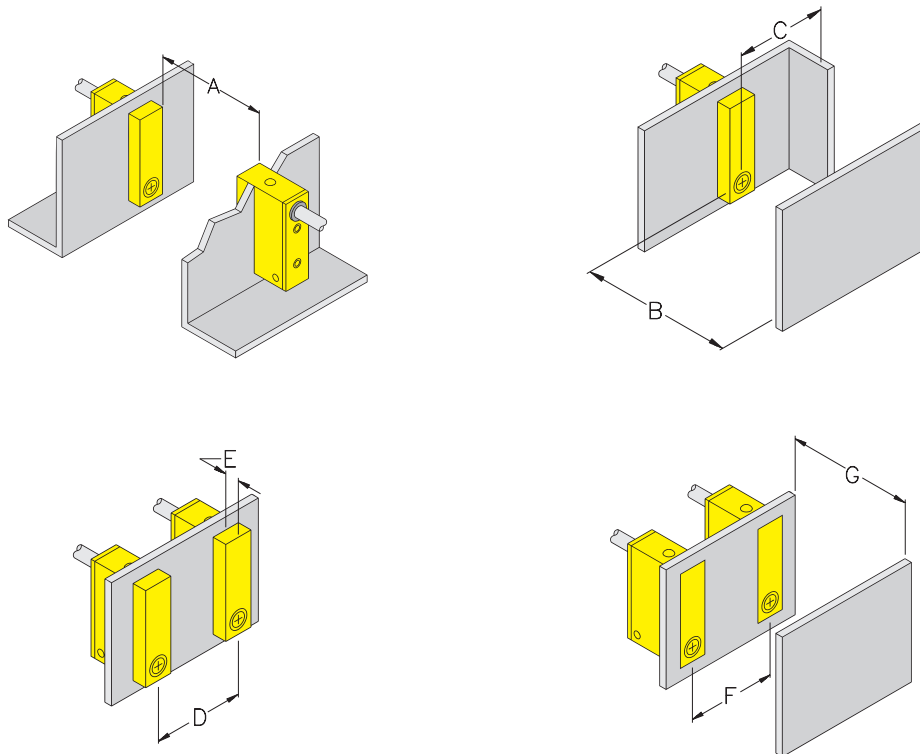
**Non-flush Mountable - Minimum Distances - Q5.5, Q14, Q20, CP80, Q80 and K90**

Housing Type	Sensor Type	A	B	C	D	E	F	G	1 Side	2 Side
Q5.5	Ni 3.5	11.00	24.00	12.00	8.00	21.00	4.00	8.00		
Q14	Ni20	60.00	90.00	45.00	30.00	120.00	202.00	30.00	Sr=20 mm*	Sr=20 mm*
Q20	Ni25	75.00	120.00	60.00	40.00	150.00	25.00	40.00	Sr=20 mm*	Sr=20 mm*
CP80	Ni40	120.00	240.00	120.00	80.00	240.00	40.00	80.00		
CP80	Ni50U	150.00	240.00	120.00	80.00	300.00	50.00	80.00		
Q80	Ni70U	210.00	240.00	120.00	80.00	420.00	70.00	80.00	Sr=50 mm	
CP80	Ni75U	225.00	240.00	120.00	80.00	450.00	60.00	80.00		
K90	Ni50U	150.00	270.00	135.00	90.00	300.00	50.00	90.00		
K90	Ni60	180.00	270.00	135.00	90.00	360.00	60.00	90.00		
K90	Ni100U	300.00	270.00	135.00	90.00	600.00	100.00	90.00	Sr=70 mm	

Dimensions are in mm.  
\* Only non-ferrous metals.



## Embeddable Mounting Characteristics - Rectangular Housings



### Flush Mountable

Housing Type	Sensor Type	Housing	A	G	C	F
Q6.5	Bi 1	6.50	6.00	3.00	7.00	13.00
Q8SE	Bi 2	8.00	12.00	6.00	8.00	16.00
Q10S	Bi 2	10.00	12.00	6.00	10.00	20.00
Q11S	Bi 2	11.00	12.00	6.00	11.00	22.00
Q12	Bi 2	12.00	12.00	6.00	12.00	24.00
Q26	Bi10	26.00	60.00	30.00	26.00	52.00
Q34	Bi15	34.00	90.00	45.00	34.00	68.00

Dimensions are in mm.

### Non-Flush Mountable

Housing Type	Sensor Type	Housing	A	B	C	D	E
Q6.5	Ni 2	6.50	12.00	6.00	10.00	13.00	4.00
Q9.5	Ni 2	9.50	12.00	6.00	14.00	19.00	4.00
Q12	Ni 4	12.00	24.00	12.00	18.00	24.00	8.00
Q25	Ni10	25.00	60.00	30.00	38.00	50.00	20.00
Q30	Ni15	30.00	90.00	45.00	45.00	60.00	30.00

Dimensions are in mm.

**Notes:**

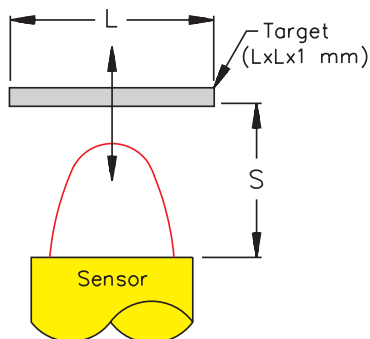


**Rectangular**



## Sensing Range Diagrams - Rectangular Housings

### Axial Approach

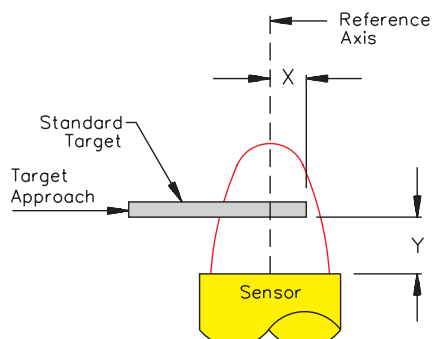


L = Diameter of target  
S = Operating distance

Maximum operating distance is achieved using a standard target size or larger.

### Sensing Range vs. Target Diameter <sup>(1)</sup>

### Lateral Approach

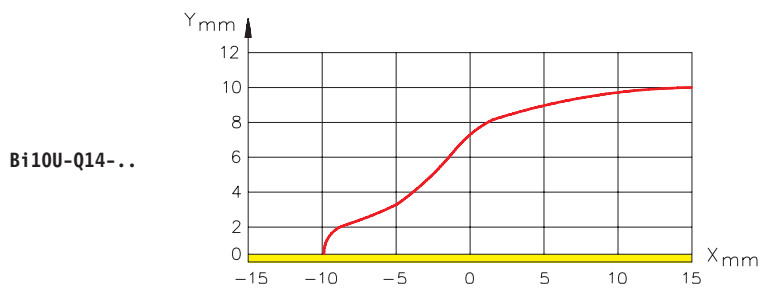


X = Target leading edge position referenced to sensor center axis.

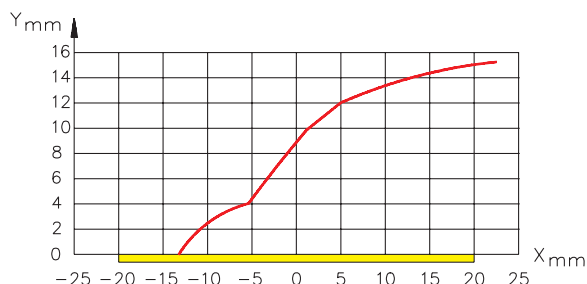
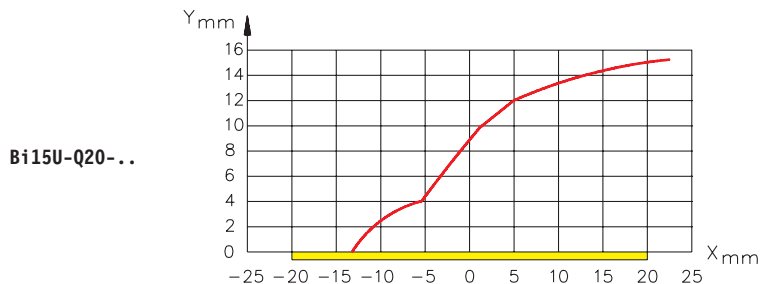
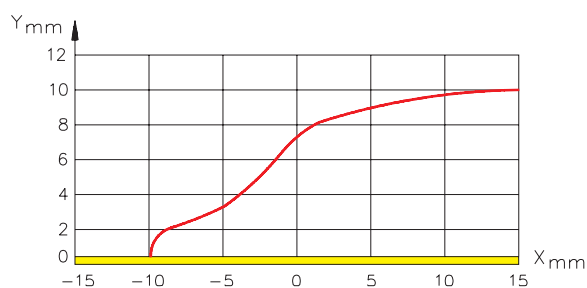
Y = Target distance from sensing face.

### Target Distance vs. Minimum Sensor Coverage Using Standard Target <sup>(2)</sup>

### Sensing Range vs. Target Diameter <sup>(1)</sup>



### Target Distance vs. Minimum Sensor Coverage Using Standard Target <sup>(2)</sup>



(1) Smallest value of L shown is minimum recommended target for that sensor.

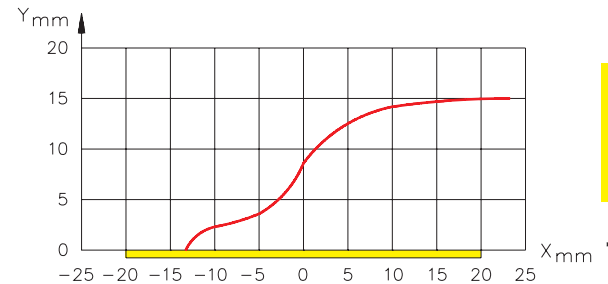
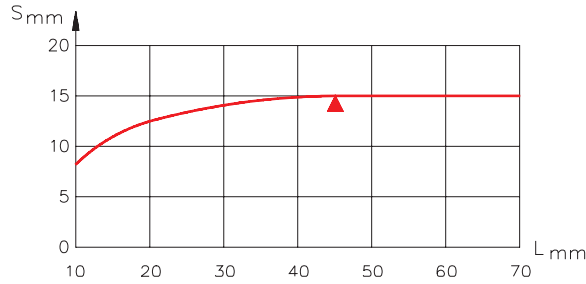
(2) Yellow area represents sensing face.

**Sensing Range Diagrams - Uprox® Rectangular Housings**

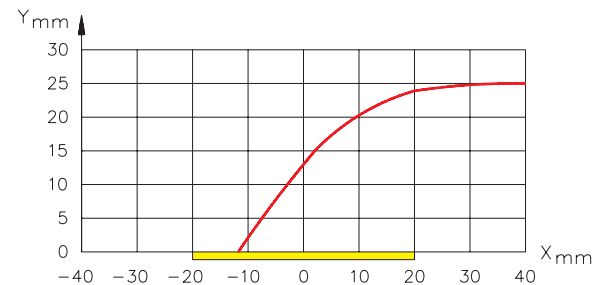
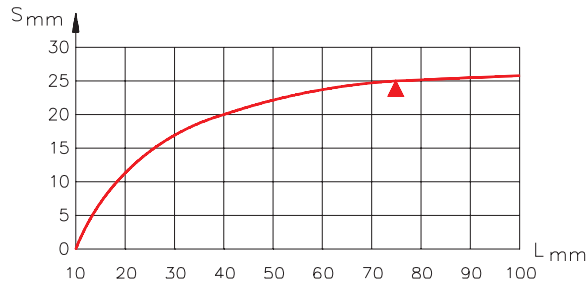
**Sensing Range vs. Target Diameter (1)**

**Target Distance vs. Minimum  
Sensor Coverage Using Standard Target (2)**

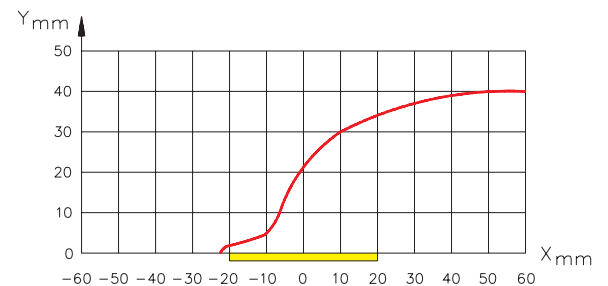
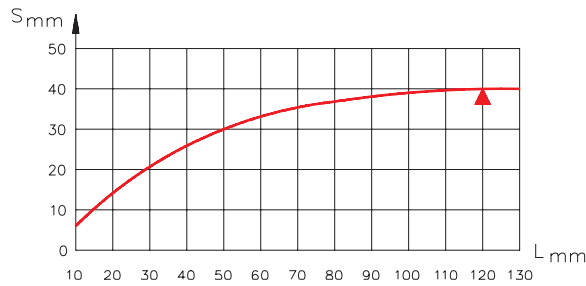
**Bi15U-CK40-...  
Bi15U-CP40-...**



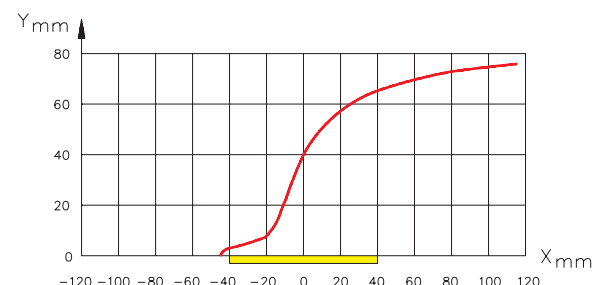
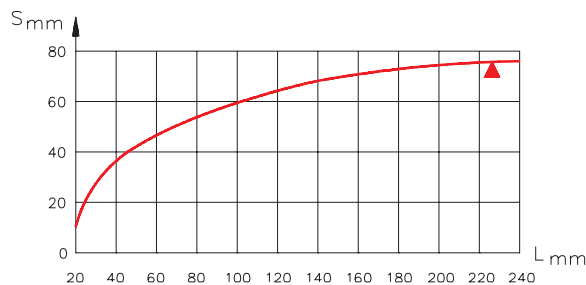
**Ni25U-CK40-...  
Ni25U-CP40-...**



**Ni40U-CP40-...**



**Ni75U-CP80-...**



(1) Smallest value of L shown is minimum recommended target for that sensor.

(2) Yellow area represents sensing face.

**Rectangular**

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>5.5 mm - Embeddable/Nonembeddable, Potted-In Cable</b>  	Bi 2-Q5.5-AG61X	S4405042		•	2	2-Wire DC	
	Bi 2-Q5.5-AG6X	S1613108		•	2		
	Bi 2-Q5.5-AN6X	S1613100		•	2	3-Wire DC NPN	
	Bi 2-Q5.5-AN6X/S34	S1613101	Weld-field Immune	•	2		
	Ni 3.5-Q5.5-AN6X	S4613610			3.5		
	Bi 2-Q5.5K-AN6X	S1613016			•	2	3-Wire DC PNP
	Bi 2-Q5.5-AP6X	S1613000		•	2		
	Bi 2-Q5.5-AP6X/S34	S1613001	Weld-field Immune	•	2		
	Ni 3.5-Q5.5-AP6X	S4613601			3.5		
	Bi 2-Q5.5K-AP6X	S1613015			•	2	2-Wire DC NAMUR
	Bi 2-Q5.5K-Y1X	S4055300			•	2	
	<b>6.0 mm - Embeddable, Potted-In Cable</b>  	Bi 3-Q06-AN6X2	S1620150		•	3	3-Wire DC NPN
Bi 3-Q06-AP6X2		S1620100		•	3	3-Wire DC PNP	
<b>6.5 mm - Embeddable/Nonembeddable, Potted-In Cable</b>  	Bi 1-Q6.5-AN6	S4613420		•	1	3-Wire DC NPN	
	Ni 2-Q6.5-AN6	S4613520			2		
	Bi 1-Q6.5-AP6	S4613400			•	1	3-Wire DC PNP
	Bi 1-Q6.5-AP6/S34	S4613401	Weld-field Immune	•	1		
	Ni 2-Q6.5-AP6	S4613500				2	
	Ni 2-Q6.5-AP6/S34	S1650023	Weld-field Immune			2	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤50	-25 to +85	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	1000	≤50	-25 to +85	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	1	
10-30 VDC	2000	≤150	-25 to +85	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	2000	≤150	-25 to +85	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	
	2000	≤150	-25 to +85	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	
	1000	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	1	
10-30 VDC	2000	≤150	-25 to +85	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	2000	≤150	-25 to +85	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	
	2000	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	
	1000	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	2	
5-30 VDC	2000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	4	<b>Diagram 4</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	GN	YE	2M/PVC	2	
	10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	GN	YE	2M/PVC	
10-30 VDC		2000	≤150	-25 to +70	IP 67	PBT	PBT	N/A	N/A	2M/PVC	
	2000	≤150	-25 to +70	IP 67	PBT	PBT	N/A	N/A	2M/PVC	2	
10-30 VDC	2000	≤150	-25 to +70	IP 67	PBT	PBT	N/A	N/A	2M/PVC	3	
	30	≤150	-25 to +70	IP 67	PBT	PBT	N/A	N/A	2M/PVC	3	
	2000	≤150	-25 to +70	IP 67	PBT	PBT	N/A	N/A	2M/PVC	3	
	30	≤150	-25 to +70	IP 67	PBT	PBT	N/A	N/A	2M/PVC	3	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>8.0 mm - Embeddable, Potted-In Cable</b>  	Bi 5-Q08-AD4X/S34	S4414550	<i>Weld-field Immune</i>	•	5	2-Wire DC
	Bi 5U-Q08-AN6X2	S1608911	<i>Uprox</i>	•	5	3-Wire DC NPN
	Bi 5-Q08-AN6X2/S34	S1601620	<i>Weld-field Immune</i>	•	5	
	Bi 7-Q08-AN6X2	S1601620	<i>Ext. Range</i>	•	7	
	Bi 8U-Q08-AN6X2	S1662007	<i>Uprox</i>	•	8	
	Bi 5U-Q08-AP6X2	S1608901	<i>Uprox</i>	•	5	3-Wire DC PNP
	Bi 5-Q08-AP6X2/S34	S1600800	<i>Weld-field Immune</i>	•	5	
	Bi 7-Q08-AP6X2	S1601600	<i>Ext. Range</i>	•	7	
	Bi 8U-Q08-AP6X2	S1662006	<i>Uprox</i>	•	8	
	Bi 5-Q08-VN6X2	S1600200	<i>Comp. Outputs</i>	•	5	4-Wire DC NPN
	Bi 5-Q08-VN6X2/S34	S1600920	<i>Weld-field Immune</i>	•	5	
	Bi 7-Q08-VN6X2	S1600920	<i>Ext. Range</i>	•	7	
	Bi 5-Q08-VP6X2	S1600100	<i>Comp. Outputs</i>	•	5	4-Wire DC PNP
	Bi 5-Q08-VP6X2/S34	S1600101	<i>Weld-field Immune</i>	•	5	
	Bi 7-Q08-VP6X2	S1600900	<i>Ext. Range</i>	•	7	
Bi 5-Q08-Y1X	S4054000			•	5	2-Wire NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	50	≤100	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	2M/PVC	2	<b>Diagram 2</b> 
10-30 VDC	300	≤100	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	2	<b>Diagram 3</b> 
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	2	
	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	2M/PVC	2	
	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	2M/PVC	3	
10-30 VDC	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	2M/PVC	3	<b>Diagram 4</b> 
	300	≤100	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	3	
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	4	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	4	<b>Diagram 5</b> 
	300	≤100	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	4	
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	5	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	5	<b>Diagram 6</b> 
	300	≤100	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	5	
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	5	
5-30 VDC	1000	Remote	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	6	<b>Diagram 6</b> 

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>8.0 mm - Embeddable, <i>picofast</i>® Connector</b>  	Bi 5-Q08-AD4X-V1130	S4414551		•	5	2-Wire DC
	Bi 5U-Q08-AN6X2-V1131	S1608910	<i>Uprox</i>	•	5	3-Wire DC NPN
	Bi 5-Q08-AN6X2-V1131	S1600600		•	5	
	Bi 5-Q08-AN6X2-V1131/S34		<i>Weld-field Immune</i>	•	5	
	Bi 7-Q08-AN6X2-V1131	S1601622	<i>Ext. Range</i>	•	7	
	Bi 8U-Q08-AN6X2-V1131	S1662008	<i>Uprox</i>	•	8	
	Bi 5U-Q08-AP6X2-V1131	S1608900	<i>Uprox</i>	•	5	3-Wire DC PNP
	Bi 5-Q08-AP6X2-V1131	S1600500		•	5	
	Bi 5-Q08-AP6X2-V1131/S34	S1600501	<i>Weld-field Immune</i>	•	5	
	Bi 7-Q08-AP6X2-V1131	S1601602	<i>Ext. Range</i>	•	7	
Bi 8U-Q08-AP6X2-V1131	S1662005	<i>Uprox</i>	•	8		
<b>8.0 mm - Embeddable, <i>picofast</i> Connector</b>  	Bi 5-Q08-VN6X2-V1141	S1600400	<i>Comp. Outputs</i>	•	5	4-Wire DC NPN
	Bi 7-Q08-VN6X2-V1141	S1600922	<i>Ext. Range</i>	•	7	
	Bi 5-Q08-VP6X2-V1141	S1600300	<i>Comp. Outputs</i>	•	5	4-Wire DC PNP
	Bi 7-Q08-VP6X2-V1141	S1600902	<i>Ext. Range</i>	•	7	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	50	≤100	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3Z-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	2	<p><b>Diagram 2</b></p>
	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	2	
	300	≤100	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	2	
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	2	
	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	2	
10-30 VDC	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	3	<p><b>Diagram 3</b></p>
	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	3	
	300	≤100	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	3	
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	3	
	1000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	3	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 4Z-*	4	<p><b>Diagram 4</b></p>
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 4Z-*	4	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 4Z-*	5	<p><b>Diagram 5</b></p>
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 4Z-*	5	

Rectangular

For material descriptions see page M22.



# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>8.0 mm - Embeddable, <i>picofast</i>® Connector</b> 	Bi 5-Q08-AD4X-V2130	S4414553		•	5	2-Wire DC
	Bi 5-Q08-AN6X2-V2131	S1600602		•	5	3-Wire DC NPN
	Bi 5U-Q08-AN6X2-V2131	S1608904	<i>Uprox</i>	•	5	
	Bi 7-Q08-AN6X2-V2131	S1601623	<i>Ext. Range</i>	•	7	
	Bi 5-Q08-AP6X2-V2131	S1600502		•	5	3-Wire DC PNP
	Bi 5U-Q08-AP6X2-V2131	S1608905	<i>Uprox</i>	•	5	
Bi 7-Q08-AP6X2-V2131	S1601603	<i>Ext. Range</i>	•	7		
<b>8.0 mm - Embeddable, Amphenol Connector</b> 	Bi 3-Q08-ES/S1027-0.2	S1044691		•	3	N/A
<b>8.0 mm - Nonembeddable, Potted-In Cable</b> 	Ni 4U-Q8SE-AN6X	S4635809	<i>Uprox</i>		4	3-Wire DC NPN
	Ni 4U-Q8SE-AP6X	S4635807	<i>Uprox</i>		4	3-Wire DC PNP
<b>8.0 mm - Nonembeddable, <i>picofast</i> Connector</b> 	Ni 4U-Q8SE-AN6X-V1131	S4635810	<i>Uprox</i>		4	3-Wire DC NPN
	Ni 4U-Q8SE-AP6X-V1131	S4635808	<i>Uprox</i>		4	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3M-*	1	<b>Diagram 1</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	2	
	2000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	2	
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	3	
	2000	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	3	
	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	3	
N/A	500	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	- - - -	*	<b>Diagram 3</b> 
10-30 VDC	1000	≤150	-30 to +85	IP 68	PP	PP	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	1000	≤150	-30 to +85	IP 68	PP	PP	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
10-30 VDC	1000	≤150	-30 to +85	IP 68	PP	PP	N/A	YE	PKG 3Z-*	2	
10-30 VDC	1000	≤150	-30 to +85	IP 68	PP	PP	N/A	YE	PKG 3Z-*	3	

Rectangular

\* For use with Weldtron Microprocessor.

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>9.5 mm - Nonembeddable, Potted-In Cable</b> 	Ni 2-Q9.5-AP6/S34	S1650077	Weld-field Immune		2	3-Wire DC PNP
<b>10 mm - Embeddable, Potted-In Cable</b> 	Bi 8U-Q10-AN6X2	S1662003	Uprox	•	8	3-Wire DC NPN
	Bi 8-Q10-VN6X2	S4616410	Comp. Outputs		8	4-Wire DC NPN
	Bi 8U-Q10-AP6X2	S1662001	Uprox	•	8	3-Wire DC PNP
	Bi 8-Q10-VP6X2	S4616401	Comp. Outputs		8	4-Wire DC PNP
<b>10 mm - Embeddable, picofast® Connector</b> 	Bi 8U-Q10-AN6X2-V1131	S1662004	Uprox	•	8	3-Wire DC NPN
	Bi 8U-Q10-AP6X2-V1131	S1662002	Uprox	•	8	3-Wire DC PNP
<b>10 mm - Embeddable, picofast Connector</b> 	Bi 8-Q10-VP6X2-V1141	S4616402	Comp. Outputs	•	8	4-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	30	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	N/A	2M/PVC	2	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
10-30 VDC	500	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	2M/PVC	1	<p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	7	<p><b>Diagram 5</b></p> <p><b>Diagram 6</b></p>
10-30 VDC	500	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	2M/PVC	2	<p><b>Diagram 7</b></p> <p><b>Diagram 8</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	8	<p><b>Diagram 9</b></p>
10-30 VDC	500	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	3	<p><b>Diagram 10</b></p>
10-30 VDC	500	≤200	-30 to +85	IP 67	Zinc	PA 12	GN	YE	PKG 3M-*	4	<p><b>Diagram 11</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 4M-*	6	<p><b>Diagram 12</b></p>

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>10 mm - Embeddable, Potted-In Cable</b>  	Bi 2-Q10S-AN6X	S1619310		•	2	3-Wire DC NPN
	Bi 2-Q10S-AP6X	S1609360		•	2	3-Wire DC PNP
	Bi 2-Q10S-VN6X	S1609341	Comp. Outputs	•	2	4-Wire DC NPN
	Bi 2-Q10S-VP6X	S1609340	Comp. Outputs	•	2	4-Wire DC PNP
	Bi 2-Q10S-AZ31X	S1309100		•	2	2-Wire AC/DC
	Bi 2-Q10S-Y0X	S4012130		•	2	2-Wire NAMUR
	Bi 2-Q10S-Y1X	S4012130		•	2	
<b>11 mm - Embeddable/Nonembeddable, Potted-In Cable</b>  	Bi 2-Q11S-AD4X	M4405040		•	2	2-Wire DC
	Bi 2-Q11S-AN4X	M4550101		•	2	3-Wire DC NPN
	Bi 2-Q11S-AP4X	M4550100		•	2	3-Wire DC PNP
	Ni 4-Q11S-AP4X	M4550110			4	
	Ni 4-Q11S-AZ31X	M4348000				4

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
10-30 VDC	2000	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
10-30 VDC	2000	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
10-30 VDC	2000	≤150	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	4	<b>Diagram 3</b> 
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	RD	2M/PVC	5	<b>Diagram 4</b> 
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	6	<b>Diagram 4</b> 
	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	6	
10-65 VDC	2000	≤100	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	7	<b>Diagram 5</b> 
10-65 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	1	<b>Diagram 6</b> 
10-65 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	2	<b>Diagram 6</b> 
	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	2	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	5	<b>Diagram 7</b> 

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>12 mm - Embeddable/Nonembeddable, Potted-In Cable</b>  	Ni 4-Q12-AD4X	M4405012			4	2-Wire DC	
	Bi 2-Q12-AN6X	M1619300		•	2	3-Wire DC NPN	
	Ni 4-Q12-AN6X	M1619400	TTL Compatible		4		
	Bi 2-Q12-AN7X	M1720800		•	2		
	Bi 2-Q12-AP6X	M1609300		•	2	3-Wire DC PNP	
	Ni 4-Q12-AP6X	M1609400			4		
	Bi 2-Q12-AZ31X	M1310000		•	2	2-Wire AC/DC	
	Ni 4-Q12-AZ31X	M1310200			4		
	<b>12 mm - Embeddable/Nonembeddable, eurofast® Connector</b>  	Bi 2-Q12-AN6X-H1141	M1619000		•	2	3-Wire DC NPN
		Ni 4-Q12-AN6X-H1141	M1619100			4	
Bi 2-Q12-AP6X-H1141		M1609000		•	2	3-Wire DC PNP	
Ni 4-Q12-AP6X-H1141		M1609100			4		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	6	<b>Diagram 1</b> 
	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	1	<b>Diagram 2</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	1	<b>Diagram 3</b> 
	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	2	<b>Diagram 4</b> 
20-250 VAC 10-65 VDC	20	≤100	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	3	<b>Diagram 5</b> 
	20	≤100	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	3	<b>Diagram 6</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	RKK 4T-*	4	
	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	RKK 4T-*	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	RKK 4T-*	5	
	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	RKK 4T-*	5	

Rectangular

For material descriptions see page M22.



# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>14 mm - Embeddable/Nonembeddable, Potted-In Cable</b>  	Ni20-Q14-AD4X	M4414557			20	2-Wire DC	
	Bi10U-Q14-AN6X2	M1608710	<i>Uprox</i>	•	10	3-Wire DC NPN	
	Bi10-Q14-AN6X2	M1608320		•	10		
	Ni20-Q14-AN6X2	M4690220			20		
	Bi10U-Q14-AP6X2	M1608700	<i>Uprox</i>	•	10	3-Wire DC PNP	
	Bi10-Q14-AP6X2	M1608720		•	10		
	Ni20-Q14-AP6X2	M4690205			20		
	Bi10-Q14-ADZ32X2	M4256220			•	10	2-Wire AC/DC Short-Circuit Protected
	Bi10-Q14-ADZ32X2/S34	M4256225	<i>Weld-field Immune</i>	•	10		
	Ni20-Q14-ADZ32X2	M4205410			20		
	Bi10-Q14-Y0X	M1608730			•	10	2-Wire NAMUR
	<b>14 mm - Embeddable/Nonembeddable, picofast® Connector</b>  	Bi10-Q14-AN6X2-V1131	M1608325		•	10	3-Wire DC NPN
Bi10U-Q14-AN6X2-V1131		M1608510	<i>Uprox</i>	•	10		
Ni20-Q14-AN6X2-V1131		M4690221			20		
Bi10-Q14-AP6X2-V1131		M1608530			•	10	3-Wire DC PNP
Bi10U-Q14-AP6X2-V1131		M1608500	<i>Uprox</i>	•	10		
Ni20-Q14-AP6X2-V1131		M4690210			20		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	150	≤100	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	2M/PVC	2	<b>Diagram 2</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	2M/PVC	3	<b>Diagram 3</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	3	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	3	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	4	<b>Diagram 4</b> 
	30	≤100	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	4	
	20	≤100	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	4	
5-30 VDC	250	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
10-30 VDC	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	6	<b>Diagram 6</b> 
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	PKG 3M-*	6	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	6	
10-30 VDC	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	7	<b>Diagram 7</b> 
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	PKG 3M-*	7	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	7	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
	Ni 5-Q18-AN6X	M4614607			5	3-Wire DC NPN
	Ni 5-Q18-AP6X	M4614606			5	3-Wire DC PNP
	Ni10-Q18-AP6X	M4652210	Extended Range		10	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	2	<p><b>Diagram 2</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	2	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<p><b>20 mm - Embeddable/Nonembeddable, Potted-In Cable</b></p>	Bi15U-Q20-AN6X2	M1608810	<i>Uprox</i>	•	15	3-Wire DC NPN
	Bi15-Q20-AN6X2	M1608310		•	15	
	Ni25-Q20-AN6X2	M1602800			25	
	Bi15U-Q20-AP6X2	M1608800	<i>Uprox</i>	•	15	3-Wire DC PNP
	Bi15-Q20-AP6X2	M1608300		•	15	
	Ni25-Q20-AP6X2	M1602700			25	
	Bi15U-Q20-VP6X2 4M	M1608602	<i>Uprox</i>	•	15	4-Wire DC PNP
	Bi15-Q20-Y0X	M1080020		•	15	2-Wire NAMUR
	Bi15-Q20-ADZ32X2	M4256250		•	15	2-Wire AC/DC Short-Circuit Protected

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	2M/PVC	1	<b>Diagram 1</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	1	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	1	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	2M/PVC	2	<b>Diagram 2</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	2M/PVC	3	<b>Diagram 3</b> 
5-30 VDC	1000	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	5	<b>Diagram 5</b> 

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>20 mm - Embeddable/Nonembeddable, eurofast® Connector</b> 	Bi15U-Q20-AN6X2-H1141	M1608610	<i>Uprox</i>	•	15	3-Wire DC NPN	
	Bi15-Q20-AN6X2-H1141	M1608315		•	15		
	Ni25-Q20-AN6X2-H1141	M1602802			25		
		Bi15U-Q20-AP6X2-H1141	M1608600	<i>Uprox</i>	•	15	3-Wire DC PNP
		Bi15-Q20-AP6X2-H1141	M1608305		•	15	
		Ni25-Q20-AP6X2-H1141	M1602702			25	
		Bi15-Q20-Y0X-H1141	M1080025		•	15	
	<b>20 mm - Embeddable, microfast® Connector</b> 	Bi15-Q20-ADZ32X2-B3131	M4256251		•	15	2-Wire AC/DC Short-Circuit Protected

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	1	<b>Diagram 1</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	1	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	1	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	<b>Diagram 2</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
5-30 VDC	1000	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	RK 4.21T-*	3	<b>Diagram 3</b> 
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PBT	PBT	GN	YE	KB 3T-*	4	<b>Diagram 4</b> 

Rectangular

For material descriptions see page M22.



# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<p><b>25 mm - Embeddable, eurofast® Quick Disconnect</b></p>	Bi10U-CA25-AP6X2-H1141	M1625631	<i>Uprox</i>	•	10	3-Wire DC PNP
<p><b>25 mm - Embeddable, picofast® Quick Disconnect</b></p>	Bi10U-CA25-AP6X2-V1131	M1625632	<i>Uprox</i>	•	10	3-Wire DC PNP
<p><b>25 mm - Nonembeddable, Potted-In Cable</b></p>	Ni10-Q25-AN6X	M4652330			10	3-Wire DC NPN
	Ni10-Q25-AP6X	M4652225			10	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.

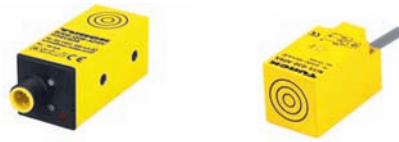


Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	250	≤200	-30 to +85	IP 67	AL	TP	GN	YE	RK 4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
10-30 VDC	250	≤200	-30 to +85	IP 67	AL	TP	GN	YE	PKG 3M-*	2	<p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	YE	2M/PVC	4	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>26 mm - Embeddable, Potted-In Cable</b> 	Bi 10F-Q26-AD4X/S34	M4470000	<i>Weld-field Immune</i>	•	10	2-Wire DC
	Bi 10S-Q26-AD4X/S34	M4470200	<i>Weld-field Immune</i>	•	10	
<b>26 mm - Embeddable, eurofast® Connector</b> 	Bi 10F-Q26-AD4X-H1141/S34	M4471000	<i>Weld-field Immune</i>	•	10	2-Wire DC
	Bi 10S-Q26-AD4X-H1141/S34	M4471200	<i>Weld-field Immune</i>	•	10	
	Bi 10F-Q26-Y0X-H1141	M4072200			•	10
<b>30 mm - Nonembeddable, Potted-In Cable</b> 	Ni 15-Q30-AN6X	M4659330			15	3-Wire DC - NPN
	Ni 15-Q30-AP6X	M4659325			15	3-Wire DC - PNP

Bi10F = Front sensing  
 Bi10S = Side sensing

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	30	≤100	-25 to +70	IP 67	PBT	PBT	PA 12	GN	YE	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	30	≤100	-25 to +70	IP 67	PBT	PBT	PA 12	Gn	YE	2M/PVC	1	
10-65 VDC	30	≤100	-25 to +70	IP 67	PBT	PBT	PA 12	N/A	YE	RK 4.2T-*	2	<p><b>Diagram 3</b></p>
	30	≤100	-25 to +70	IP 67	PBT	PBT	PA 12	N/A	YE	RK 4.2T-*	2	
5-30 VDC	30	Remote	-25 to +70	IP 67	PBT	PBT	PA 12	N/A	YE	RK 4.21T-*	3	<p><b>Diagram 4</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP67	PBT	PBT	N/A	N/A	YE	2M/PVC	4	<p><b>Diagram 5</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	2M/PVC	5	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>Q34 - Embeddable, Potted-In Cable</b> 	Bi 10F-Q34-ADZ30X2/S34	T4202100	Front Sensing, WFI	•	10	2-Wire AC/DC Short-Circuit Protected
	Bi 10T-Q34-ADZ30X2/S34	T4202200	Top Sensing, WFI	•	10	
<b>Q34 - Embeddable, eurofast® Connector</b> 	Bi 10F-Q34-AN6X2-H1141		Front Sensing	•	10	3-Wire DC NPN
	Bi 10T-Q34-AN6X2-H1141		Top Sensing	•	10	
	Bi 10F-Q34-AP6X2-H1141	T4693190	Front Sensing	•	10	3-Wire DC PNP
	Bi 10T-Q34-AP6X2-H1141	T4693390	Top Sensing	•	10	
<b>Q34 - Embeddable, minifast® Connector</b> 	Bi 10F-Q34-AN6X2-B1141	T4693200	Front Sensing	•	10	3-Wire DC NPN
	Bi 10T-Q34-AN6X2-B1141		Top Sensing	•	10	
	Bi 10F-Q34-AP6X2-B1141	T4693100	Front Sensing	•	10	3-Wire DC PNP
	Bi 10T-Q34-AP6X2-B1141	T4693300	Top Sensing	•	10	
	Bi 10F-Q34-ADZ30X2-B1131/S34	T4201100	Front Sensing, WFI	•	10	2-Wire AC/DC Short-Circuit Protected
	Bi 10T-Q34-ADZ30X2-B1131/S34	T4201200	Top Sensing, WFI	•	10	
	Bi 10F-Q34-AZ3X2-B1131	T1369200	Front Sensing	•	10	2-Wire AC/DC
	Bi 10T-Q34-AZ3X2-B1131	T1369000	Top Sensing	•	10	
<b>Q34 - Embeddable, microfast® Connector</b> 	Bi 10F-Q34-ADZ30X2-B3131/S34	T4217000	Front Sensing, WFI	•	10	2-Wire AC/DC Short-Circuit Protected
	Bi 10T-Q34-ADZ30X2-B3131/S34	T4217100	Top Sensing, WFI	•	10	
	Bi 10F-Q34-AZ3X2-B3131	T1369298	Front Sensing	•	10	2-Wire AC/DC
	Bi 10T-Q34-AZ3X2-B3131	T1369098	Top Sensing	•	10	

WFI = Weld-Field Immune Sensors.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-300 VDC 20-250 VAC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	2M/PVC	1	<b>Diagram 1</b> 
	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	2M/PVC	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	<b>Diagram 2</b> 
	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	3	<b>Diagram 3</b> 
	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 40-*M	4	<b>Diagram 4</b> 
	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 40-*M	4	
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 40-*M	5	<b>Diagram 5</b> 
	500	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 40-*M	5	
10-300 VDC 20-250 VAC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	RKM 30-*M	6	<b>Diagram 6</b> 
	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	RKM 30-*M	6	
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	RKM 30-*M	6	<b>Diagram 7</b> 
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	RKM 30-*M	6	
10-300 VDC 20-250 VAC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	KB 3T-*	7	<b>Diagram 7</b> 
	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	KB 3T-*	7	
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	KB 3T-*	7	<b>Diagram 7</b> 
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	RD	KB 3T-*	7	

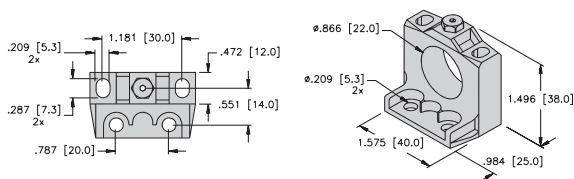
Rectangular

For material descriptions see page M22.

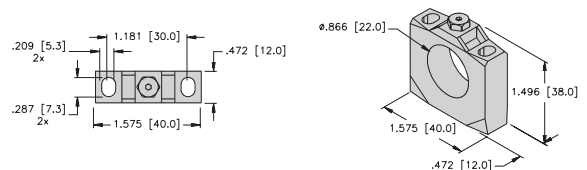
# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>CA40 - Embeddable, eurofast® Connector</b> 	Bi20U-CA40-AN6X2-H1141 W/BS2.1	M1627390	<i>Uprox</i>	•	20	3-Wire DC NPN
	Bi20U-CA40-AP6X2-H1141 W/BS2.1	M1627290	<i>Uprox</i>	•	20	
	Bi20U-CA40-AP6X2-H1141/S1590 W/BS2.0	M1627297	<i>weldguard</i>	•	20	
	Bi20U-CA40-AP6X2-H1141/S1591 W/BS2.0	M1627296	<i>armorguard®</i>	•	20	
	Bi20U-CA40-AP6X2-H1141/S1591 W/BS2.1	M1627294	<i>armorguard®</i>	•	20	3-Wire DC PNP
<b>CA40 - Embeddable, minifast® Connector</b> 	Bi20U-CA40-ADZ30X2-B1131 W/BS2.1	M4283290	<i>Uprox</i>	•	20	2-Wire AC/DC Short-Circuit Protected
	Bi20U-CA40-ADZ30X2-B1131/S1669	M4283205	<i>Stoneface®</i>	•	20	
	Bi20-CA40-ADZ30X2-B1131/S34/S1590	M4283593	<i>weldguard</i>	•	20	
	Bi20-CA40-ADZ30X2-B1131/S34/S1591 W/BS2.1	M4283595	<i>armorguard</i>	•	20	
<b>CA40 - Embeddable, microfast® Connector</b> 	Bi20U-CA40-ADZ30X2-B3131 W/BS2.1	M4283292	<i>Uprox</i>	•	20	2-Wire AC/DC Short-Circuit Protected
	Bi20-CA40-ADZ30X2-B3131/S34 W/BS2.1	M4283590		•	20	
	Bi20-CA40-ADZ30X2-B3131/S34/S1590	M4283594	<i>weldguard</i>	•	20	
	Bi20-CA40-ADZ30X2-B3131/S34/S1591 W/BS2.1	M4283596	<i>armorguard</i>	•	20	



**BS 2.1 Mounting Bracket**



**BS 2.0 Mounting Bracket**

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	250	≤200	-30 to +85	IP 67	AL	TP	GN	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	250	≤200	-30 to +85	IP 67	AL	TP	GN	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
	250	≤200	-30 to +85	IP 67	AL	WG	GN	YE	RK 4T-*	2	
	250	≤200	-30 to +85	IP 67	AG	WG	GN	YE	RK 4T-*	2	
	250	≤200	-30 to +85	IP 67	AG	WG	GN	YE	RK 4T-*	2	
10-300 VDC 20-250 VAC	20	≤400/300	-30 to +85	IP 67	AL	TP	GN	YE	RKM 30-*M	3	<p><b>Diagram 3</b></p>
	20	≤400/300	-30 to +85	IP 67	AL	SF	GN	YE	RKM 30-*M	3	
	20	≤400/300	-25 to +70	IP 67	AL	WG	GN	YE	RKM 30-*M	3	
	20	≤400/300	-25 to +70	IP 67	AG	WG	GN	YE	RKM 30-*M	3	
10-300 VDC 20-250 VAC	20	≤400/300	-30 to +85	IP 67	AL	TP	GN	YE	KB 3T-*	4	<p><b>Diagram 4</b></p>
	20	≤400/300	-25 to +70	IP 67	AL	TP	GN	YE	KB 3T-*	4	
	20	≤400/300	-25 to +70	IP 67	AL	WG	GN	YE	KB 3T-*	4	
	20	≤400/300	-25 to +70	IP 67	AG	WG	GN	YE	KB 3T-*	4	

Rectangular

For material descriptions see page M22.



# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>CA4080 - Embeddable, minifast® Connector</b> 	Bi20-CA4080-ADZ30X2-B1131	T4283400	<i>Metal Edge Det.</i>	•	20	2-Wire AC/DC Short-Circuit Protected
<b>CA4080 - Embeddable, eurofast® Connector</b> 	Bi20-CA4080-VP4X2-H1141	T1625590	<i>Metal Edge Det.</i>	•	20	4-Wire DC PNP
<b>CA40130 - Embeddable, minifast Connector</b> 	Bi20-CA40130-ADZ30X2-B1131	T4283503	<i>Metal Edge Det.</i>	•	20	2-Wire AC/DC Short-Circuit Protected
<b>CA40130 - Embeddable, eurofast Connector</b> 	Bi20-CA40130-VP4X2-H1141	T4283599	<i>Metal Edge Det.</i>	•	20	4-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-300 VDC 20-250 VAC	30/100	≤400/300	-25 to +70	IP 67	TS	SF	GN	YE	RKM 30-*M	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
10-65 VDC	100	£400	-25 to +70	IP 67	TS	SF	GN	YE	RK 4.4T-*	2	
10-300 VDC 20-250 VAC	30/100	≤400/300	-25 to +70	IP 67	TS	SF	GN	YE	RKM 30-*M	1	
10-65 VDC	100	£400	-25 to +70	IP 67	TS	SF	GN	YE	RK 4.4T-*	2	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>CK4080 - Embeddable, minifast® Connector</b> 	Bi20-CK4080-ADZ30X2-B1131	T4283493	<i>Metal Edge Det.</i>	•	20	2-Wire AC/DC Short-Circuit Protected
<b>CK4080 - Embeddable, eurofast® Connector</b> 	Bi20-CK4080-VP4X2-H1141	T4283491	<i>Metal Edge Det.</i>	•	20	4-Wire DC PNP
<b>CK40130 - Embeddable, minifast Connector</b> 	Bi20-CK40130-ADZ30X2-B1131	T4283589	<i>Metal Edge Det.</i>	•	20	2-Wire AC/DC Short-Circuit Protected
<b>CK40130 - Embeddable, eurofast Connector</b> 	Bi20-CK40130-VP4X2-H1141	T4283591-1	<i>Metal Edge Det.</i>	•	20	4-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-300 VDC 20-250 VAC	30/100	£400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
10-65 VDC	100	£400	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	2	
10-300 VDC 20-250 VAC	30/100	£400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	
10-65 VDC	100	£400	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	2	

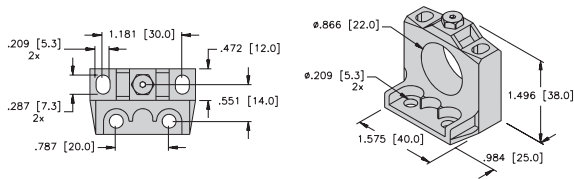
Rectangular

For material descriptions see page M22.

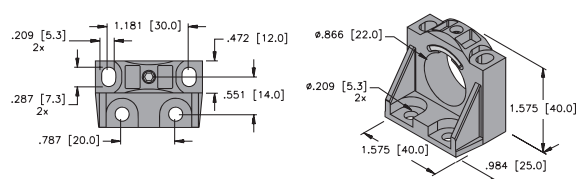
# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>CK40 - Embeddable/Nonembeddable, eurofast® Connector</b> 	Bi15-CK40-AD4X-H1141 W/BS 2.1	M4465090		•	15	2-Wire DC
	Ni20-CK40-AD4X-H1141 W/BS 2.1	M4465290			20	
	Bi15U-CK40-AN6X2-H1141 W/BS 2.1	M1625690	<i>Uprox</i>	•	15	3-Wire DC NPN
	Bi15-CK40-AN6X2-H1141 W/BS 2.1	M1625190		•	15	
	Ni20-CK40-AN6X2-H1141 W/BS 2.1	M1625390			20	
	Ni25U-CK40-AN6X2-H1141 W/BS 2.1	M1625789	<i>Uprox</i>		25	
	Ni35U-CK40-AN6X2-H1141 W/BS 4	M1625810	<i>Uprox</i>		35	
	Bi15U-CK40-AP6X2-H1141 W/BS 2.1	M1625689	<i>Uprox</i>	•	15	3-Wire DC PNP
	Bi15-CK40-AP6X2-H1141 W/BS 2.1	M1625090		•	15	
	Ni20-CK40-AP6X2-H1141 W/BS 2.1	M1625290			20	
Ni25U-CK40-AP6X2-H1141 W/BS 2.1	M1625790	<i>Uprox</i>		25		
Ni35U-CK40-AP6X2-H1141 W/BS 4	M1625800	<i>Uprox</i>		35		
Bi15-CK40-VN4X2-H1141 W/BS 2.1	M1550190	<i>Comp. Outputs</i>	•	15	4-Wire DC NPN	
Ni20-CK40-VN4X2-H1141 W/BS 2.1	M1550390	<i>Comp. Outputs</i>		20		
Bi15-CK40-VP4X2-H1141 W/BS 2.1	M1550091	<i>Comp. Outputs</i>	•	15	4-Wire DC PNP	
Ni20-CK40-VP4X2-H1141 W/BS 2.1	M1550290	<i>Comp. Outputs</i>		20		
Ni35U-CK40-VP6X2-H1141	M1625815	<i>Uprox</i>		35		
Bi15-CK40-Y1X-H1141 W/BS 2.1	M4065000			•	15	2-Wire DC NAMUR
Bi15U-CK40-ASIX2-H1140 W/BS 2.1	M1901088	<i>Uprox</i>		•	15	2-Wire ASI-BUS
Ni25U-CK40-ASIX2-H1140 W/BS 2.1	M1901089	<i>Uprox</i>		25		



**BS 2.1 Mounting Bracket**



**BS 4 Mounting Bracket**

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	150	≤100	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	150	≤100	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.2T-*	1	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	<b>Diagram 2</b> 
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	3	<b>Diagram 3</b> 
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	3	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	3	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	3	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	RK 4T-*	3	
10-65 VDC	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	4	<b>Diagram 4</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	4	
10-65 VDC	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	5	<b>Diagram 5</b> 
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	5	
	250	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	5	
5-30 VDC	150	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	RK 4.21T-*	6	<b>Diagram 6</b> 
18-33 VDC	200	N/A	-30 to +85	IP 67	PBT	PBT	GN	YE	RKC 254-*M	7	<b>Diagram 7</b> 
	200	N/A	-30 to +85	IP 67	PBT	PBT	GN	YE	RKC 254-*M	7	

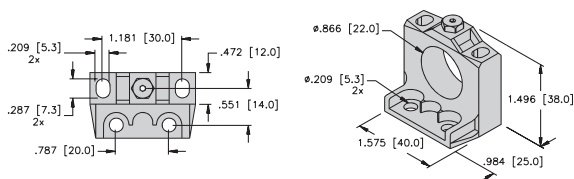
Rectangular

For material descriptions see page M22.

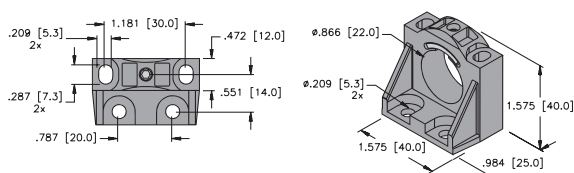
# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>CK40 - Embeddable/Nonembeddable, minifast® Connector</b> 	Bi15U-CK40-ADZ30X2-B1131 W/BS 2.1	M4280090	<i>Uprox</i>	•	15	2-Wire AC/DC Short-Circuit Protected	
	Ni25U-CK40-ADZ30X2-B1131 W/BS 2.1	M4280290	<i>Uprox</i>		25		
	Ni35U-CK40-ADZ30X2-B1131 W/BS 4	M4280410	<i>Uprox</i>		35		
	Bi15-CK40-ADZ30X2-B1131/S34 W/BS 2.1	M4244090		WFI	•	15	2-Wire AC/DC Short-Circuit Protected
	Bi15-CK40-AZ3X2-B1131 W/BS 2.1	M1335091			•	15	2-Wire AC/DC
	Ni20-CK40-AZ3X2-B1131 W/BS 2.1	M1335291				20	
<b>CK40 - Embeddable/Nonembeddable, microfast® Connector</b> 	Bi15U-CK40-ADZ30X2-B3131 W/BS 2.1	M4280091	<i>Uprox</i>	•	15	2-Wire AC/DC Short-Circuit Protected	
	Ni25U-CK40-ADZ30X2-B3131 W/BS 2.1	M4280291	<i>Uprox</i>		25		
	Ni35U-CK40-ADZ30X2-B3131 W/BS 4	M4280430	<i>Uprox</i>		35		
	Bi15-CK40-ADZ30X2-B3131/S34 W/BS 2.1	M4244290		WFI	•	15	2-Wire AC/DC Short-Circuit Protected
	Bi15-CK40-AZ3X2-B3131 W/BS 2.1	M1335095			•	15	2-Wire AC/DC
	Ni20-CK40-AZ3X2-B3131 W/BS 2.1	M1335290				20	



**BS 2.1 Mounting Bracket**



**BS 4 Mounting Bracket**

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-300 VDC 20-250 VAC	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	
10-300 VDC 20-250 VAC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 30-*M	1	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	
10-300 VDC 20-250 VAC	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	
10-300 VDC 20-250 VAC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	KB 3T-*	2	

Rectangular

For material descriptions see page M22.



# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>CP40 - Embeddable/Nonembeddable, Terminal Chamber</b>  	Bi15-CP40-AD4X	M4477000		•	15	2-Wire DC
	Ni20-CP40-AD4X	M4477100			20	
	Bi15U-CP40-AN6X2	M1623512	<i>Uprox</i>	•	15	3-Wire DC NPN
	Bi15-CP40-AN6X2	M1623000		•	15	
	Ni20-CP40-AN6X2	M1623100			20	
	Ni25U-CP40-AN6X2	M1623711	<i>Uprox</i>		25	
	Ni40U-CP40-AN6X2	M1623610	<i>Uprox, Ext. Range</i>		40	
	Bi15-CP40-AN6X2/S97	M1623001	<i>Low Temp -40° C</i>	•	15	
	Bi15U-CP40-AP6X2	M1623502	<i>Uprox</i>	•	15	3-Wire DC PNP
	Bi15-CP40-AP6X2	M1603000		•	15	
	Ni20-CP40-AP6X2	M1603100			20	
	Ni25U-CP40-AP6X2	M1623701	<i>Uprox</i>		25	
	Ni40U-CP40-AP6X2	M1623602	<i>Uprox</i>		40	
	Ni50U-CP40-AP6X2	M1625842	<i>Uprox, Ext. Range</i>		50	
	Bi15U-CP40-VN4X2	M1540511	<i>Uprox</i>	•	15	4-Wire NPN
	Bi15-CP40-VN4X2	M1525000	<i>Comp. Outputs</i>	•	15	
	Bi15-CP40-VN4X2/S100	M1514400	<i>High Temp. 100°C</i>	•	15	
	Bi20-CP40-VN4X2	M1579221	<i>Ext. Range</i>	•	20	
	Ni20-CP40-VN4X2	M1525100	<i>Comp. Outputs</i>		20	
	Ni20-CP40-VN4X2/S100	M1527200	<i>High Temp. 100°C</i>		20	
	Ni20NF-CP40-VN4X2	M1528200	<i>Nonferrous</i>		20	
	Ni35-CP40-VN4X2	M1525400	<i>Comp. Outputs</i>		35	
	Ni40U-CP40-VN4X2	M1540611	<i>Uprox, Ext. Range</i>		40	
	Ni50U-CP40-VN4X2	M1625807	<i>Uprox</i>		50	
	Bi15U-CP40-VP4X2	M1540501	<i>Uprox</i>	•	15	4-Wire PNP
	Bi15-CP40-VP4X2	M1501000	<i>Comp. Outputs</i>	•	15	
	Bi15-CP40-VP4X2/S100	M1501900	<i>High Temp. 100°C</i>	•	15	
	Bi20-CP40-VP4X2	M1501200	<i>Ext. Range</i>	•	20	
	Ni20-CP40-VP4X2	M1501100	<i>Comp. Outputs</i>		20	
	Ni20-CP40-VP4X2/S100	M1502000	<i>High Temp. 100°C</i>		20	
	Ni20NF-CP40-VP4X2	M1508200	<i>Nonferrous</i>		20	
	Ni35-CP40-VP4X2	M1501400	<i>Comp. Outputs</i>		35	
	Ni40U-CP40-VP4X2	M1540601	<i>Uprox, Ext. Range</i>		40	
	Ni50U-CP40-VP4X2	M1538303	<i>Uprox</i>		50	
	Bi15U-CP40-ASIX2	M1901003	<i>Uprox</i>	•	15	2-Wire ASI-BUS
	Ni40U-CP40-ASIX2	M1901008	<i>Uprox</i>		40	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	150	≤100	-25 to +70	IP 67	PBT	PBT	N/A	YE	- - - -	1	<b>Diagram 1</b> 
	150	≤100	-25 to +70	IP 67	PBT	PBT	N/A	YE	- - - -	1	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	2	<b>Diagram 2</b> 
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	2	
	250	≤200	-40 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	<b>Diagram 3</b> 
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	
10-65 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	4	<b>Diagram 4</b> 
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	150	≤200	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	150	≤200	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
	100	≤200	0 to +60	IP 67	PBT	PBT	GN	YE	- - - -	4	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	4	
10-65 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	4	<b>Diagram 5</b> 
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	
	150	≤200	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	5	
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	
	150	≤200	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	5	
	100	≤200	0 to +60	IP 67	PBT	PBT	GN	YE	- - - -	5	
	150	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	5	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	5	
18-33 VDC	200	N/A	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	6	<b>Diagram 6</b> 
	200	N/A	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	6	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>CP40 - Embeddable/Nonembeddable, Terminal Chamber</b> 	Bi 15-CP40-VN4X2/S109	M1526900	Time Delay	•	15	4-Wire NPN
	Ni 20-CP40-VN4X2/S109	M1527100	Time Delay		20	
	Bi 15-CP40-VP4X2/S109	M1504721	Time Delay	•	15	4-Wire PNP
	Ni 30-CP40-VP4X2/S109	M1512521	Time Delay		30	
	Bi 15-CP40-VN4X2/S110	M1527000	Time Delay	•	15	4-Wire NPN
	Ni 20-CP40-VN4X2/S110	M1527300	Time Delay		20	
	Bi 15-CP40-VP4X2/S110	M1509821	Time Delay	•	15	4-Wire PNP
	Ni 20-CP40-VP4X2/S110	M1509921	Time Delay		20	
	Bi 15-CP40-FDZ30X2	M4224100	Prog. Outputs	•	15	2-Wire AC/DC
	Bi 15-CP40-FDZ30X2/S34	M4226100	WFI	•	15	
	Bi 15-CP40-FDZ30X2/S97	M4226600	Low Temp. -40°C	•	15	
	Bi 15U-CP40-FDZ30X2	M4280601	Uprox	•	15	
	Ni 20-CP40-FDZ30X2	M4224200	Prog. Outputs		20	
	Ni 35-CP40-FDZ30X2	M4224500	Prog. Outputs		35	
	Ni 40U-CP40-FDZ30X2	M4280801	Uprox		40	
	Bi 15-CP40-FZ3X2	M1341000	Prog. Outputs	•	15	2-Wire AC/DC
	Bi 15-CP40-FZ3X2/S97	M1341010	Low Temp. -40°C	•	15	
	Bi 15-CP40-FZ3X2/S100	M1377600	High Temp. 100°C	•	15	
	Ni 20-CP40-FZ3X2	M1341100	Prog. Outputs		20	
	Ni 20-CP40-FZ3X2/S100	M1377500	High Temp. 100°C		20	
Ni 20NF-CP40-FZ3X2	M1378200	Prog. Outputs		20		
Ni 35-CP40-FZ3X2	M1341300	Prog. Outputs		35		
Ni 40-CP40-FZ3X2/S100	M1374802	High Temp. 100°C				
Bi 15-CP40-FZ3X2/S109	M1373700	Time Delay	•	15	2-Wire AC	
Bi 15-CP40-FZ3X2/S110	M1373500	Time Delay	•	15		
Ni 20-CP40-FZ3X2/S109	M1374500	Time Delay		20		
Ni 20-CP40-FZ3X2/S110	M1374600	Time Delay		20		
Ni 30-CP40-FZ3X2/S109	M1374700	Time Delay		30		
Ni 30-CP40-FZ3X2/S110	M1374400	Time Delay		30		
Bi 15-CP40-VDZ3X2	M4222700	Comp. Outputs	•	15	4-Wire AC/DC	
Bi 15-CP40-Y1X	M1012000		•	15	NAMUR	
Ni 20-CP40-Y1X	M1012100			20		

WFI = Weld-Field Immune Sensors.  
 "/S109" Designates on Delay.  
 "/S110" Designates off Delay.

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	<b>Diagram 1</b> 
	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	<b>Diagram 2</b> 
	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	<b>Diagram 3</b> 
	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	
10-300 VDC 20-250 VAC	60	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	<b>Diagram 4</b> 
	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-40 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	<b>Diagram 5</b> 
	20	≤400/300	-40 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	0 to +60	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	<b>Diagram 6</b> 
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
20-250 VAC 20-320 VDC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
5-30 VDC	150	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	- - - -	5	
	150	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	- - - -	5	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<p><b>Q50 - Nonembeddable, <i>minifast</i>® Connector</b></p>	Ni20-Q50-ADZ30X2-B1131/S34	T4265200	<i>Weld-Field Immune</i>		20	2-Wire AC/DC
<p><b>Q50 - Nonembeddable, <i>microfast</i>® Connector</b></p>	Ni20-Q50-ADZ30X2-B3131/S34	T4265290	<i>Weld-Field Immune</i>		20	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-300 VDC 20-250 VAC	30	≤400/300	-25 to +70	IP 67	AL	Teflon	GN	YE	RKM 30-*M	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	30	≤400/300	-25 to +70	IP 67	AL	Teflon	GN	YE	KB 3T-*	2	

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>CP80 - Embeddable/Nonembeddable, Terminal Chamber</b> 	Ni 75U-CP80-AN6X2	M1623811	<i>Uprox</i>		75	3-Wire DC NPN
	Ni 75U-CP80-AP6X2	M1623801	<i>Uprox</i>		75	3-Wire DC PNP
	Bi 40-CP80-VN4X2	M1579800	<i>Comp. Outputs</i>	•	40	4-Wire DC NPN
	Ni 40-CP80-VN4X2	M1525500	<i>Comp. Outputs</i>		40	
	Ni 50-CP80-VN4X2	M1525600	<i>Comp. Outputs</i>		50	
	Ni 75U-CP80-VN4X2	M1540811	<i>Uprox</i>		75	
	Bi 40-CP80-VP4X2	M1569800	<i>Comp. Outputs</i>	•	40	4-Wire DC PNP
	Ni 40-CP80-VP4X2	M1501500	<i>Comp. Outputs</i>		40	
	Ni 50-CP80-VP4X2	M1501600	<i>Comp. Outputs</i>		50	
	Ni 75U-CP80-VP4X2	M1540801	<i>Uprox</i>		75	
	Bi 40-CP80-FDZ30X2	M4230901	<i>Prog. Outputs</i>	•	40	2-Wire AC/DC Short-Circuit Protected
	Ni 50-CP80-FDZ30X2	M4232100	<i>Prog. Outputs</i>		50	
	Ni 50-CP80-FDZ30X2/S100	M4229000	<i>Prog. Outputs</i>		50	
	Ni 75U-CP80-FDZ30X2	M4280901	<i>Uprox</i>		75	
	Bi 40-CP80-FZ3X2	M1340401	<i>Prog. Outputs</i>	•	40	2-Wire AC/DC
	Ni 40-CP80-FZ3X2	M1341500	<i>Prog. Outputs</i>		40	
	Ni 40-CP80-FZ3X2/S100	M1345300	<i>High Temp. 100°C</i>		40	
	Ni 50-CP80-FZ3X2	M1341600	<i>Prog. Outputs</i>		50	
Ni 40-CP80-Y1	M1040000				40	2-Wire NAMUR
Ni 50-CP80-Y1	M1040100				50	
Ni 75U-CP80-ASIX2	M1901010		<i>Uprox</i>		75	2-Wire ASI-BUS

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	1	<p><b>Diagram 1</b></p>
10-30 VDC	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	2	<p><b>Diagram 2</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	<p><b>Diagram 3</b></p>
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	<p><b>Diagram 4</b></p>
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	250	≤200	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	4	
20-250 VAC 10-300 VDC	60	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	<p><b>Diagram 5</b></p>
	100	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	5	
	25	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	<p><b>Diagram 6</b></p>
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	5	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	5	
5-30 VDC	100	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	- - - -	6	<p><b>Diagram 7</b></p>
	100	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	- - - -	6	
18-33 VDC	200	N/A	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	7	<p><b>Diagram 7</b></p>

Rectangular

For material descriptions see page M22.



# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>Q80 - Embeddable/Nonembeddable, eurofast® Connector</b> 	Bi50U-Q80-AN6X2-H1141	M1608944	<i>Uprox</i>	•	50	3-Wire DC NPN
	Bi50U-Q80-AP6X2-H1141	M1608940	<i>Uprox</i>	•	50	3-Wire DC PNP
	Bi50U-Q80-VN4X2-H1141	M1562001	<i>Uprox</i>	•	50	4-Wire DC NPN
	Ni70U-Q80-VN4X2-H1141	M1625521	<i>Uprox</i>	•	70	
	Bi50U-Q80-VP4X2-H1141	M1562000	<i>Uprox</i>	•	50	4-Wire DC PNP
Ni70U-Q80-VP4X2-H1141	M1625833	<i>Uprox</i>	•	70		
<b>Q80 - Embeddable, minifast® Connector</b> 	Bi50-Q80-ADZ30X2-B1131	M4200310		•	50	2-Wire AC/DC Short-Circuit Protected
<b>Q80 - Embeddable, microfast® Connector</b> 	Bi50-Q80-ADZ30X2-B3131	M4200311		•	50	2-Wire AC/DC Short-Circuit Protected
<b>CP80 - Embeddable/Nonembeddable, Terminal Chamber</b> 	Ni60-Q80-Y1X	M1008700			60	2-Wire NAMUR

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	1	<b>Diagram 1</b> 
10-30 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4T-*	2	
10-65 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4.4T-*	3	<b>Diagram 2</b> 
	250	≤200	0 to +50	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	3	
10-65 VDC	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4.4T-*	4	<b>Diagram 3</b> 
	250	≤200	-25 to +70	IP 68	PBT	PBT	GN	YE	RK 4.4T-*	4	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RKM 30-*M	5	<b>Diagram 3</b> 
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	KB 3T-*	6	<b>Diagram 4</b> 
											<b>Diagram 5</b> 
5-30 VDC	100	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	- - - -	7	<b>Diagram 6</b> 
											<b>Diagram 7</b> 

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
	Ni 60-K90-VN4X-B2141	M1520300	Comp. Outputs		60	4-Wire DC NPN
	Ni 60-K90-VP4X-B2141	M1510300	Comp. Outputs		60	4-Wire DC PNP
	Ni 60-K90-AZ3X-B2131	M1354200			60	2-Wire AC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	60	≤200	-25 to +70	IP 67	PUR	PUR	N/A	YE	RK 40-*M	1	<p><b>Diagram 1</b></p>
10-65 VDC	60	≤200	-25 to +70	IP 67	PUR	PUR	N/A	YE	RK 40-*M	2	<p><b>Diagram 2</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	PBT	N/A	YE	RK 30-*M	3	<p><b>Diagram 3</b></p>

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
	Ni 60-K90SR-VN4X2	M1574000	Comp. Outputs		60	4-Wire DC NPN
	Ni 60-K90SR-VP4X2	M1564000	Comp. Outputs		60	4-Wire DC PNP
	Ni 100U-K90SR-VP4X2	M1625834	Uprox		100	
	Ni 60-K90SR-FDZ30X2	M4240200	Prog. Outputs		60	2-Wire AC/DC Short-Circuit Protected
	Ni 60-K90SR-FZ3X2	M1342900	Prog. Outputs		60	2-Wire AC/DC
	Ni 50-K90SR-Y1	M1007400				50

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	60	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	<p><b>Diagram 1</b></p>
10-65 VDC	60	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	<p><b>Diagram 2</b></p>
	250	≤200	-30 to +85	IP 68	PBT	PBT	GN	YE	- - - -	2	
10-300 VDC 20-250 VAC	100	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	<p><b>Diagram 3</b></p> <p>-OR-</p>
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
5-30 VDC	100	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	- - - -	4	<p><b>Diagram 4</b></p>

Rectangular

For material descriptions see page M22.

# Inductive Sensors



Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>Q130 - Nonembeddable, Potted-In Cable</b> 	Ni30-Q130-VN4X2	M1517800	Comp. Output		30	4-Wire DC NPN
	Ni30-Q130-VP4X2	M1517900	Comp. Output		30	4-Wire DC PNP
	Ni30-Q130-ADZ30X2	M4209500			30	2-Wire AC/DC
<b>Q130 - Nonembeddable, minifast® Connector</b> 	Ni30-Q130-VN4X2-B2141	M1518000	Comp. Output		30	4-Wire DC NPN
	Ni30-Q130-VP4X2-B2141	M1518001	Comp. Output		30	4-Wire DC PNP
<b>Q130 - Nonembeddable, minifast Connector</b> 	Ni30-Q130-ADZ30X2-B1131	M4210000			30	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	60	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	<p><b>Diagram 1</b></p>
10-65 VDC	60	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	<p><b>Diagram 2</b></p>
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	<p><b>Diagram 3</b></p>
10-65 VDC	60	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 40-*M	4	<p><b>Diagram 4</b></p>
10-65 VDC	60	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 40-*M	5	<p><b>Diagram 5</b></p>
10-300 VDC 20-250 VAC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 30-*M	6	<p><b>Diagram 6</b></p>

Rectangular

For material descriptions see page M22.



## Inductive Barrel Sensor Selection Guide

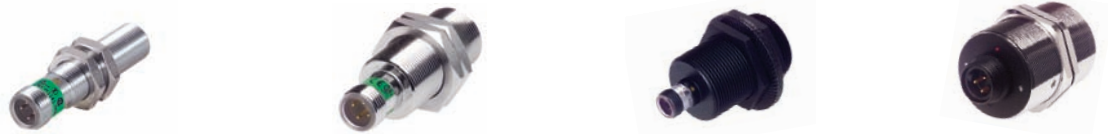


Embeddable/Nonembeddable Metal Barrel Quick Disconnect					
Housing	4 mm	5 mm	6.5 mm	8 mm	8 mm
Sensing Range	1 mm	1 mm	1.5 - 4 mm	1.5 - 2 mm	1.5 - 4 mm
Pages	D13	D13	D13 - D15	D15 - D17	D19 - D27



Embeddable/Nonembeddable Metal Barrel Potted-In Cable						
Housing	3 mm	4 mm	5 mm	6.5 mm	8 mm	8 mm
Sensing Range	1 mm	1 mm	1 mm	1.5 - 4 mm	1.5 - 3 mm	1.5 - 4 mm
Pages	D29	D29	D27 - D29	D31 - D33	D35 - D37	D39 - D47

Inductive Barrel Sensor Selection Guide



Embeddable/Nonembeddable Metal Barrel Quick Disconnect				
Housing	12 mm	18 mm	30 mm	47 mm
Sensing Range	2 - 8 mm	2 - 15 mm	10 - 20 mm	20 - 25 mm
Pages	D51 - D67	D91 - D115	D149 - D163	D189

Barrels



Embeddable/Nonembeddable Metal Barrel Potted-In Cable					
Housing	11 mm	12 mm	18 mm	30 mm	47 mm
Sensing Range	2 - 5 mm	2 - 8 mm	2 - 14 mm	10 - 20 mm	20 - 25 mm
Pages	D49	D69 - D81	D117 - D131	D165 - D173	D189

# Inductive Sensors

## Inductive Barrel Sensor Selection Guide



Embeddable/Nonembeddable Plastic Barrel Quick Disconnect					
Housing	12 mm	18 mm	18 mm	30 mm	40 mm
Sensing Range	2 - 8 mm	5 - 12 mm	5 mm	10 - 20 mm	30 mm
Pages	D83	D135 - D137	D145	D177	D185



Embeddable/Nonembeddable Plastic Barrel Potted-In Cable						
Housing	12 mm	18 mm	18 mm	20 mm	30 mm	40 mm
Sensing Range	2 - 8 mm	5 - 12 mm	5 mm	10 mm	10 - 20 mm	20 mm
Pages	D85 - D87	D139 - D141	D145	D147	D179 - D183	D185

**Inductive Barrel Sensor Selection Guide**



Embeddable/Nonembeddable Metal Terminal Chamber				
Housing	12 mm	18 mm	30 mm	47 mm
Sensing Range	2 - 8 mm	5 - 12 mm	10 - 20 mm	25 - 40 mm
Pages	D81	D133	D175	D191

Barrels



Embeddable/Nonembeddable Plastic Terminal Chamber					
Housing	12 mm	18 mm	20 mm	30 mm	40 mm
Sensing Range	2 - 8 mm	5 - 12 mm	10 mm	10 - 20 mm	15 - 30 mm
Pages	D89	D143	D147	D183	D187

# Inductive Sensors

## Inductive Sensor Part Number Key

**B i 10 U - G T 30 - A DZ 30 X2** Wiring Options Special Option Codes

### Mounting

- B = Embeddable
- N = Nonembeddable

### Principle of Operation

- i = Inductive

### Rated Operating Distance (mm)

### Sensing Characteristics

- F = Front Sensing on Q26 and Q34 Sensor
- FE =
- NF = Nonferrous Only
- S = Side Sensing on Q26 Sensor
- T = Side Sensing on Q34 Sensor
- U = *Uprox*<sup>®</sup> Sensor

### Housing Material Modifier

- E = Stainless Steel

### Housing Style

#### Barrel - Metal

- G = Full Threading, Generally Chrome Plated Brass
- H = Smooth, Chrome Plated Brass or Stainless Steel
- M = Partial Threading, Chrome Plated Brass

#### Barrel - Plastic

- K = Smooth
- KT = PVDF, Smooth
- P = Full Threading
- PT = PVDF, Full Threading
- S = Partial Threading
- T = Right Angle

#### Rectangular

- Q = Metal or Plastic, Various Rectangular Styles

#### Limit Switch

- CA = *stubby*<sup>®</sup>, Short Aluminum Housing, Connector
- CK = *stubby*<sup>®</sup>, Short Plastic Housing, Connector
- CP = *combiprox*<sup>®</sup>, Plastic Housing, Terminal Chamber Base with Removable Sensor

### Number of LEDs

Examples:

- Blank = No LEDs
- X2 = 2 LEDs

### Voltage Range

#### AC/DC: (No SCP\*\*)

- 3 = 20-250 VAC, 10-300 VDC
- 14 = 20-132 VAC, 10-140 VDC
- 31 = 20-250 VAC, 10-300 VDC, Plastic Barrel
- 33 = 35-250 VAC, Grounded Metal Barrel

#### AC/DC: (Latched SCP)

- 30 = 20-250 VAC, 10-300 VDC
- 32 = 20-250 VAC, 10-300 VDC
- 40 = 20-140 VAC/DC, High Off-State Current

#### DC:

- 4 = 10-65 VDC, Polarity Protected, Pulsed SCP\*\*
  - 6 = 10-30 VDC, Polarity Protected, Pulsed SCP
  - 7 = 10-30 VDC, TTL Compatible
  - 8 = 20-30 VDC, Polarity Protected, Pulsed SCP
  - 41 = 10-65 VDC, Polarity Protected, Pulsed SCP
  - 61 = 10-30 VDC, Polarity Protected, Pulsed SCP
- \*\*SCP = Short-Circuit and Overload Protection

### Output

- D = 2-Wire DC (Transistor Output)
- DZ = 2-Wire AC/DC, (Power MOSFET Output)
- LF = Frequency Output
- G = 2-Wire DC, Low Voltage Drop
- N = NPN Transistor (Current Sinking)
- P = PNP Transistor (Current Sourcing)
- R = Relay Output
- Z = 2-Wire AC or 2-Wire AC/DC

### Output Function

- A = Normally Open (N.O.)
- DA = Dynamic Output (Ring Sensor), Normally Open
- F = Connection Programmable (N.O. or N.C.)
- R = Normally Closed (N.C.)
- U = Jumper Programmable (N.O. or N.C.)
- V = Complementary Outputs: One N.O., One N.C.
- Y0 = NAMUR Output, Requires Switching Amplifier
- Y1 = NAMUR Output, Requires Switching Amplifier

### Secondary Barrel Modifier

- E = Extended Barrel Length
- H = armorguard<sup>®</sup>/Stoneface
- K = Short Barrel Length
- LD = Load Dump
- M = Medium Barrel Length
- SK = Right-Angle Terminal Chamber
- SR = Straight Terminal Chamber
- T = Barb Fitting at Cable Entry
- WD = Washdown IP 67/IP 68/IP 69K
- S = Side Sensing

Housing Diameter/Height (mm) or CRS Probe Length (mm = Number/10)

### Primary Barrel Modifier

- T = Teflon<sup>®</sup> Coated

## Wiring Options

### A) Connectorized Sensor

Bi 2-M12-AN6X- **H1 1 4 1**

#### Connector Family

- B1 = *minifast*®, Metal, Male
- B2 = *minifast*®, Plastic, Male
- B3 = *microfast*®, Metal, Male
- H1 = *eurofast*®, Metal or Plastic, Male
- V1 = *picofast*®, Metal, Male
- V2 = *picofast*®, Snap and M8x1, Male (Q08 Only)

#### Connector / Sensor Transition

- 1 = Straight
- 3 = Straight with Adapter
- 4 = Right-Angle with Adapter

#### Wiring Configuration

- Example:
- 1 = Standard
  - 3 = N.C. DC Output on Pin 4 (for US)

#### Number of Pins

### B) Potted Cable

Bi 2-G12-AN6X- **7M**

#### Cable Length

- Blank = 2 Meter cable
- 7M = 7 Meter cable

Barrels

## Special Option Codes

Bi 2-S12-AN7X- **/S100**

or

Bi10R-W30-DAN6X-H1141 **/F2**

#### Option Code

- Example:
- /S34 = Weld Field Immune
  - /S97 = -40°C (-40°F) Operating Temperature
  - /S100 = +100°C (+212°F) Operating Temp.
  - /S1589 = Barrel sensors with armorguard laminate

#### Option Code

- Example:
- /F2 = Alternate Oscillator Frequency

# Inductive Sensors

## Mounting

TURCK inductive proximity sensors are manufactured with a shielded coil, designated by “Bi” in the part number, and a nonshielded coil, designated by “Ni” in the part number. Embeddable (shielded) units may be safely flush-mounted in metal. Nonembeddable (nonshielded) units require a metal free area around the sensing face. Because of possible interference of the electromagnetic fields generated by the oscillators, minimum spacing is required between adjacent or opposing sensors.

It is good engineering practice to mount sensors horizontally or with the sensing face looking down. Avoid sensors that look up wherever possible, especially if metal filings and chips are present.

## Maximum Locknut Torque Specifications

The locknut torque should be considered for all threaded sensors to prevent the housing from being over stressed. The values below pertain to the locknut provided with each sensor. Liquid thread sealants of an anaerobic base, such as Loctite, are recommended if strong vibrations are likely.

**Caution:** Sensor barrels are typically brass. Consider break torque when selecting grade of thread sealant.

Barrel Size	Metal Barrel	Plastic Barrel
5 mm	5 Nm (3.7 ft-lb)	----
8 mm	10 Nm (7.4 ft-lb)	----
12 mm	10 Nm (11 ft-lb)	1 Nm (0.7 ft-lb)
18 mm	25 Nm (18 ft-lb)	2 Nm (1.4 ft-lb)
30 mm	90 Nm (66 ft-lb)	5 Nm (3.7 ft-lb)
47 mm	90 Nm (66 ft-lb)	----

## Drill Hole Sizes for Metric Threads

Thread Size	Pitch	Clr (mm)	Tap (mm)	Clr (in)	Tap (in)
M5 x 0.5	0.5	5.0	4.133	13/64	5/32
M8 x 1	1.0	8.0	6.27	21/64	1/4
M12 x 1	1.0	12.0	10.27	31/64	13/32
M18 x 1	1.0	18.0	16.27	23/32	41/64
M30 x 1.5	1.5	30.0	27.44	1-3/16	1-5/64
PG 9	1.41	15.2	12.76	5/8	1/2
PG 13.5	1.41	20.4	17.96	13/16	23/32
PG 36	1.59	47.0	44.24	1-7/8	1-47/64

$$\text{Tap Drill Size in Inches} = \frac{[\text{Diameter in mm} - (\text{Pitch in mm} / 0.577)]}{25.4}$$

Refer to Section L for plug taps.

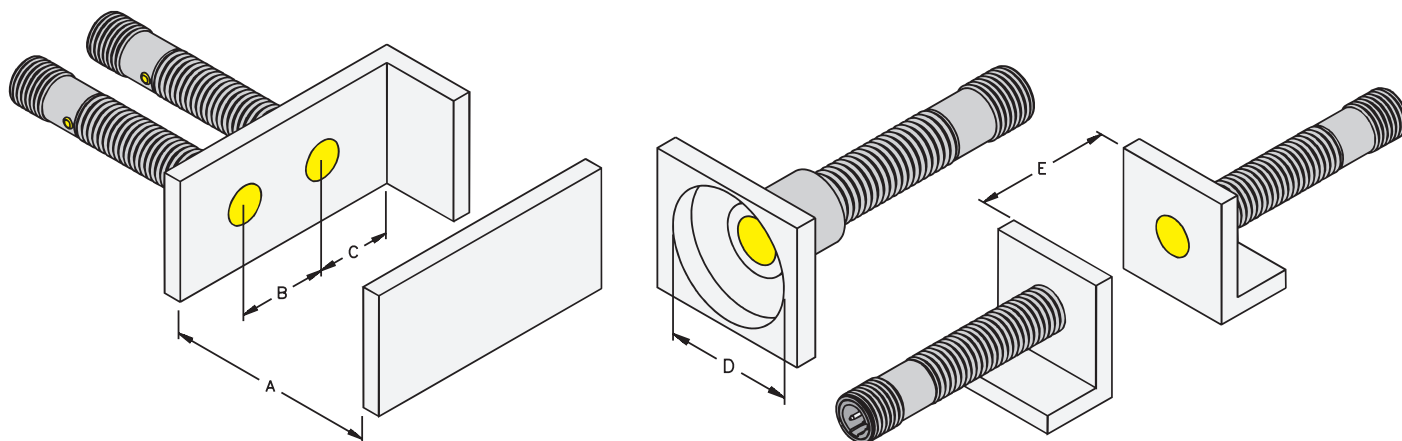
**Notes:**

**Barrels**



# Inductive Sensors

## Embeddable Mounting Considerations

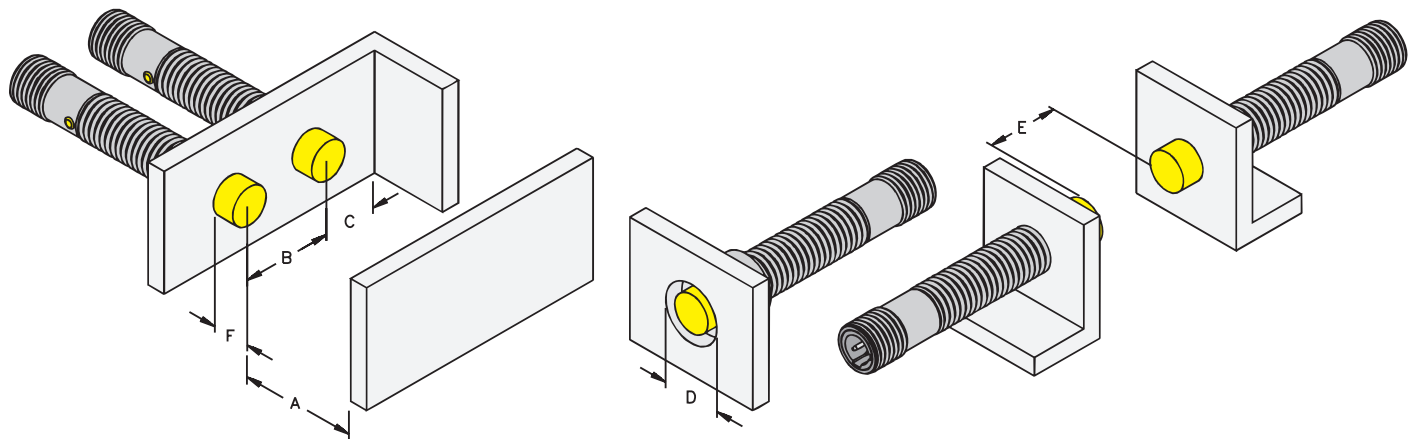


### Flush Mountable

Sensor Type	Barrel Diameter	A	B	C	D	E
Bi 1	4.00	3.00	8.00	6.00	12.00	6.00
Bi 1	5.00	3.00	10.00	8.00	15.00	6.00
Bi 1.5U	6.50	5.00	13.00	10.00	20.00	9.00
Bi 1.5	6.50	5.00	13.00	10.00	20.00	9.00
Bi 2	6.50	6.00	13.00	10.00	20.00	12.00
Bi 1.5U	8.00	5.00	16.00	12.00	24.00	9.00
Bi 1.5	8.00	5.00	16.00	12.00	24.00	9.00
Bi 2	8.00	6.00	16.00	12.00	24.00	12.00
Bi 2	11.00	6.00	22.00	17.00	33.00	12.00
Bi 2	12.00	6.00	24.00	18.00	36.00	12.00
Bi 3U	12.00	9.00	24.00	18.00	36.00	18.00
Bi 3	12.00	9.00	24.00	18.00	36.00	18.00
Bi 4	12.00	12.00	24.00	18.00	36.00	24.00
Bi 5U	18.00	15.00	36.00	27.00	54.00	30.00
Bi 5	18.00	15.00	36.00	27.00	54.00	30.00
Bi 7	18.00	21.00	36.00	27.00	54.00	42.00
Bi 8U	18.00	24.00	36.00	27.00	54.00	48.00
Bi 8	18.00	24.00	36.00	27.00	54.00	48.00
Bi 10U	30.00	30.00	60.00	45.00	90.00	60.00
Bi 10	30.00	30.00	60.00	45.00	90.00	60.00
Bi 12	30.00	36.00	60.00	45.00	90.00	72.00
Bi 15	30.00	45.00	60.00	45.00	90.00	90.00
Bi 20	47.00	60.00	94.00	71.00	141.00	120.00
Bi 25	47.00	75.00	94.00	71.00	141.00	150.00

Dimensions are in mm.

**Nonembeddable Mounting Characteristics**

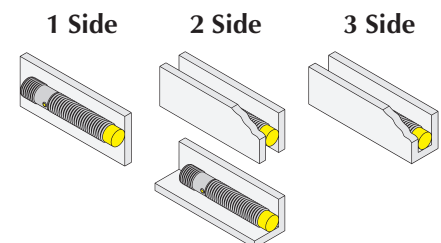


**Non-flush Mountable**

Sensor Type	Barrel Diameter	A	B	C	D	E	F	1 Side	2 Side	3 Side
Ni 3	6.50	9.00	20.00	10.00	20.00	18.00	6.00			
Ni 3	8.00	9.00	24.00	12.00	24.00	18.00	6.00			
Ni 4U	8.00	12.00	24.00	12.00	24.00	24.00	8.00			
Ni 4	8.00	12.00	24.00	12.00	24.00	24.00	8.00			
Ni 5	11.00	15.00	33.00	17.00	33.00	30.00	10.00			
Ni 4	12.00	12.00	36.00	18.00	36.00	24.00	8.00			
Ni 5	12.00	15.00	36.00	18.00	36.00	30.00	10.00			
Ni 8U	12.00	24.00	36.00	18.00	36.00	48.00	16.00	Sr=6 mm*		
Ni 8	12.00	24.00	36.00	18.00	36.00	48.00	16.00			
Ni 8	18.00	24.00	54.00	27.00	54.00	48.00	16.00			
Ni 10	18.00	30.00	54.00	27.00	54.00	60.00	20.00			
Ni 12U	18.00	36.00	54.00	27.00	54.00	72.00	20.00	Sr=10 mm*	Sr=9 mm*	Sr=9 mm*
Ni 14	18.00	42.00	54.00	27.00	54.00	84.00	20.00			
Ni 10	20.00	30.00	60.00	30.00	60.00	60.00	20.00			
Ni 15	30.00	45.00	90.00	45.00	90.00	90.00	20.00			
Ni 20U	30.00	60.00	90.00	45.00	90.00	120.00	25.00	Sr=15 mm*	Sr=12 mm*	Sr=11 mm*
Ni 20	30.00	60.00	90.00	45.00	90.00	120.00	20.00			
Ni 20	40.00	60.00	120.00	60.00	120.00	120.00	40.00			
Ni 30	40.00	90.00	120.00	60.00	120.00	180.00	40.00			
Ni 25	47.00	75.00	141.00	71.00	141.00	150.00	40.00			
Ni 40	47.00	120.00	141.00	71.00	141.00	240.00	40.00			

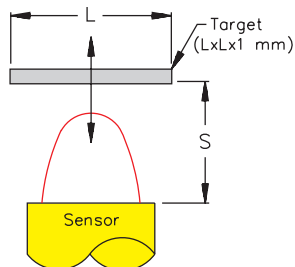
Barrels

Dimensions are in mm.  
\* Only DC sensors



## Sensing Range Diagrams

### Axial Approach

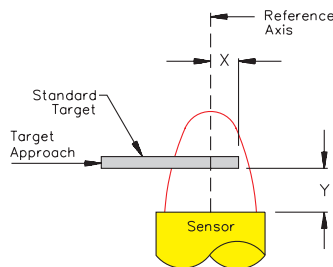


$L$  = Diameter of target  
 $S$  = Operating distance

Maximum operating distance is achieved using a standard target size or larger.

Sensing Range vs. Target Diameter <sup>(1)</sup>

### Lateral Approach



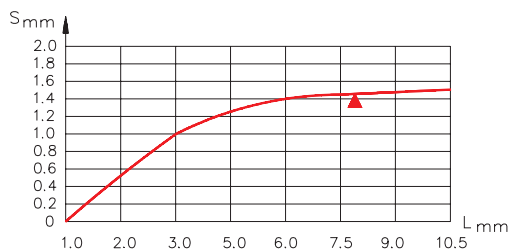
$X$  = Target leading edge position referenced to sensor center axis.

$Y$  = Target distance from sensing face.

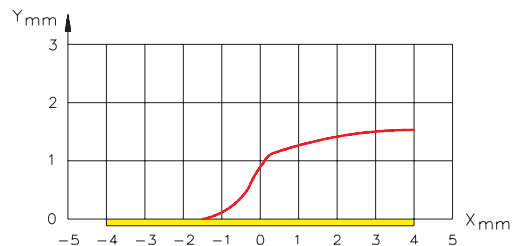
Target Distance vs. Minimum Sensor Coverage Using Standard Target <sup>(2)</sup>

Sensing Range vs. Target Diameter <sup>(1)</sup>

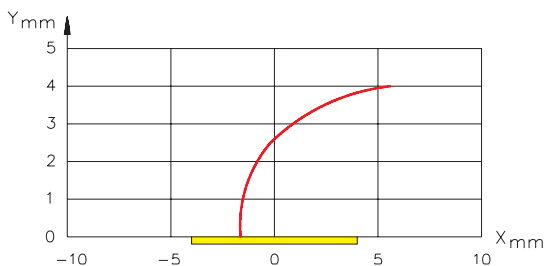
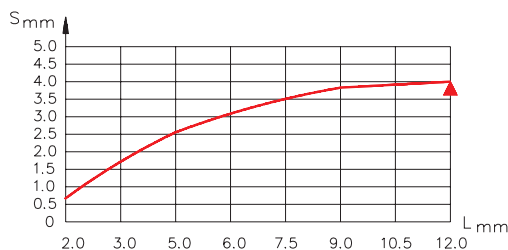
Bi1.5U-EG08-...



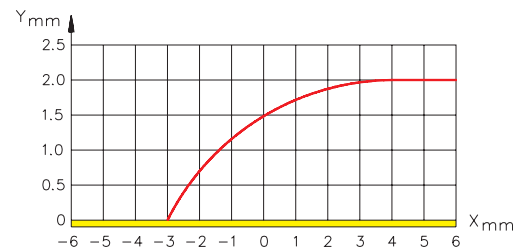
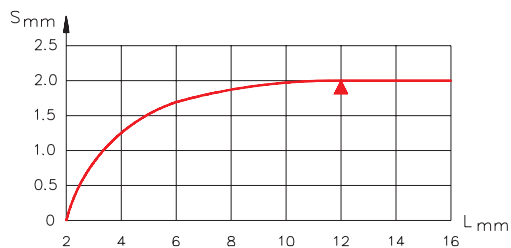
Target Distance vs. Minimum Sensor Coverage Using Standard Target <sup>(2)</sup>



Ni 4U-EG08-...



Bi 2U-M12-...



(1) Smallest value of  $L$  shown is minimum recommended target for that sensor.

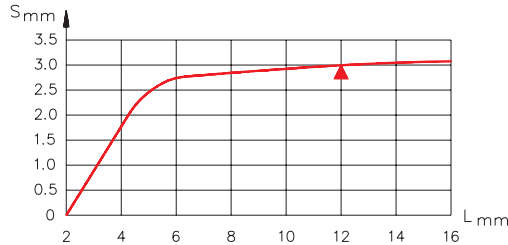
(2) Yellow area represents sensing face.

**Sensing Range Diagrams**

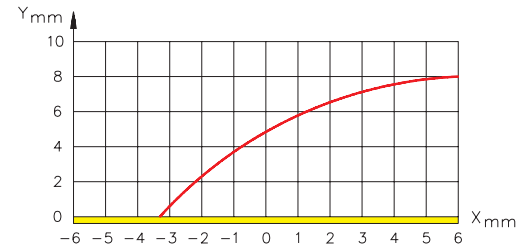
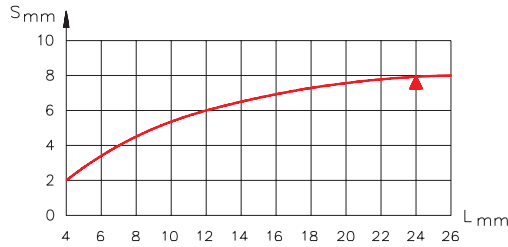
**Sensing Range vs. Target Diameter (1)**

**Target Distance vs. Minimum Sensor Coverage Using Standard Target (2)**

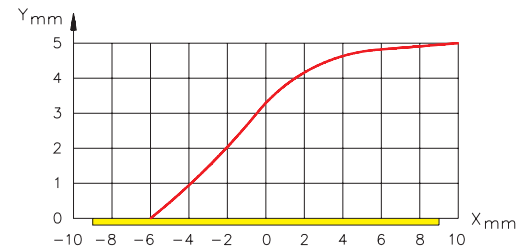
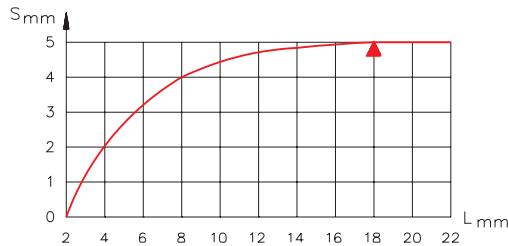
**Bi 3U-M12-..**



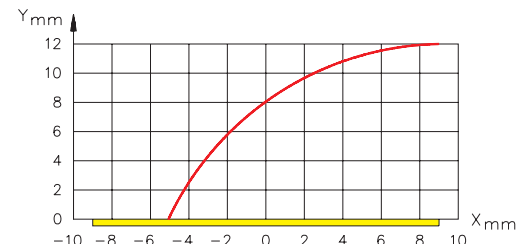
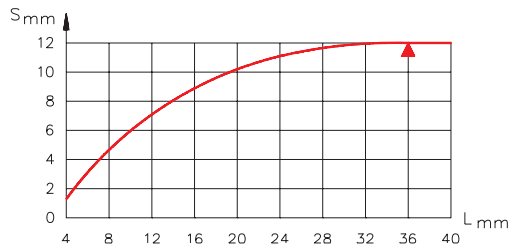
**Ni 8U-M12-..**



**Bi 5U-M18-..**



**Ni 12U-M18-..**



(1) Smallest value of L shown is minimum recommended target for that sensor.

(2) Yellow area represents sensing face.

**Barrels**

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>4 mm - Embeddable, Miniature Smooth, picofast® Quick Disconnect</b> 	Bi 1-EH04-AN6X-V1331	S4608540		1	3-Wire DC NPN
	Bi 1-EH04-AP6X-V1331	S4608440		1	3-Wire DC PNP
	Bi 1-EH04-Y1-V1330	S1003044		1	2-Wire DC NAMUR
<b>5 mm - Embeddable, Miniature Threaded, picofast Quick Disconnect</b> 	Bi 1-EG05-AN6X-V1331	S4608740		1	3-Wire DC NPN
	Bi 1-EG05-AP6X-V1331	S4608640		1	3-Wire DC PNP
	Bi 1-EG05-Y1-V1331	S1003241		1	2-Wire DC NAMUR
<b>6.5 mm - Embeddable, Miniature Smooth, picofast Quick Disconnect</b> 	Bi 1.5-EH6.5K-AN6X-V1131	S4610840	Short Barrel	1.5	3-Wire DC NPN
	Bi 2-EH6.5K-AN6X-V1131	S4610120	Short Barrel	2	
	Bi 1.5-EH6.5K-AP6X-V1131	S4610740	Short Barrel	1.5	3-Wire DC PNP
	Bi 1.5-EH6.5K-AP6X-V1131/S100	S4612003	High Temp. 100°C	1.5	
	Bi 2-EH6.5K-AP6X-V1131	S4610020	Short Barrel	2	
<b>6.5 mm - Embeddable, Miniature Smooth, picofast Quick Disconnect</b> 	Bi 1.5-EH6.5-AN6X-V1131	S4612120		1.5	3-Wire DC NPN
	Bi 1.5U-EH6.5-AN6X-V1131	S4600687	Uprox	1.5	
	Bi 2-EH6.5-AN6X-V1131	S4612320		2	
	Bi 2U-EH6.5-AN6X-V1131	S4281180	Uprox	2	
	Bi 1.5-EH6.5-AP6X-V1131	S4612020		1.5	3-Wire DC PNP
	Bi 2-EH6.5-AP6X-V1131	S4612220		2	
	Bi 2U-EH6.5-AP6X-V1131	S4281160	Uprox	2	
	Bi 1.5-EH6.5-AP6X-V1131/S100	S4612002	High Temp. 100°C	1.5	
	Bi 1.5-EH6.5-Y1-V1130	S1004621		1.5	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	<div style="border: 1px solid black; padding: 5px;"> <p><b>Diagram 1</b></p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>Diagram 2</b></p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>Diagram 3</b></p> </div>
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	PKG 3Z-*	3	
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	PKG 3Z-*	3	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +100	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +100	IP 67	SS	EPTR	N/A	YE	PKG 3Z-*	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	PKG 3Z-*	3	



Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>6.5 mm - Nonembeddable, Miniature Smooth, picofast® Quick Disconnect</b> 	Ni 3-EH6.5K-AN6X-V1131	S4610320	Short Barrel	3	3-Wire DC NPN
	Ni 3-EH6.5K-AP6X-V1131	S4610220	Short Barrel	3	3-Wire DC PNP
<b>6.5 mm - Nonembeddable, Miniature Smooth, picofast Quick Disconnect</b> 	Ni 3-EH6.5-AN6X-V1131	S4612520		3	3-Wire DC NPN
	Ni 4U-EH6.5-AN6X-V1131	S4600683	Uprox	4	
	Ni 3-EH6.5-AP6X-V1131	S4612420		3	3-Wire DC PNP
	Ni 4U-EH6.5-AP6X-V1131	S4600681	Uprox	4	
<b>8 mm - Nonembeddable, Miniature Smooth, picofast Quick Disconnect</b> 	Ni 2-H08K-AN6X-V1131	S1614800	Short Barrel	2	3-Wire DC NPN
	Ni 2-H08K-AP6X-V1131	S1604800	Short Barrel	2	3-Wire DC PNP
<b>8 mm - Embeddable, Miniature Smooth, picofast Quick Disconnect</b> 	Bi 1.5-H08K-AN6X-V1131	S1604340	Short Barrel	1.5	3-Wire DC NPN
	Bi 1.5-H08K-AP6X-V1131	S1604330	Short Barrel	1.5	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	2	
10-30 VDC	5000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	5000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
10-30 VDC	5000	≤150	-25 to +70	IP 67	SS	PBT	N/A	YE	PKG 3Z-*	1	
10-30 VDC	5000	≤150	-25 to +70	IP 67	SS	PBT	N/A	YE	PKG 3Z-*	2	

Barrels

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Embeddable, Miniature Threaded, picofast® Quick Disconnect</b> 	Bi 1.5-EG08K-AN6X-V1131	S4672540	Short Barrel	1.5	3-Wire DC NPN
	Bi 2-EG08K-AN6X-V1131	S4669550	Short Barrel	2	
	Bi 1.5-EG08K-AP6X-V1131	S4672440	Short Barrel	1.5	3-Wire DC PNP
	Bi 2-EG08K-AP6X-V1131	S4669450	Short Barrel	2	
	Bi 2-EG08K-AP6X-V1131/S957*	S4669452		2	
Bi 1.5-EG08K-Y1-V1131	S1003630	Short Barrel	1.5	2-Wire DC NAMUR	
<b>8 mm - Embeddable, Miniature Threaded, picofast Quick Disconnect</b> 	Bi 1.5-EG08-AN6X-V1131	S4602350		1.5	3-Wire DC NPN
	Bi 1.5U-EG08-AN6X-V1131	S4600530	Uprox	1.5	
	Bi 2-EG08-AN6X-V1131	S4602150	Ext. Range	2	
	Bi 2U-EG08-AN6X-V1131	S4602036	Uprox	2	
	Bi 1.5-EG08-AP6X-V1131	S4602220		1.5	3-Wire DC PNP
	Bi 1.5U-EG08-AP6X-V1131	S4600520	Uprox	1.5	
	Bi 2-EG08-AP6X-V1131	S4602050	Ext. Range	2	
	Bi 2-EG08-AP6X-V1131/S1589	S4602050-1	armorguard	2	
	Bi 2U-EG08-AP6X-V1131	S4602033		2	
	Bi 1.5-EG08-Y1-V1131	S1003530		1.5	2-Wire DC NAMUR
<b>8 mm - Embeddable, Miniature Threaded, picofast Quick Disconnect</b> 	Bi 2-G08K-AP6X-V1131	S4672803	Ext. Range	2	3-Wire DC PNP
<b>8 mm - Embeddable, Miniature Threaded, picofast Quick Disconnect</b> 	Bi 2-G08-AP6X-V1131	S4602002			3-Wire DC PNP

\* Full flush mounting in steel without reducing 2 mm sensing range.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	PKG 3Z-*	3	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	1000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	PKG 3Z-*	2	
	1000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	PKG 3Z-*	3	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PBT	N/A	YE	PKG 3Z-*	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS		N/A	YE	PKG 3Z-*	2	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Nonembeddable, Miniature Threaded, picofast® Quick Disconnect</b> 	Ni 3-EG08K-AN6X-V1131	S4669750	Short Barrel	3	3-Wire DC NPN
	Ni 3-EG08K-AP6X-V1131	S4669650	Short Barrel	3	3-Wire DC PNP
	Ni 3-EG08K-Y1-V1130	S1003721	Short Barrel Short Barrel	3	2-Wire DC NAMUR
<b>8 mm - Nonembeddable, Miniature Threaded, picofast® Quick Disconnect</b> 	Ni 3-EG08-AN6X-V1131	S4602850		3	3-Wire DC NPN
	Ni 4U-EG08-AN6X-V1131	S4600630	Uprox	4	
	Ni 3-EG08-AP6X-V1131	S4602750		3	3-Wire DC PNP
	Ni 4U-EG08-AP6X-V1131	S4600620	Uprox	4	
Ni 3-EG08-Y1-V1130	S1003732			3	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; background-color: #e0f0e0; margin: 0;">Diagram 1</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center; background-color: #e0f0e0; margin: 0;">Diagram 2</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center; background-color: #e0f0e0; margin: 0;">Diagram 3</p> </div>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	PKG 3Z-*	3	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	1	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	PKG 3Z-*	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	PKG 3Z-*	3	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Embeddable, Miniature Threaded, eurofast® Quick Disconnect</b> 	Bi 2-EG08K-AG41X-H1341	S4562011	Short Barrel	2	2-Wire DC
	Bi 2-EG08K-AG41X-H1341/S1589	S4562090	armorguard	2	
	Bi 1.5-EG08K-AN6X-H1341	S4669150	Short Barrel	1.5	3-Wire DC NPN
	Bi 2-EG08K-AN6X-H1341	S4669560	Short Barrel	2	
	Bi 1.5-EG08K-AP6X-H1341	S4669050	Short Barrel	1.5	3-Wire DC PNP
	Bi 2-EG08K-AP6X-H1341	S4669460	Short Barrel	2	
	Bi 2-EG08K-AP6X-H1341/S1589	S4669486	armorguard	2	
	Bi 1.5-EG08K-Y1-H1341	S1003620	Short Barrel	1.5	2-Wire DC NAMUR
	Bi 1.5-EG08K-Y1X-H1341	S1003640	Short Barrel	1.5	
	<b>8 mm - Embeddable, Miniature Threaded, eurofast Quick Disconnect</b> 	Bi 2-EG08-AG41X-H1341	S4562001	Ext. Range	2
Bi 2-EG08-AG41X-H1341/S1589		S4562095	armorguard	2	
Bi 1.5-EG08-AD6X-H1341		S4600203		1.5	
Bi 1.5-EG08-AN6X-H1341		S4602360		1.5	3-Wire DC NPN
Bi 1.5-EG08WD-AN6X-H1341		S4602211	Washdown	1.5	
Bi 1.5-EG08-AN7X-H1341		S4602361	TTL Compatible	1.5	
Bi 1.5U-EG08-AN6X-H1341		S4600550	Uprox	1.5	
Bi 2-EG08-AN6X-H1341		S4602160	Ext. Range	2	
Bi 2-EG08-AN6X-H1341/S1589		S4602182	armorguard	2	
Bi 2U-EG08-AN6X-H1341		S4602037	Uprox	2	
Bi 1.5U-EGT08-AN6X-H1341		S4600558	Uprox	1.5	
Bi 1.5-EG08-AP6X-H1341		S4602260		1.5	
Bi 1.5-EG08WD-AP6X-H1341		S4602210	Washdown	1.5	
Bi 1.5U-EG08-AP6X-H1341		S4600540	Uprox	1.5	
Bi 2-EG08-AP6X-H1341		S4602060	Ext. Range	2	
Bi 2-EG08-AP6X-H1341/S1589		S4602086	armorguard	2	
Bi 2U-EG08-AP6X-H1341		S4602034	Uprox	2	
Bi 1.5U-EG08-AP6X-H1341/S1589		S4600540-1	Uprox/armorguard	1.5	
Bi 1.5U-EGT08-AP6X-H1341		S4600555	Uprox	1.5	
Bi 2-EG08-VN6X-H1341		S4602521	Comp. Outputs	2	4-Wire DC NPN
Bi 2-EG08-VP6X-H1341		S4602522	Comp. Outputs	2	4-Wire DC PNP
Bi 1.5-EG08-Y1-H1341		S1003502		1.5	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 2</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	4	
	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*	4	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	RK 4.21T-*	5	<b>Diagram 3</b> 
	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4.21T-*	5	
10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	1	
	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*	1	
	1000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4.2T-*	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 4</b> 
	3000	≤150	-10 to +85	IP 68, 69K	SS	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤150	-25 to +70	IP 68	SS	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤150	-30 to +85	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	
	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*	3	
	1000	≤150	-35 to +85	IP 68	SS	PA 12	N/A	YE	RK 4T-*	3	
	3000	≤150	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 5</b> 
	3000	≤150	-10 to +85	IP 68, 69K	SS	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	RK 4T-*	4	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	4	
	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-2	4	
	1000	≤150	-35 to +85	IP 68	SS	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤150	-30 to +85	IP 67	SS	WG	N/A	YE	RK 4T-*	4	
	2000	≤150	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	4	
10-30 VDC	3000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4.4T-*	6	<b>Diagram 6</b> 
10-30 VDC	3000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4.4T-*	7	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	RK 4.21T-*	5	<b>Diagram 7</b> 

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Embeddable, Miniature Threaded, eurofast® Quick Disconnect</b> 	Bi 1.5-G08-AN6X-H1341	S4603700		1.5	3-Wire DC NPN
	Bi 1.5-G08-AN7X-H1341	S4701126	TTL Compatible	1.5	
	Bi 2-G08-AN6X-H1341	S4602600	Ext. Range	2	
	Bi 1.5-G08-AP6X-H1341	S4603600		1.5	3-Wire DC PNP
	Bi 2-G08-AP6X-H1341	S4602500	Ext. Range	2	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	1	<b>Diagram 1</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2	<b>Diagram 2</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2	

\* Length in meters.

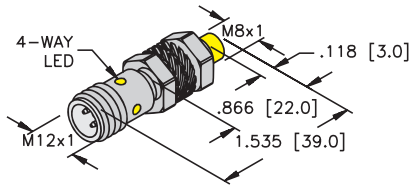
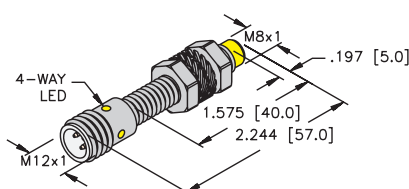
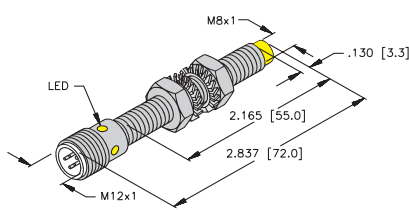
Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Nonembeddable, Miniature Threaded, eurofast® Quick Disconnect</b> 	Ni 4-EG08K-AG41X-H1341	S4561011	Short Barrel	4	2-Wire DC
	Ni 4-EG08K-AG41X-H1341/S1589	S4561090	armorguard	4	
	Ni 3-EG08K-AN6X-H1341	S4669760	Short Barrel	3	3-Wire DC NPN
	Ni 3-EG08K-AP6X-H1341	S4669660	Short Barrel	3	3-Wire DC PNP
	Ni 3-EG08K-Y1-H1341 Ni 3-EG08K-Y1X-H1341	S1003720 S1003704	Short Barrel	3 3	2-Wire DC NAMUR
<b>8 mm - Nonembeddable, Miniature Threaded, eurofast Quick Disconnect</b> 	Ni 4-EG08-AG41X-H1341	S4561001		4	2-Wire DC
	Ni 4-EG08-AG41X-H1341/S1589	S4561091	armorguard	4	
	Ni 3-EG08-AN6X-H1341	S4602860		3	3-Wire DC NPN
	Ni 3-EG08-AN6X-H1341/S1589	S4602889	armorguard	3	
	Ni 4U-EG08-AN6X-H1341	S4600650	Uprox	4	
	Ni 3-EG08-AN7X-H1341	S4669761	TTL Compatible	3	
	Ni 3-EG08-AP6X-H1341	S4602760		3	3-Wire DC PNP
	Ni 3-EG08-AP6X-H1341/S1589	S4602799	armorguard	3	
	Ni 4U-EG08-AP6X-H1341	S4600640	Uprox	4	
	Ni 4U-EG08-AP6X-H1341/S1589	S4600640-1	Uprox/armorguard	4	
Ni 3-EG08-Y1-H1341	S1003730		3	2-Wire DC NAMUR	
<b>8 mm - Nonembeddable, Miniature Threaded, eurofast Quick Disconnect</b> 	Ni 2-G08-AN6X-H1341	S4603300		2	3-Wire DC NPN
	Ni 3-G08-AN6X-H1341	S4602704		3	
	Ni 2-G08-AP6X-H1341	S4603200		2	3-Wire DC PNP
	Ni 3-G08-AP6X-H1341	S4602705		3	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	SS	WG	N/A		RK 4T-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2	<b>Diagram 2</b> 
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	RK 4.21T-*	4	
	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	RK 4.21T-*	4	
10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	1	<b>Diagram 3</b> 
	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2	
	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	RK 4T-*	2	
	2000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 4</b> 
	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*	3	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤150	-30 to +85	IP 67	SS	WG	N/A	YE	RK 4T-*	3	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	N/A	RK 4.21T-*	4	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	

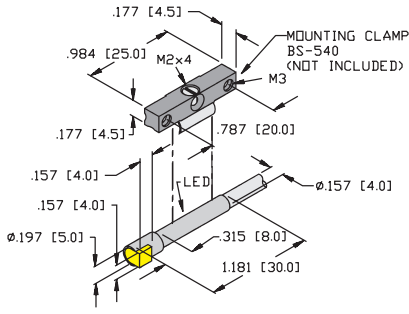
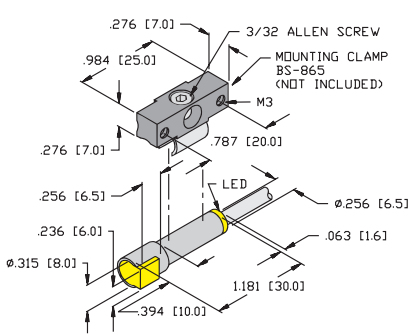
Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>5 mm - Embeddable, Side Sensing, Miniature Smooth Barrel, Potted-In Cable</b>  	Bi 1-HS540-AN6X	S4604101	Side Sensing	1	3-Wire DC NPN
	Bi 1-HS540-AP6X	S4604001	Side Sensing	1	3-Wire DC PNP
	Bi 1-HS540-Y1	S1004001	Side Sensing	1	2-Wire DC NAMUR
<b>8 mm - Embeddable, Side Sensing, Miniature Smooth Barrel, Potted-In Cable</b>  	Bi 1.5-HS865-AN6X	S4604301	Side Sensing	1.5	3-Wire DC NPN
	Bi 1.5-HS865-AP6X	S4604201	Side Sensing	1.5	3-Wire DC PNP
	Bi 1.5-HS865-Y1	S1004201	Side Sensing	1.5	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p>
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<p><b>Diagram 2</b></p>
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	<p><b>Diagram 3</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>3 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1-EH03-AN7X*	M1619323	<i>TTL Compatible</i>	1	3-Wire DC NPN
	Bi 1-EH03-AP7X*	M1619322	<i>TTL Compatible</i>	1	3-Wire DC PNP
<b>4 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1-EH04-AN6X	S4609640		1	3-Wire DC NPN
	Bi 1-EH04-AP6X	S4609540		1	3-Wire DC PNP
	Bi 1-EH04-Y1	S1003040		1	2-Wire DC NAMUR
<b>5 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable</b> 	Bi 1-EG05-AN6X	S4609840		1	3-Wire DC NPN
	Bi 1-EG05-AP6X	S4609740		1	3-Wire DC PNP
	Bi 1-EG05-Y1	S1003240		1	2-Wire DC NAMUR

\* Flush mountable only in non-ferrous metals.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	5000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p>
10-30 VDC	5000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<p><b>Diagram 2</b></p>
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 3</b></p>
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>6.5 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1.5-EH6.5K-AN6X	S4610640	Short Barrel	1.5	3-Wire DC NPN
	Bi 2-EH6.5K-AN6X	S4610100	Short Barrel	2	
	Bi 1.5-EH6.5K-AP6X	S4610540	Short Barrel	1.5	3-Wire DC PNP
	Bi 2-EH6.5K-AP6X	S4610000	Short Barrel	2	
	Bi 1.5-EH6.5K-Y1	S1004600	Short Barrel	1.5	2-Wire DC NAMUR
<b>6.5 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1.5-EH6.5-AN6X	S4612100		1.5	3-Wire DC NPN
	Bi 2-EH6.5-AN6X	S4612300	Ext. Range	2	
	Bi 2U-EH6.5-AN6X	S4281170	Uprox	2	
	Bi 1.5-EH6.5-AP6X	S4612000		1.5	3-Wire DC PNP
	Bi 1.5U-EH6.5-AP6X		Uprox	1.5	
	Bi 2-EH6.5-AP6X	S4612200	Ext. Range	2	
	Bi 2U-EH6.5-AP6X	S4281150	Uprox	2	
	Bi 1.5-EH6.5-AP6X/S100	S4612001	High Temp. 100°C	1.5	
Bi 1.5-H6.5-Y1X	S4004810		1.5	2-Wire DC NAMUR	
<b>6.5 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1.5-H6.5M-AN7	S4708100	TTL Compatible	1.5	3-Wire DC NPN

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<b>Diagram 1</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<b>Diagram 2</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	<b>Diagram 3</b> 
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	1000	≤150	-25 to +70	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<b>Diagram 3</b> 
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	1000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	Remote	-25 to +100	IP 67	CPB	EPTR	TROG	N/A	YE	2M/PVC	3	
5-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	3	
10-30 VDC	2000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>6.5 mm - Nonembeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Ni 3-EH6.5K-AN6X	S4610300	<i>Short Barrel</i>	3	3-Wire DC NPN
	Ni 3-EH6.5K-AP6X	S4610200	<i>Short Barrel</i>	3	3-Wire DC PNP
	Ni 3-EH6.5K-Y1	S1004700	<i>Short Barrel</i>	3	2-Wire DC NAMUR
<b>6.5 mm - Nonembeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Ni 3-EH6.5-AN6X	S4612500		3	3-Wire DC NPN
	Ni 4U-EH6.5-AN6X	S4600682	<i>Uprox</i>	4	
	Ni 3-EH6.5-AP6X	S4612400		3	3-Wire DC PNP
	Ni 4U-EH6.5-AP6X	S4600680	<i>Uprox</i>	4	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	<p><b>Diagram 2</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<p><b>Diagram 3</b></p>



Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1.5-H08K-AN6X	S1604341	<i>Short Barrel</i>	1.5	3-Wire DC NPN
	Bi 1.5-H08K-AP6X	S1604331	<i>Short Barrel</i>	1.5	3-Wire DC PNP
	Bi 1.5-H08K-AP6/S100	S1604303	<i>High Temp. 100°C</i>	1.5	
<b>8 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1.5-H08M-AP6X	S1604301		1.5	3-Wire DC PNP
<b>8 mm - Embeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Bi 1.5-H08-AN6X	S1614300		1.5	3-Wire DC NPN
	Bi 1.5-H08-AP6X	S1604300		1.5	3-Wire DC PNP
	Bi 1.5-H08-Y1	S1021800		1.5	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<p><b>Diagram 2</b></p>
	3000	≤150	-25 to +100	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
10-30 VDC	2000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<p><b>Diagram 3</b></p>
10-30 VDC	2000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	2000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Nonembeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Ni 2-H08K-AN6X	S1614700	<i>Short Barrel</i>	2	3-Wire DC NPN
	Ni 2-H08K-AP6X	S1604700	<i>Short Barrel</i>	2	3-Wire DC PNP
<b>8 mm - Nonembeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Ni 2-H08M-AN7	S4709500	<i>TTL Compatible</i>	2	3-Wire DC NPN
<b>8 mm - Nonembeddable, Miniature Smooth Barrel, Potted-In Cable</b> 	Ni 3-H08-AN6X	S1614900		3	3-Wire DC NPN
	Ni 3-H08-AP6X	S1604900		3	3-Wire DC PNP
	Ni 2-H08-Y1	S1021500		2	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<p><b>Diagram 2</b></p>
10-30 VDC	2000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 3</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Embeddable, Miniature Threaded Barrel, Side Sensing, Potted-In Cable</b> 	Bi 1.5-GS880-AN6X	S4604501	Side Sensing	1.5	3-Wire DC NPN
	Bi 1.5-GS880-AP6X	S4604401	Side Sensing	1.5	3-Wire DC PNP
	Bi 1.5-GS880-Y0	S1004401	Side Sensing	1.5	2-Wire DC NAMUR
<b>8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable</b> 	Bi 2-EG08K-AG41X	S4562010		2	2-Wire DC
	Bi 2-EG08K-AG41X/S1589	S4562091	weldguard	2	
	Bi 2-EG08K-AG41X/S1610	S4562096	armorguard	2	
	Bi 1.5-EG08K-AN6X	S4669140	Short Barrel	1.5	3-Wire DC NPN
	Bi 2-EG08K-AN6X	S4669500	Short Barrel	2	
	Bi 2-EG08K-AN6X/S1589	S4669587	armorguard	2	
	Bi 2-EG08K-AN6X/S957*	S4669503	Flush Mount	2	
	Bi 1.5-EG08K-AP6X	S4669040	Short Barrel	1.5	3-Wire DC PNP
	Bi 2-EG08K-AP6X	S4669400	Short Barrel	2	
	Bi 2-EG08K-AP6X/S957*	S4669453	Flush Mount	2	
	Bi 2-EG08K-AP6X/S97	S4669413	Low Temp.	2	
Bi 1.5-EG08K-AP6/S100	S4669016	High Temp. 100°C	1.5		
Bi 1.5-EG08K-Y1	S1003600	Short Barrel	1.5	2-Wire DC NAMUR	

\* Full flush mounting in steel without reducing 2 mm sensing range.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<b>Diagram 1</b> 
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<b>Diagram 2</b> 
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	<b>Diagram 3</b> 
10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	4	<b>Diagram 4</b> 
	1000	≤100	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	4	
	1000	≤100	-25 to +70	IP 67	AG	WG	TROG	N/A	YE	2M/PUR	4	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<b>Diagram 3</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-25 to +100	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<b>Diagram 4</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-40 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +100	IP 67	SS	EPTR	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable</b> 	Bi 2-EG08-AG41X	S4562000		2	2-Wire DC
	Bi 2-EG08-AG41X/S1589	S4562088	<i>armorguard</i>	2	
	Bi 1.5-EG08-AN6X	S4602340		1.5	3-Wire DC NPN
	Bi 1.5U-EG08-AN6X	S4600510	<i>Uprox</i>	1.5	
	Bi 2-EG08-AN6X	S4602140	<i>Ext. Range</i>	2	
	Bi 2-EG08-AN6X/S1589	S4602181	<i>armorguard</i>	2	
	Bi 2U-EG08-AN6X	S4602035	<i>Uprox</i>	2	
	Bi 1.5-EG08-AN7X	S1766110	<i>TTL Compatible</i>	1.5	
	Bi 1.5-EG08-AP6X	S4602240		1.5	3-Wire DC PNP
	Bi 1.5U-EG08-AP6X	S4600500	<i>Uprox</i>	1.5	
	Bi 2-EG08-AP6X	S4602040	<i>Ext. Range</i>	2	
	Bi 2-EG08-AP6X/S100	S4602047	<i>High Temp. 100°C</i>	2	
	Bi 2-EG08-AP6X/S957	S4602008	<i>Flush Mount</i>	2	
	Bi 2-EG08-AP6X/S1589	S4602085	<i>armorguard</i>	2	
	Bi 2-EG08-AP6X/S1610	S4602086-1	<i>armorguard</i>	2	
	Bi 2U-EG08-AP6X	S4602032	<i>Uprox</i>	2	
	Bi 1.5-EG08-Y1	S1003500		1.5	2-Wire DC NAMUR
	Bi 2-EG08-AZ14X	S4100001		2	2-Wire AC/DC
	Bi 2-EG08-VP6X	S1604610	<i>Comp. Outputs</i>	2	4-Wire DC PNP
<b>8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable, Teflon Coated</b> 	Bi 2-EGT08-AG41X	S4602540		2	2-Wire DC
	Bi 1.5-EGT08-AP/S100	S4602256	<i>High Temp. 100°C</i>	1.5	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	4	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	4	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<b>Diagram 2</b> 
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	1	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<b>Diagram 3</b> 
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +100	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PUR	3	<b>Diagram 4</b> 
20-132 VAC 10-140 VDC	20	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	5	<b>Diagram 5</b> 
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	6	<b>Diagram 6</b> 
10-55 VDC	1000	≤100	-25 to +70	IP 67	TC	PA 12	TC	N/A	YE	2M/PUR	4	
10-30 VDC	2000	≤150	-25 to +100	IP 67	TC	PA 12	TC	N/A	YE	2M/PUR	2	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable</b>  	Bi 1.5-G08-AN6X	S4602300		1.5	3-Wire DC NPN	
	Bi 2-G08-AN6X	S4602100	Ext. Range	2		
	Bi 1.5-G08-AP6X	S4602200		1.5	3-Wire DC PNP	
	Bi 2-G08-AP6X	S4602000	Ext. Range	2		
	Bi 1.5-G08-Y1	S1005224			1.5	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams		
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>		
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1			
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2		<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2			
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3			<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Nonembeddable, Miniature Threaded Barrel, Potted-In Cable</b> 	Ni 4-EG08K-AG41X	S4561010	<i>Short Barrel</i>	4	2-Wire DC
	Ni 3-EG08K-AN6X	S4669700	<i>Short Barrel</i>	3	3-Wire DC NPN
	Ni 3-EG08K-AP6X	S4669600	<i>Short Barrel</i>	3	3-Wire DC PNP
	Ni 3-EG08K-Y1	S1003700	<i>Short Barrel</i>	3	2-Wire DC NAMUR
<b>8 mm - Nonembeddable, Miniature Threaded Barrel, Potted-In Cable</b> 	Ni 4-EG08-AG41X	S4561000		4	2-Wire DC
	Ni 3-EG08-AN6X	S4602840		3	3-Wire DC NPN
	Ni 3-EG08-AN6X/S1589	S4602888	<i>armorguard</i>	3	
	Ni 3-EG08-AN7X	S4669759	<i>TTL Compatible</i>	3	
	Ni 4U-EG08-AN6X	S4600610	<i>Uprox</i>	4	
	Ni 3-EG08-AP6X	S4602740		3	3-Wire DC PNP
	Ni 3-EG08-AP6X/S1589	S4602789	<i>armorguard</i>	3	
Ni 4U-EG08-AP6X	S4600600	<i>Uprox</i>	4		

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	3	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	4	
10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	2	
	2000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	3	
	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	3	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Nonembeddable, Miniature Threaded Barrel, Potted-In Cable</b> 	Ni 2-G08-AN6X	S4601300		2	3-Wire DC NPN
	Ni 3-G08-AN6X	S4602800		3	
	Ni 2-G08-AP6X	S4601200		2	3-Wire DC PNP
	Ni 3-G08-AP6X	S4602700		3	
<b>8 mm - Nonembeddable, Miniature Threaded Barrel, Potted-In Cable</b> 	Ni 2-G08-Y1	S1005300		2	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	<b>Diagram 1</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	<b>Diagram 2</b> 
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PVC	3	<b>Diagram 3</b> 



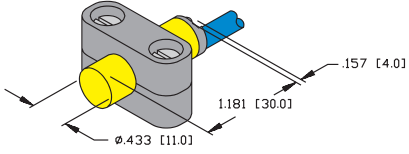
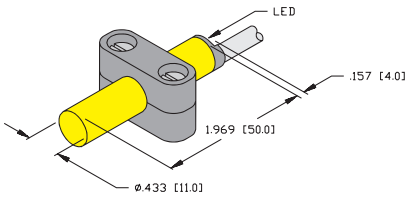
Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>11 mm - Embeddable/Nonembeddable, Smooth Barrel, Potted-In Cable</b> 	Bi 2-K11-Y1	M1007000		•	2	2-Wire DC NAMUR	
	Ni 5-K11-Y0	T1007100			5		
<b>11 mm - Embeddable/Nonembeddable, Smooth Barrel, Potted-In Cable</b> 	Bi 2-K11-AN6	T4660600		•	2	3-Wire DC NPN	
	Ni 5-K11-AN6	T4660800			5		
	Ni 5-K11-AN6X	M4661200			5		
	Bi 2-K11-AP6	T4660500			•	2	3-Wire DC PNP
	Ni 5-K11-AP6	T4660700			5		
	Ni 5-K11-AP6X	T1668295			5		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
5-30 VDC	5000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	<p><b>Diagram 1</b></p>
	2000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	2	<p><b>Diagram 2</b></p>
	1500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	2	
	1500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	3	<p><b>Diagram 3</b></p>
	1500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	3	
	1500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Embeddable, eurofast® Connection</b> 	Bi 4-M12K-AN6X-H1141	T4607101	Short Barrel	4	3-Wire DC PNP
	Bi 4-M12K-AP6X-H1141	T4607082	Short Barrel	4	3-Wire DC PNP
	Bi 2-M12K-VP6X-H1141	M1633005	Short Barrel	2	4-Wire DC PNP
<b>12 mm - Embeddable, eurofast Connection</b> 	Bi 2-M12-AD4X-H1141	T4406500		2	2-Wire DC
	Bi 3-M12-AD4X-H1141	T4405041	Ext. Range	3	
	Bi 2-EM12-AN6X-H1141	T4606601		2	3-Wire DC NPN
	Bi 2-M12-AN6X-H1141	T4606600		2	
	Bi 3-EM12WD-AN6X-H1141	M1634334	Washdown	3	
	Bi 3-M12WD-AN6X-H1141	M4607120	Washdown	3	
	Bi 3U-EM12-AN6X-H1141	M1634350	Uprox	3	
	Bi 3U-M12-AN6X-H1141	M1634150	Uprox	3	
	Bi 3U-M12-AN6X2-H1141	M1634155	Uprox	3	
	Bi 4-M12-AN6X-H1141	T4607100	Extended Range	4	
	Bi 2-EM12-AP6X-H1141	T4606501		2	3-Wire DC PNP
	Bi 2-M12-AP6X-H1141	T4606500		2	
	Bi 3-EM12WD-AP6X-H1141	M1634331	Washdown	3	
	Bi 3-M12WD-AP6X-H1141	M4607121	Washdown	3	
	Bi 3U-EM12-AP6X-H1141	M1634340	Uprox	3	
	Bi 3U-EM12H-AP6X-H1141	M1634312	Uprox, Stoneface	3	
	Bi 3U-M12-AP6X-H1141	M1634140	Uprox	3	
	Bi 3U-M12-AP6X2-H1141	M1634145	Uprox	3	
	Bi 4-M12-AP6X-H1141	T4607000	Extended Range	4	
	Bi 2-M12-VN6X-H1141	T1643000	Comp. Outputs	2	
	Bi 4-M12-VN6X-H1141	T1643200	Ext. Range, Comp. Outputs	4	
	Bi 2-M12-VP6X-H1141	T1633000	Comp. Outputs	2	4-Wire DC PNP
	Bi 4-M12-VP6X-H1141	T1633200	Ext. Range, Comp. Outputs	4	
	Bi 4-EM12-VP6X-H1141	T1633201	Ext. Range, Comp. Outputs	4	
	Bi 2-EM12-Y0X-H1141	T4010098		2	2-Wire DC NAMUR
	Bi 2-M12-Y1X-H1141	M4010200		2	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	<b>Diagram 1</b>
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 2</b>
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 3</b>
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4T-*	2	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	2000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	2	
	3000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	2	
	3000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	2	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	GN	YE	RK 4T-*	2	
2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2		
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4T-*	3	<b>Diagram 5</b>
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	3000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	3000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	3000	≤200	-30 to +85	IP 68	SS	SF	N/A	YE	RKG 4T-*/S600	3	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3		
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	<b>Diagram 6</b>
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4.4T-*	5	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4.21T-*	6	
	5000	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.21T-*	6	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<p>12 mm - Embeddable, <i>euromast</i>® Connection, Teflon Coated Sensors</p>	Bi 3-MT12H-AD4X-H1141/S1589	T4405082	<i>armorguard</i>	3	2-Wire DC
	Bi 3-MT12H-AD4X-H1144/S1589	T4405084	<i>armorguard</i>	3	
	Bi 3U-MT12-AN6X-H1141	M1634250	<i>Uprox</i>	3	3-Wire DC NPN
	Bi 4-MT12H-AN6X-H1141	T4607194	<i>Ext. Range, Stoneface</i>	4	
	Bi 4-MT12H-AN6X-H1141/S1589	T4607188	<i>Ext. Range, armorguard</i>	4	
	Bi 2-MT12-AP6X-H1141/S34	M1669020	<i>Weld-field Immune</i>	2	3-Wire DC PNP
	Bi 3U-MT12-AP6X-H1141	M1634240	<i>Uprox</i>	3	
	Bi 3U-MT12-AP6X2-H1141	M1634245	<i>Uprox, Dual-Color LED</i>	3	
	Bi 3U-MT12H-AP6X-H1141	M1634212	<i>Uprox, Stoneface</i>	3	
	Bi 3U-MT12H-AP6X-H1141/S1589	M1634294	<i>Ext. Range, armorguard</i>	3	
	Bi 3U-MT12H-AP6X2-H1141/S1589	M1634293	<i>armorguard</i>	3	
	Bi 4-MT12H-AP6X-H1141	T4607093	<i>Ext. Range, Stoneface</i>	4	
	Bi 4-MT12H-AP6X-H1141/S1589	T4607099	<i>Ext. Range, armorguard</i>	4	
	Bi 2-MT12-Y0X-H1141	T4010093		2	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*/S674	2	
10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	<b>Diagram 2</b> 
	2000	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKG 4T-*/S600	3	
	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	TC	N/A	YE	RK 4T-*	4	<b>Diagram 3</b> 
	3000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	4	
	3000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	4	
	3000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RKG 4T-*/S600	4	
	3000	≤200	-30 to +85	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	4	
	3000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	4	
	2000	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKG 4T-*/S600	4	
	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	4	
5-30 VDC	5000	Remote	-25 to +70	IP 67	TC	TC	N/A	YE	RK 4.21T-*	5	<b>Diagram 4</b> 
<b>Diagram 5</b> 											

Barrels

\* Length in meters

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>12 mm - Embeddable, eurofast® Connection, Extended Barrel Length</b>  	Bi 2-M12E-AD4X-H1141	T4406590		2	2-Wire Dc	
	Bi 3-M12E-AD4X-H1141	T4405080	Ext. Range	3		
	Bi 2-M12E-AN6X-H1141	T4606602			2	3-Wire DC NPN
	Bi 3NF-EM12HE-AN6X2-H1141	M1615003	Non-Ferrous	3		
	Bi 3U-EM12E-AN6X-H1141	M1634351	Uprox	3		
	Bi 3U-EM12HE-AN6X2-H1141	M1634311	Stoneface, Uprox	3		
	Bi 3U-EM12HE-AN6X2-H1141/S1589	M1634397	armorguard	3		
	Bi 3U-M12E-AN6X-H1141	M1634151	Uprox	3		
	Bi 4-M12E-AN6X-H1141	T4607193	Ext. Range	4		
	Bi 4-EM12HE-AN6X-H1141/S1589	T4607185	Ext. Range, armorguard	4		
	Bi 2-M12E-AP6X-H1141	T4606599			2	3-Wire DC PNP
	Bi 3NF-EM12HE-AP6X2-H1141	M1615001	Non-Ferrous	3		
	Bi 3U-EM12E-AP6X-H1141	M1634343	Uprox	3		
	Bi 3U-M12E-AP6X-H1141	M1634148	Uprox	3		
	Bi 3U-EM12HE-AP6X2-H1141	M1634310	Stoneface, Uprox	3		
	Bi 3U-EM12HE-AP6X2-H1141/S1589	M1634398	Uprox, armorguard	3		
	Bi 4-M12E-AP6X-H1141	T4608030	Ext. Range	4		
	Bi 4-EM12HE-AP6X-H1141/S1589	T4607184	Ext. Range, armorguard	4		
	Bi 2-M12E-VN6X-H1141	T1643080	Comp. Output		2	4-Wire DC NPN
	Bi 3U-M12E-VN4X-H1141	M1580354	Uprox	3		
	Bi 4-M12E-VN6X-H1141	T1643201	Ext. Range	4		
	Bi 2-M12E-VP6X-H1141	T1633080	Comp. Output		2	4-Wire DC PNP
	Bi 3U-M12E-VP4X-H1141	M1580252	Uprox	3		
	Bi 4-M12E-VP6X-H1141	T4608092	Ext. Range	4		
	Bi 2-M12E-Y0X-H1141	T4606490			2	2-Wire DC NAMUR
	<b>12 mm - Embeddable, eurofast Connection, Extended Barrel Length, Stainless Steel</b>  	Bi 2-EM12FE-AP6X-H1141	M4614536	Stainless Steel Front Cap	2	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	<b>Diagram 2</b> 
	3000	≤200	0 to +60	IP 67	SS	SF	GN	YE	RK 4T-*	2	
	3000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	2	
	3000	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKG 4T-*/S600	2	
	3000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	2	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	2000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 3</b> 
	3000	≤200	0 to +60	IP 67	SS	PA 12	GN	YE	RK 4T-*	3	
	3000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	3000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKG 4T-*/S600	3	
	3000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	<b>Diagram 4</b> 
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 5</b> 
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
5-30 VDC	5000	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.21T-*	6	<b>Diagram 6</b> 
10-30 VDC	180	≤200	-25 to +80	IP 68, 69K	SS	SS	N/A	YE	RKV 4T-*	3	

Barrels

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>12 mm - Embeddable, eurofast® Connection, Extended Barrel Length, Teflon Coated Sensors</b>  	Bi 3-MT12E-AD4X-H1141	T4405088-2		3	2-Wire DC	
	Bi 3-MT12HE-AD4X-H1141	T4405088	Stoneface	3		
	Bi 3-MT12HE-AD4X-H1144	T4405089	Stoneface	3		
	Bi 3-MT12HE-AD4X-H1141/S1589	T4405086	armorguard®	3		
	Bi 3-MT12HE-AD4X-H1144/S1589	T4405087	armorguard	3		
	Bi 3-MT12HE-AD4X-H1141/S1610	T4405087-1	armorguard	3		
	Bi 3U-MT12HE-AN6X2-H1141	M1634230	Stoneface, Uprox	3	3-Wire DC NPN	
	Bi 3U-MT12HE-AN6X2-H1141/S1589	M1634290	Uprox, armorguard	3		
	Bi 4-MT12HE-AN6X-H1141	T4607197	Ext. Range	4		
	Bi 4-MT12HE-AN6X-H1141/S1589	T4607187	Ext. Range, armorguard	4		
	Bi 3U-MT12HE-AN6X2-H1141/S1610	M1634230-1	armorguard	3		
	Bi 3U-MT12E-AP6X2-H1141	M1634248	Uprox	3	3-Wire DC PNP	
	Bi 3U-MT12HE-AP6X2-H1141	M1634220	Stoneface, Uprox	3		
	Bi 3U-MT12HE-AP6X2-H1141/S1589	M1634291	Uprox, armorguard	3		
	Bi 4-MT12HE-AP6X-H1141	T4608093	Stoneface, Ext. Range	4		
	Bi 4-MT12HE-AP6X-H1141/S1589	T4608094	Ext. Range, armorguard	4		
	Bi 4-MT12E-AP6X-H1141	T4608093-2	Ext. Range	4		
	Bi 4-MT12HE-AP6X-H1141/S1610	T4608093-1	armorguard	4		
	<b>12 mm - Embeddable, eurofast Connection, Extended Barrel Length</b>  	Bi 3FE-M12FEE-AP6X-H1141	M1615108	Ferrous Only	3	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	RK 4.2T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 7</b></p>
	1000	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	RK 4.2T-*	1	
	1000	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	RK 4.2T-*/S674	7	
	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*	1	
	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*	1	
	1000	≤100	-25 to +70	IP 67	AG	WG	N/A	YE	RK 4.2T-*	1	
10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RKG 4T-*/S600	2	
	3000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	2	
	2000	≤200	-25 to +70	IP 67	TC	TC	N/A	YE	RKG 4T-*/S600	2	
	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	2	
	3000	≤200	-25 to +70	IP 67	AG	WG	N/A	YE	RKG 4T-*/S600	2	
10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	3	
	3000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RKG 4T-*/S600	3	
	3000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	3	
	2000	≤200	-25 to +70	IP 67	TC	TC	N/A	YE	RKG 4T-*/S600	3	
	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	3	
	2000	≤200	-25 to +70	IP 67	TC	TC	N/A	YE	RKG 4T-*/S600	3	
	2000	≤200	-25 to +70	IP 67	AG	WG	N/A	YE	RKG 4T-*/S600	3	
10-30 VDC	250	≤200	-0 to +60	IP67	CPB	SS	N/A	YE	RK 4T-*	3	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>12 mm - Nonembeddable, eurofast® Connection</b>  	Ni 4-M12-AD4X-H1141	T4406700		4	2-Wire DC	
	Ni 4-M12-AD4X-H1144	M4406701		4		
	Ni 8-M12-AD4X-H1141	T4411241	<i>Ext. Range</i>	8		
	Ni 8-M12-AD4X-H1144	T4411289	<i>Ext. Range</i>	8		
	Ni 4-EM12-AN7X-H1141	T4606893	<i>TTL Compatible</i>	4	3-Wire DC NPN	
	Ni 4-M12-AN6X-H1141	T4606800		4		
	Ni 5-EM12WD-AN6X-H1141	M4653431	<i>Washdown</i>	5		
	Ni 5-M12-AN6X-H1141	T4671390		5		
	Ni 8-M12-AN6X-H1141	T4611315	<i>Ext. Range</i>	8		
	Ni 8U-EM12-AN6X-H1141	M1644350	<i>Uprox</i>	8		
	Ni 8U-M12-AN6X-H1141	M1644150	<i>Uprox</i>	8		
	Ni 8U-M12-AN6X2-H1141	M1644155	<i>Uprox, Dual LED</i>	8		
	Ni 4-M12-AP6X-H1141	T4606700		4	3-Wire DC PNP	
	Ni 5-EM12WD-AP6X-H1141	M1634331	<i>Washdown</i>	5		
	Ni 5-M12-AP6X-H1141	T4653400		5		
	Ni 8-M12-AP6X-H1141	T4611310	<i>Ext. Range</i>	8		
	Ni 8U-EM12-AP6X-H1141	M1644340	<i>Uprox</i>	8		
	Ni 8U-M12-AP6X-H1141	M1644140	<i>Uprox</i>	8		
	Ni 8U-M12-AP6X2-H1141	M1644145	<i>Uprox, Dual LED</i>	8		
	Ni 4-M12-VN6X-H1141	T1643100	<i>Comp. Output</i>	4	4-Wire DC NPN	
	Ni 8-M12-VN6X-H1141	T4611323	<i>Ext. Range, Comp. Output</i>	8		
	Ni 4-EM12-VP6X-H1141	M1633101	<i>Comp. Output</i>	4	4-Wire DC PNP	
	Ni 4-M12-VP6X-H1141	T1633100	<i>Comp. Output</i>	4		
	Ni 8-M12-VP6X-H1141	T4611324	<i>Ext. Range, Comp. Output</i>	8		
	Ni 5-M12-Y1X-H1141	M4010300			5	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	2000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	2000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*/S674	2	
	2000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
	2000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*/S674	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKV 4T-*	3	<b>Diagram 2</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	1500	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 3</b> 
	1500	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	4	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	4	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	GN	YE	RK 4T-*	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 4</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4.4T-*	6	<b>Diagram 5</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
5-30 VDC	2000	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.21T-*	7	<b>Diagram 6</b> 

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Nonembeddable, eurofast® Connection, Teflon Coated</b>  	Ni 8-MT12H-AD4X-H1141/S1589	T4411291	<i>armorguard</i>	8	2-Wire DC
	Ni 8U-MT12-AN6X-H1141	M1644250	<i>Uprox</i>	8	3-Wire DC NPN
	Ni 8U-MT12-AP6X-H1141	M1644240	<i>Uprox</i>	8	3-Wire DC PNP
	Ni 8U-MT12-AP6X2-H1141	M1644245	<i>Uprox</i>	8	
Ni 8U-MT12H-AP6X2-H1141/S1589	M1644292		<i>Uprox, armorguard</i>	8	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	2000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4.2T-*/S600	1	<p><b>Diagram 1</b></p>
	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	<p><b>Diagram 3</b></p>
	2000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	3	

\* Length in meters.

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Nonembeddable, Extended Barrel Length, eurofast® Connection</b> 	Ni 4-M12E-AD4X-H1141	T4406790		4	2-Wire DC
	Ni 4-M12E-AD4X-H1144	T4406792		4	
	Ni 8-M12E-AN6X-H1141	T4611325	<i>Ext. Range</i>	8	3-Wire DC NPN
	Ni 8-EM12HE-AN6X-H1141/S1589	T4611395	<i>Ext. Range, armorguard®</i>	8	
	Ni 8U-EM12E-AN6X-H1141	M1644351	<i>Uprox</i>	8	
	Ni 8U-EM12E-AN6X2-H1141	M1644315	<i>Uprox</i>	8	
	Ni 8U-EM12HE-AN6X2-H1141/S1589	M1644391	<i>Uprox, armorguard</i>	8	
	Ni 8U-M12E-AN6X-H1141	M1644151	<i>Uprox</i>	8	
	Ni 8-M12E-AP6X-H1141	T4611398-1	<i>Ext. Range</i>	8	3-Wire DC PNP
	Ni 8-EM12HE-AP6X-H1141/S1589	T4611396	<i>armorguard</i>	8	
	Ni 8U-EM12E-AP6X-H1141	M1644342	<i>Uprox</i>	8	
	Ni 8U-EM12E-AP6X2-H1141	M1644314	<i>Uprox</i>	8	
	Ni 8U-EM12HE-AP6X2-H1141/S1589	M1644392	<i>Uprox, armorguard</i>	8	
	Ni 8U-M12E-AP6X-H1141	M1644144	<i>Uprox</i>	8	
	Ni 8U-M12E-VN4X-H1141	M1580552	<i>Comp. Output</i>	8	4-Wire DC NPN
	Ni 8U-EM12E-VP4X-H1141	M1580463	<i>Uprox</i>	8	4-Wire DC PNP
	Ni 8U-M12E-VP4X-H1141	M1580454	<i>Uprox</i>	8	
	Ni 4-M12E-VN6X-H1141	T1643190	<i>Comp. Output</i>	4	4-Wire DC NPN
	Ni 4-EM12E-VP6X-H1141	T1633191	<i>Comp. Output</i>	4	4-Wire DC PNP
	Ni 4-M12E-VP6X-H1141	T1633190	<i>Comp. Output</i>	4	
Ni 8-M12E-VP6X-H1141	T4611389	<i>Ext. Range, Comp. Output</i>	8		
<b>12 mm - Nonembeddable, Extended Barrel Length, eurofast Connection, Teflon Coated</b> 	Ni 8-MT12HE-AN6X-H1141/S1589	T4611397	<i>Ext. Range, armorguard</i>	8	3-Wire DC NPN
	Ni 8U-MT12E-AN6X-H1141	M1644251	<i>Uprox</i>	8	
	Ni 8U-MT12E-AN6X2-H1141	M1644248	<i>Uprox</i>	8	
	Ni 8U-MT12HE-AN6X2-H1141/S1589	M1644290	<i>Uprox, armorguard</i>	8	
	Ni 8-MT12HE-AP6X-H1141/S1589	T4611398	<i>Ext. Range, armorguard</i>	8	3-Wire DC PNP
	Ni 8U-MT12E-AP6X2-H1141	M1644247	<i>Uprox</i>	8	
	Ni 8U-MT12HE-AP6X2-H1141/S1589	M1644291	<i>Uprox, armorguard</i>	8	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	2000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	2000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*/S674	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 2</b> 
	2000	≤200	-25 to +70	IP 67	WG	WG	N/A	YE	RKG 4T-*/S600	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	WG	WG	GN	YE	RKG 4T-*/S600	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 3</b> 
	2000	≤200	-25 to +70	IP 67	WG	WG	N/A	YE	RKG 4T-*/S600	4	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	4	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKV 4T-*	4	
	2000	≤200	-30 to +85	IP 68	WG	WG	GN	YE	RKG 4T-*/S600	4	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
10-65 VDC	2000	≤200	-30 to +85	IP 67	SS	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 4</b> 
10-65 VDC	2000	≤200	-30 to +85	IP 67	SS	PA 12	N/A	YE	RKV 4T-*	6	
10-65 VDC	2000	≤200	-30 to +85	IP 67	SS	PA 12	N/A	YE	RK 4.4T-*	6	<b>Diagram 5</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4.4T-*	6	<b>Diagram 6</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
10-30 VDC	2000	≤200	-25 to +70	IP 67	WG	WG	N/A	YE	RKG 4T-*/S600	3	<b>Diagram 6</b> 
	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	WG	WG	GN	YE	RKG 4T-*/S600	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	WG	WG	N/A	YE	RKG 4T-*/S600	4	<b>Diagram 6</b> 
	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 67	WG	WG	GN	YE	RKG 4T-*/S600	4	

Barrels

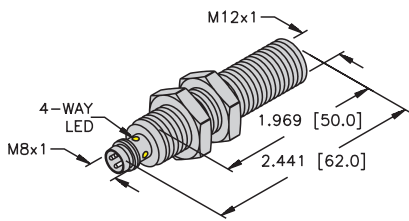
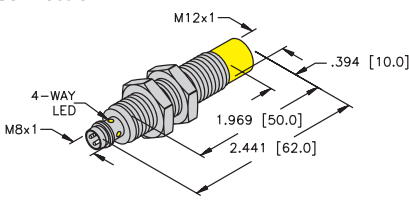
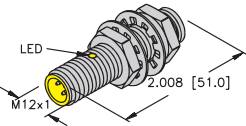
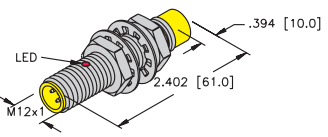
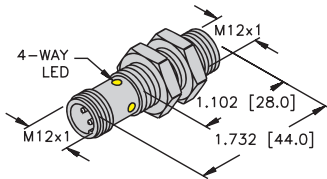
\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Embeddable, picofast® Connection</b> 	Bi 2-G12-AN6X-V1131	T4635583		2	3-Wire DC NPN
	Bi 4-G12-AN6X-V1131	M1690707	Extended Range	4	
	Bi 2-G12-AP6X-V1131	T4606597		2	3-Wire DC PNP
	Bi 4-G12-AP6X-V1131	M1690703	Extended Range	4	
<b>12 mm - Nonembeddable, picofast Connection</b> 	Ni 5-G12-AN6X-V1131	T4635721		5	3-Wire DC NPN
	Ni 5-G12-AP6X-V1131	T4635690		5	3-Wire DC PNP
<b>12 mm - Embeddable, eurofast® Connection</b> 	Bi 2-G12-AN6X-H1141	T4606693		2	3-Wire DC NPN
	Bi 2-G12-AP6X-H1141	T4606595		2	3-Wire DC PNP
	Bi 4-EG12-AP6X-H1141	T4607091	Extended Range	4	
<b>12 mm - Nonembeddable, eurofast Connection</b> 	Ni 5-G12-AN6X-H1141	T4635793		5	3-Wire DC NPN
	Ni 5-G12-AN7X-H1141	T1714593		5	
	Ni 8-G12-AN6X-H1141	T4611383	Extended Range	8	
	Ni 5-G12-AP6X-H1141	T4635692		5	3-Wire DC PNP
	Ni 5-G12-Y0-H1141	T1005594		5	2-Wire DC NAMUR
<b>12 mm - Embeddable, eurofast Connection</b> 	Bi 2-G12K-AP6X-H1141	M4670260		2	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



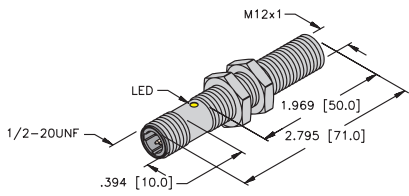
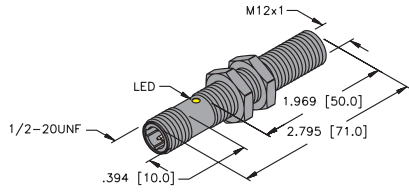
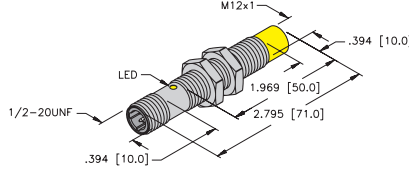
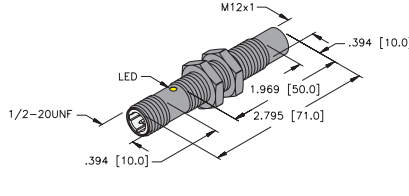
Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	PKG 3Z-*	1	<b>Diagram 1</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	PKG 3Z-*	2	<b>Diagram 2</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	PKG 3Z-*	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	PKG 3Z-*	1	<b>Diagram 3</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	PKG 3Z-*	2	<b>Diagram 4</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 5</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 5</b> 
	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4T-*	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 5</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 5</b> 
5-30 VDC	2000	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	N/A	RK 4.21T-*	5	<b>Diagram 5</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	N/A	RK 4T-*	4	<b>Diagram 5</b> 

Barrels

\* Length in meters.  
For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Embeddable, <i>microfast</i>® Connection</b> 	Bi 2-G12-ADZ32X-B3131	T4205001		2	2-Wire AC/DC Short-circuit Protected
	Bi 2U-G12-ADZ32X-B3131	M4281005	<i>Uprox</i>	2	
	Bi 4-G12-ADZ32X-B3131	T4205031	<i>Ext. Range</i>	4	
		Bi 2-G12-AZ33X-B3131	T1304032		2
<b>12 mm - Embeddable, <i>microfast</i> Connection, Teflon Coated</b> 	Bi 2-GT12H-ADZ32X-B3131/S34	T4205093	<i>WFI</i>	2	2-Wire AC/DC Short-circuit Protected
	Bi 2-GT12H-ADZ32X-B3131/S34/S1589	T4205096	<i>WFI</i>	2	
	Bi 2-GT12-ADZ32X-B3131/S34	T4205005	<i>WFI</i>	2	
	Bi 2U-GT12-ADZ32X-B3131	M4281015	<i>Uprox</i>	2	
	Bi 4-GT12H-ADZ32X-B3131	T4205097	<i>Stoneface</i>	4	
	Bi 4-GT12H-ADZ32X-B3131/S1589	T4205087	<i>armorguard</i> ®	4	
		Bi 2-GT12-AZ33X-B3131/S34	T1304082		2
<b>12 mm - Nonembeddable, <i>microfast</i> Connection</b> 	Ni 4-G12-ADZ32X-B3131	T4205201		4	2-Wire AC/DC Short-circuit Protected
	Ni 8-G12-ADZ32X-B3131	M4205401	<i>Ext. Range</i>	8	
	Ni 8U-G12-ADZ32X-B3131	M4281105	<i>Ext. Range, Uprox</i>	8	
		Ni 4-G12-AZ33X-B3131	T1304232		4
<b>12 mm - Nonembeddable, <i>microfast</i> Connection, Teflon Coated</b> 	Ni 4-GT12-ADZ32X-B3131/S34	T4205205	<i>WFI</i>	4	2-Wire AC/DC
	Ni 4-GT12-AZ33X-B3131/S34	T1304292	<i>WFI</i>	4	
	Ni 4-GT12H-ADZ32X-B3131/S34/S1589	T4205293	<i>armorguard</i>	4	
	Ni 8-GT12H-ADZ32X-B3131/S1589	T4205480-1	<i>armorguard</i>	8	
	Ni 8U-GT12-ADZ32X-B3131	M4281115	<i>Uprox</i>	8	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	<p><b>Diagram 1</b></p>
	20	≤100	-30 to +85	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	KB 3T-*	1	
	20	≤100	-30 to +85	IP 67	TC	TC	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	
	20	≤100	-30 to +85	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	PA 12	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	TC	PA 12	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	KB 3T-*	1	
	20	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	KB 3T-*	1	
	20	≤100	-30 to +85	IP 67	TC	PA 12	N/A	YE	KB 3T-*	1	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 2-M12-AD4X	T4405000		2	2-Wire DC	
	Bi 3-M12-AD4X	T4405035	Ext. Range	3		
	Bi 2-M12-AN6X	T4606695		2	3-Wire DC NPN	
	Bi 3U-EM12-AN6X	M1634320	Uprox	3		
	Bi 3U-M12-AN6X	M1634120	Uprox	3		
	Bi 4-M12-AN6X	T4607130	Ext. Range	4		
	Bi 2-M12-AP6X	T4605000		2	3-Wire DC PNP	
	Bi 2-M12-AP6X/S100	M4605003	High Temp. 100°C	2		
	Bi 3U-EM12-AP6X	M1634300	Uprox	3		
	Bi 3U-M12-AP6X	M1634100	Uprox	3		
	Bi 4-M12-AP6X	T4607006	Ext. Range	4		
	Bi 2-M12-VN6X	T1640200		Comp. Output	2	4-Wire DC NPN
	Bi 4-M12-VN6X	T1643300	Ext. Range, Comp. Output	4		
	Bi 2-M12-VP6X	T1630200		Comp. Output	2	4-Wire DC PNP
Bi 4-M12-VP6X	T1633300	Ext. Range, Comp. Output	4			
	Bi 2-EM12-ADZ32X	T4205092		2	2-Wire AC/DC Short-circuit Protected	
<b>12 mm - Embeddable, Potted-In Cable, Teflon Coated</b> 	Bi 2U-MT12-ADZ32X	M4205100	Uprox	2	2-Wire AC/DC Short-circuit Protected	
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 3-EM12WD-AN6X	M1634333	Washdown	3	3-Wire DC NPN	
	Bi 2-EM12WD-AP6/S929	M4614515	Low Temp. -60°C	2	3-Wire DC PNP	
	Bi 3-EM12WD-AP6X	M1634330	Washdown	3		
	Bi 3-EM12WD-AP6X/S97	M1634336	Low Temp. -40°C	3		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	3000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	2000	≤200	-25 to +100	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	3000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	6	<b>Diagram 6</b> 
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	6	
10-30 VDC	2000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	2	<b>Diagram 6</b> 
10-30 VDC	1000	≤200	-60 to +60	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	
	2000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	
10-30 VDC	2000	≤200	-40 to +70	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 3-EM12WDK-AP6X/S97	M1634307	Washdown Low Temp. -40°C	3	3-Wire DC PNP
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 2-M12E-AD4X	T4405083-1		2	2-Wire DC
	Bi 3U-EM12E-AN6X	M1634352	Uprox	3	3-Wire DC NPN
	Bi 3U-M12E-AN6X	M1634126	Uprox	3	
	Bi 3U-EM12E-AP6X	M1634302	Uprox	3	3-Wire DC PNP
	Bi 3U-M12E-AP6X	M1634108	Uprox	3	
	Bi 2-M12E-VN6X	T1640290	Comp. Output	2	4-Wire DC NPN
	Bi 4-M12E-VN6X	T1643290	Ext. Range, Comp. Output	4	
Bi 4-M12E-VP6X	T1633391	Ext. Range, Comp. Output	4	4-Wire DC PNP	
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 2-EM12D-AP6/S120	M4614512	High Temp. 120°C	2	3-Wire DC PNP
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 2-M12T-AN6X	T4606100		2	3-Wire DC NPN
	Bi 4-M12T-AN6X	T4608100	Ext. Range	4	
	Bi 2-M12T-AP6X	T4606000		2	3-Wire DC PNP
	Bi 2-M12T-AP6X/S34	M1666800	WFI	2	
	Bi 4-M12T-AP6X	T4608000	Ext. Range	4	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-40 to +70	IP 68/ 69 K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	<b>Diagram 1</b> 
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 3</b> 
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 4</b> 
10-30 VDC	3000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 5</b> 
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
10-30 VDC	100	≤200	-25 to +120	IP 67	SS	PTFE	PTFE	N/A	N/A	2M/PTFE	3	<b>Diagram 5</b> 
	3000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 5</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 5</b> 
	1500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 3-GT12K-AD4X/S1610	T4405083-2	<i>armorguard</i>	3	2-Wire DC
	Bi 2-EG12HK-AN6X/S1589	T4605192	<i>armorguard</i>	2	3-Wire DC NPN
	Bi 2-G12K-AN6X	T4671200	<i>Short Barrel</i>	2	
	Bi 4-G12K-AN6X	T4670251	<i>Short Barrel</i>	4	
	Bi 2-G12K-AP6X	T4670200	<i>Short Barrel</i>	2	3-Wire DC PNP
	Bi 4-G12K-AP6X	T4670250	<i>Short Barrel</i>	4	
	Bi 2-EG12-Y0X	T4012000		2	2-Wire DC NAMUR
	Bi 2-G12-Y0	T1005400		2	
Bi 2-G12-Y0X	T4010000		2		
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 2-EG12-AN6X	T4605101		2	3-Wire DC NPN
	Bi 2-G12-AN6X	T4635500		2	
	Bi 2-G12-AN7X	T4730500	<i>TTL Compatible</i>	2	
	Bi 4-G12-AN6X	T1690706	<i>Extended Range</i>	4	
	Bi 2-EG12-AP6X	T4605001		2	3-Wire DC PNP
	Bi 2-G12-AP6X	T4635400		2	
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 2-G12-ADZ32X	T4205000		2	2-Wire AC/DC Short-circuit Protected
	Bi 4-G12-ADZ32X	T4205030	<i>Extended Range</i>	4	
	Bi 2-G12-AZ33X	T1304002		2	2-Wire AC/DC
	Bi 2-GT12-ADZ32X/S34	T4205210	<i>WFI</i>	2	2-Wire AC/DC Short-circuit Protected
<b>12 mm - Embeddable, Potted-In Cable, Teflon Coated</b> 	Bi 2-GT12-AZ33X/S34	T1304052	<i>WFI</i>	2	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	AG	WG	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
10-30 VDC	2000	≤200	-25 to +70	IP 67	WG	WG	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 2</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	4	
	5000	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	N/A	2M/PVC	4	
	5000	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤150	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
35-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	5	
35-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	5	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Non-Embeddable, Potted-In Cable</b> 	Ni 4-M12-AD4X	T4405200		4	2-Wire DC
	Ni 8-M12-AD4X	T4411235	<i>Extended Range</i>	8	
	Ni 8-M12-AD4X/S90	T4411235-1	<i>Extended Range</i>	8	
	Ni 4-M12-AN6X	T4606380		4	3-Wire DC NPN
	Ni 8-M12-AN6X	T4611318	<i>Extended Range</i>	8	
	Ni 8U-EM12-AN6X	M1644320	<i>Ext. Range, Uprox</i>	8	
	Ni 8U-M12-AN6X	M1644120	<i>Ext. Range, Uprox</i>	8	
	Ni 4-M12-AP6X	T4605200		4	3-Wire DC PNP
	Ni 4-M12-AP6X/S100	M4605201	<i>High Temp. 100°C</i>	4	
	Ni 8-M12-AP6X	T4611319	<i>Extended Range</i>	8	
	Ni 8U-EM12-AP6X	M1644300	<i>Uprox</i>	8	
	Ni 8U-M12-AP6X	M1644100	<i>Uprox</i>	8	
	Ni 4-M12-VN6X	T1640400	<i>Ext. Range, Comp. Output</i>	4	4-Wire DC NPN
	Ni 8-M12-VN6X	T4611321	<i>Ext. Range, Comp. Output</i>	8	
	Ni 4-M12-VP6X	T1630400	<i>Ext. Range</i>	4	4-Wire DC PNP
	Ni 8-M12-VP6X	T4611322	<i>Ext. Range, Comp. Output</i>	8	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PUR	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	2000	≤200	-25 to +100	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Non-Embeddable, Potted-In Cable</b> 	Ni 5-EM12WD-AN6X	M4653430	Washdown	5	3-Wire DC NPN
	Ni 5-EM12WD-AP6X	M4653417	Washdown	5	3-Wire DC PNP
	Ni 5-EM12WD-AP6/S100	M4653425	Washdown, High Temp. 100°C	5	
<b>12 mm - Nonembeddable, Potted-In Cable, Extended Barrel Length</b> 	Ni 4-M12E-AD4X	T4405298		4	2-Wire DC
	Ni 8-M12E-AN6X	T4611326		8	3-Wire DC NPN
	Ni 8U-EM12E-AN6X	M1644322	Uprox	8	
	Ni 8U-M12E-AN6X	M1644121	Uprox	8	
	Ni 8U-EM12E-AP6X	M1644303	Uprox	8	3-Wire DC PNP
	Ni 8U-M12E-AP6X	M1644102	Uprox	8	
	Ni 4-M12E-VN6X	T1643190	Comp. Output	4	4-Wire DC NPN
	Ni 4-M12E-VP6X	T1633192	Comp. Output	4	4-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1500	≤200	-10 to +85	IP 68, 69	SS	PVDF	EPTR	N/A	YE	2M/PUR	2	<p><b>Diagram 1</b></p>
10-30 VDC	1500	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	<p><b>Diagram 2</b></p>
	1500	≤200	-25 to +100	IP 68, 69K	SS	IRPA	EPTR	N/A	N/A	2M/PUR	3	
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 3</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<p><b>Diagram 4</b></p>
	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	<p><b>Diagram 5</b></p>
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<p><b>Diagram 5</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	



Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Nonembeddable, Potted-In Cable</b> 	Ni 4-EM12D-AP6/S120	M1633110	<i>High Temp. 120°C</i>	4	3-Wire DC PNP
<b>12 mm - Nonembeddable, Potted-In Cable</b> 	Ni 4-M12T-AN6X	T4606300		4	3-Wire DC NPN
	Ni 4-M12T-AP6X	T4606200		4	3-Wire DC PNP
<b>12 mm - Nonembeddable, Potted-In Cable</b> 	Ni 8-G12K-AD4X	T4411230	<i>Short Barrel</i>	8	2-Wire DC
	Ni 5-G12K-AN6X	T4671300	<i>Short Barrel</i>	5	3-Wire DC NPN
	Ni 5-G12K-AP6X	T4670300	<i>Short Barrel</i>	5	3-Wire DC PNP
<b>12 mm - Nonembeddable, Potted-In Cable</b> 	Ni 5-G12-AN6X	T4635700		5	3-Wire DC NPN
	Ni 5-G12-AN7X	T1714500	<i>TTL Compatible</i>	5	
	Ni 8-G12-AN6X	T4611327	<i>Extended Range</i>	8	
	Ni 5-G12-AP6X	T4635600		5	3-Wire DC PNP
	Ni 5-G12-Y0	T1005500		5	2-Wire NAMUR
	Ni 5-G12-Y0X	T4010100		5	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	100	≤200	-25 to +120C	IP 67	SS	PTFE	PTFE	N/A	N/A	2M/PTFE	3	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	2000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-30 VDC	1500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	1500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	1500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1500	≤150	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	1500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
5-30 VDC	2000	N/A	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	N/A	2M/PVC	1	
	2000	N/A	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	

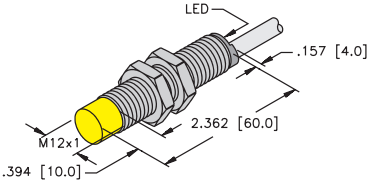
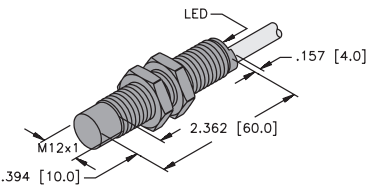
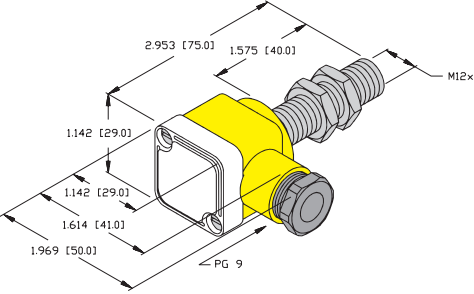
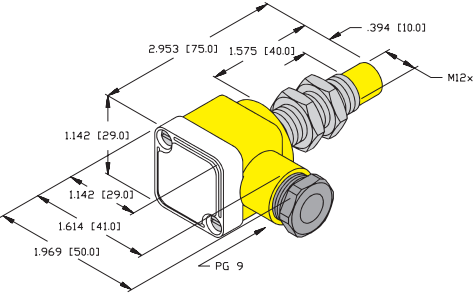
Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Nonembeddable, Potted-In Cable</b> 	Ni 4-G12-AZ33X	T1304202		4	2-Wire AC/DC
	Ni 4-G12-ADZ32X	T4205200		4	
	Ni 8-G12-ADZ32X	T4205400	<i>Extended Range</i>	8	
<b>12 mm - Nonembeddable, Potted-In Cable, Teflon Coated</b> 	Ni 4-GT12-ADZ32X/S34	T4205210	<i>Weld-field Immune</i>	4	2-Wire AC/DC
	Ni 4-GT12-AZ33X/S34	T1304294	<i>Weld-field Immune</i>	4	2-Wire AC/DC
<b>12 mm - Embeddable, Terminal Chamber</b> 	Bi 2-G12SK-AN6X2	T4636500		2	3-Wire DC NPN
	Bi 3U-EG12SK-AN6X	M1634420	<i>Uprox</i>	3	
	Bi 2-G12SK-AP6X2	T4636400		2	3-Wire DC PNP
	Bi 3U-EG12SK-AP6X	M1634400	<i>Uprox</i>	3	
<b>12 mm - Nonembeddable, Terminal Chamber</b> 	Ni 5-G12SK-AN6X2	T4636700		5	3-Wire DC NPN
	Ni 8U-EG12SK-AN6X	M1644420	<i>Uprox</i>	8	
	Ni 5-G12SK-AP6X2	T4636600		5	3-Wire DC PNP
	Ni 8U-EG12SK-AP6X	M1644400	<i>Uprox</i>	8	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
35-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	1	
35-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	2	
	3000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	3	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	3000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	3	
10-30 VDC	1500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	2	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	2	
10-30 VDC	1500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	3	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>12 mm - Embeddable/Nonembeddable, Plastic, eurofast® Quick Disconnect</b> 	Bi 3-P12WD-AN6X-H1141	M4605143	Washdown	•	3	3-Wire DC NPN	
	Ni 5-P12WD-AN6X-H1141	M4653713	Washdown		5		
	Bi 3-P12WD-AP6X-H1141	M4605142	Washdown	•	3	3-Wire DC PNP	
	Ni 5-P12WD-AP6X-H1141	M4653712	Washdown		5		
	<b>12 mm - Embeddable/Nonembeddable, Plastic, eurofast® Quick Disconnect</b> 	Bi 2-S12-AD4X-H1141	T4453094		•	2	2-Wire DC
		Bi 2-S12-AN6X-H1141	T4652100		•	2	3-Wire DC NPN
Bi 3U-S12-AN6X-H1141		M1634620	Uprox	•	3		
Ni 4-S12-AN6X-H1141		T4652300			4		
Ni 8U-S12-AN6X-H1141		M1644620	Uprox		8	3-Wire DC PNP	
Bi 2-S12-AP6X-H1141		T4652000		•	2		
Bi 3U-S12-AP6X-H1141		M1634600	Uprox	•	3		
Ni 4-S12-AP6X-H1141		T4652200			4	2-Wire DC NAMUR	
Ni 8U-S12-AP6X-H1141		M1644600	Uprox		8		
Bi 2-S12-Y0X-H1141		T4030090			•	2	2-Wire DC NAMUR
Ni 5-S12-Y0X-H1141	T4030300				5		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-10 to +85	IP 68, 69K	PA 12	PA 12	N/A	YE	RK 4T-*	2	<b>Diagram 1</b> 
	2000	≤200	-10 to +85	IP 68, 69K	PA 12	PA 12	N/A	YE	RK 4T-*	2	
10-30 VDC	2000	≤200	-10 to +85	IP 68, 69K	PA 12	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 2</b> 
	2000	≤200	-10 to +85	IP 68, 69K	PA 12	PA 12	N/A	YE	RK 4T-*	3	
10-65 VDC	1000	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4.2T-*	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	2	<b>Diagram 3</b> 
	3000	≤200	-30 to +85	IP 68	PBT	PBT	N/A	YE	RKK 4T-*	2	
	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	2	
	2000	≤200	-30 to +85	IP 68	PBT	PBT	N/A	YE	RKK 4T-*	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	3	<b>Diagram 4</b> 
	3000	≤200	-30 to +85	IP 68	PBT	PBT	N/A	YE	RKK 4T-*	3	
	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	3	
	2000	≤200	-30 to +85	IP 68	PBT	PBT	N/A	YE	RKK 4T-*	3	
5-30 VDC	5000	Remote	-25 to +70	IP 67	PA	PA	N/A	YE	RKK 4T-*	4	
	2000	Remote	-25 to +70	IP 67	PA	PA	N/A	YE	RKK 4T-*	4	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>12 mm - Embeddable/Nonembeddable, Plastic Potted-In Cable</b> 	Bi 2-P12-Y0	T1009300		•	2	2-Wire DC NAMUR
	Bi 2-P12-Y0/S100	M1030200	High Temp. 100°C	•	2	
	Bi 2-P12-Y0X	T4030000		•	2	
	Bi 2-P12-Y1X/S97	T4030021	Low Temp. -40°C	•	2	
	Ni 5-P12-Y0/S100	M1024200	High Temp. 100°C		5	2-Wire DC NAMUR
	Ni 5-P12-Y0X	T4030100			5	
	Ni 5-P12-Y1	M1009400			5	
<b>12 mm - Embeddable/Nonembeddable, Plastic Potted-In Cable</b> 	Bi 3-P12WD-AN6X	M4605141	Washdown	•	3	3-Wire DC NPN
	Bi 3-P12WD-AP6X	M4605140	Washdown	•	3	3-Wire DC PNP
	Ni 5-P12WD-AP6X	M4653710	Washdown		5	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
5-30 VDC	5000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>Diagram 1</b></p> <p style="text-align: center;"><b>Diagram 2</b></p> <p style="text-align: center;"><b>Diagram 3</b></p> </div>
	5000	Remote	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	N/A	2M/PVC	1	
	5000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
	5000	Remote	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/Silicon	1	
5-30 VDC	2000	Remote	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	N/A	2M/PVC	1	
	2000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
	2000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	
10-30 VDC	2000	≤200	-10 to +85	IP 68, 69K	PA 12	PA 12	EPTR	N/A	YE	2M/PUR	2	
10-30 VDC	2000	≤200	-10 to +85	IP 68, 69K	PA 12	PA 12	EPTR	N/A	YE	2M/PUR	3	
	2000	≤200	-10 to +85	IP 68, 69K	PA 12	PA 12	EPTR	N/A	YE	2M/PUR	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>12 mm - Embeddable/Nonembeddable, Plastic, Potted-In Cable</b> 	Bi 3U-S12-AN6X	M1634520	<i>Uprox</i>	•	3	3-Wire DC NPN	
	Ni 8U-S12-AN6X	M1644520	<i>Uprox</i>		8		
	Bi 3U-S12-AP6X	M1634500	<i>Uprox</i>	•	3	3-Wire DC PNP	
	Ni 8U-S12-AP6X	M1644500	<i>Uprox</i>		8		
	<b>12 mm - Embeddable/Nonembeddable, Plastic, Potted-In Cable</b> 	Bi 2-S12-AD4X	T4453000		•	2	2-Wire DC
		Ni 4-S12-AD4X	T4453200			4	
Bi 2-S12-AN6X		T4653100		•	2	3-Wire DC NPN	
Bi 2-S12-AN7X		T1713800	<i>TTL Compatible</i>	•	2		
Bi 2-S12-AN7X/S100		T1773100	<i>High Temp. 100°C</i>	•	2		
Ni 4-S12-AN6X		T4653300			4		
Ni 4-S12-AN7X		T1713900	<i>TTL Compatible</i>		4		
Ni 4-S12-AN7X/S100		T1773000	<i>High Temp. 100°C</i>		4		
Bi 2-S12-AP6X		T4653000		•	2	3-Wire DC PNP	
Bi 2-S12-AP6X/S97		M1664500	<i>Low Temp. -40°C</i>	•	2		
Bi 2-S12-AP7X/S100		T1755500	<i>High Temp. 100°C</i>	•	2		
Ni 4-S12-AP6X		T4653200			4		
Ni 4-S12-AP6X/S97		M4653221	<i>Low Temp. -40°C</i>		4		
Ni 4-S12-AP7X/S100		T1768100	<i>High Temp. 100°C</i>		4		
Ni 8-S12-AP6X		T4611381	<i>Extended Range</i>		8		
Bi 2-S12-AZ31X		T1302000		•	2	2-Wire AC/DC	
Bi 2-S12-AZ31X/S97		M1302002	<i>Low Temp. -40°C</i>	•	2		
Bi 2-S12-AZ31X/S100		M1302001	<i>High Temp. 100°C</i>	•	2		
Ni 4-S12-AZ31X		T1302200			4		
Ni 4-S12-AZ31X/S97		M1302202	<i>Low Temp. -40°C</i>		4		
Ni 4-S12-AZ31X/S100	M1302201	<i>High Temp. 100°C</i>		4			
Bi 2-S12-ADZ32X	T4453091		•	2	2-Wire AC/DC Short-Circuit Protected		
Ni 4-S12-ADZ32X	T4453292			4			

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	3000	≤200	-30 to +85	IP 68	PBT	PBT	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 1</b> 
	2000	≤200	-30 to +85	IP 68	PBT	PBT	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	3000	≤200	-30 to +85	IP 68	PBT	PBT	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 2</b> 
	2000	≤200	-30 to +85	IP 68	PBT	PBT	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	1000	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 3</b> 
	1000	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 4</b> 
	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-25 to +100	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1500	≤200	-25 to +100	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/Silicon	3	
	2000	≤200	-25 to +100	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/Silicon	3	
	1500	≤200	-25 to +100	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
	20	≤100	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/Silicon	4	
	20	≤100	-25 to +100	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
	20	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
	20	≤100	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/Silicon	4	
	20	≤100	-25 to +100	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
	20	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>12 mm - Embeddable/Nonembeddable, Plastic, Terminal Chamber</b> 	Bi 2-P12SK-Y1X	M4031000		•	2	2-Wire DC NAMUR
	Ni 5-P12SK-Y0X	T4031100			5	2-Wire DC NAMUR
<b>12 mm - Embeddable/Nonembeddable, Plastic, Terminal Chamber</b> 	Bi 2-P12SK-AD4X	T4453050		•	2	2-Wire DC
	Bi 2-P12SK-AN6X2	T4654000		•	2	3-Wire DC NPN
	Bi 3U-P12SK-AN6X	M1634720	<i>Uprox</i>	•	3	
	Ni 5-P12SK-AN6X2	T4654200			5	
	Ni 8U-P12SK-AN6X	M1644720	<i>Uprox</i>		8	
	Bi 2-P12SK-AP6X2	T4653900		•	2	3-Wire DC PNP
	Bi 3U-P12SK-AP6X	M1634700	<i>Uprox</i>	•	3	
Ni 5-P12SK-AP6X2	T4654100			5		
Ni 8U-P12SK-AP6X	M1644700	<i>Uprox</i>		8		
Bi 2-P12SK-AZ31X	M1339500			•	2	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
5-30 VDC	5000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	- - - -	1	<p><b>Diagram 1</b></p>
5-30 VDC	2000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	- - - -	1	<p><b>Diagram 2</b></p>
10-65 VDC	1000	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	- - - -	2	<p><b>Diagram 3</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	YE	- - - -	3	<p><b>Diagram 4</b></p>
	3000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	- - - -	3	
	1500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	YE	- - - -	3	
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	- - - -	3	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	YE	- - - -	4	<p><b>Diagram 5</b></p>
	3000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	- - - -	4	
	1500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	YE	- - - -	4	
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	- - - -	4	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	- - - -	5	



Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable eurofast® Connection</b> 	Bi 5-M18-AD4X-H1141	T4414500		5	2-Wire DC
	Bi 7-M18-AD4X-H1141	T4414541	Extended Range	7	
	Bi 5-EM18-AN6X-H1141	T4614601		5	3-Wire DC NPN
	Bi 5-M18-AN6X-H1141	T4614600		5	
	Bi 5U-EM18-AN6X-H1141	M1635350	Uprox	5	
	Bi 5U-M18-AN6X-H1141	M1635150	Uprox	5	
	Bi 7-EM18WD-AN6X-H1141	M4614534	Washdown	7	
	Bi 8-M18-AN6X-H1141	T4615100	Extended Range	8	
	Bi 5U-M18-ASIX-H1140	M1901004	Uprox	5	2-Wire ASI-BUS
	Bi 5-EM18-AP6X-H1141	T4614501		5	3-Wire DC PNP
	Bi 5-M18-AP6X-H1141	T4614500		5	
	Bi 5U-EM18-AP6X-H1141	M1635340	Uprox	5	
	Bi 5U-M18-AP6X-H1141	M1635140	Uprox	5	
	Bi 7-EM18WD-AP6X-H1141	M4614531	Washdown	7	
	Bi 7-M18WD-AP6X-H1141	M4614529	Washdown	7	
	Bi 8-M18-AP6X-H1141	T4615000	Ext. Range	8	
	Bi 8-EM18H-AP6X-H1141	T4615094	Ext. Range	8	
	Bi 8-EM18H-AP6X-H1141/S1589	T4615099	armorguard	8	
	Bi 5-EM18-VN4X-H1141	T4614699	Comp. Output	5	4-Wire DC NPN
	Bi 5-M18-VN4X-H1141	T1571800	Comp. Output	5	
Bi 8-M18-VN4X-H1141	T4590702	Ext. Range	8		
Bi 5-M18-VP4X-H1141	T1561800	Comp. Output	5	4-Wire DC PNP	
Bi 8-M18-VP4X-H1141	T4590701	Ext. Range	8		
Bi 5-M18-Y1X-H1141	M4015200			5	2-Wire NAMUR
<b>18 mm - Embeddable eurofast Connection, Stainless Steel</b> 	Bi 5-EM18FM-AP6X-H1141	M4614539	Stainless Steel Front Cap	5	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4T-*	2	<b>Diagram 2</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	2500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	2	
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RKV 4T-*	2	
	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	2	
500	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	2		
18-33 VDC	200	N/A	-30 to +85	IP 68	CPB	PA 12	N/A	YE	RKC 254-*M	7	<b>Diagram 3</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4T-*	3	<b>Diagram 4</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	1000	≤200	-25 to +85	IP 68, 69K	CPB	PA 12	N/A	YE	RK 4T-*	3	
	500	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	
	500	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RKV 4T-*	3	
500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKV 4T-*	3		
10-65 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RKV 4.4T-*	4	<b>Diagram 5</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
	500	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4.4T-*	4	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 6</b> 
	500	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4.4T-*	5	
5-30 VDC	1000	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.21T-*	6	<b>Diagram 7</b> 
10-30 VDC	180	≤200	-25 to +80	IP 68, 69K	SS	SS	N/A	YE	RKV 4T-*	3	<b>Diagram 7</b> 

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, eurofast® Connection, Teflon Coated</b> 	Bi 5-MT18-AD4X-H1141/S34	M4414501	<i>WFI</i>	5	2-Wire DC
	Bi 7-MT18H-AD4X-H1141	T4414580-1	<i>Extended Range</i>	7	
	Bi 5U-MT18-AN6X-H1141	M1635250	<i>Uprox</i>	5	3-Wire DC NPN
	Bi 5U-MT18-AN6X2-H1141	M1635255	<i>Uprox</i>	5	
	Bi 5U-MT18-AP6X-H1141	M1635240	<i>Uprox</i>	5	3-Wire DC PNP
	Bi 5U-MT18-AP6X2-H1141	M1635245	<i>Uprox</i>	5	
<b>18 mm - Embeddable, eurofast Connection, Teflon Coated</b> 	Bi 5-MT18-AP6X2-H1141/S34	M1655503	<i>WFI</i>	5	3-Wire DC PNP
	Bi 5-MT18-AP6X2-H1141/S34/S1589	M1655580	<i>armorguard</i>	5	
<b>18 mm - Embeddable, eurofast Connection, Short Barrel</b> 	Bi 8-M18K-AP6X-H1141	T4615050	<i>Extended Range</i>	8	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	PA 12	N/A	YE	RK 4.2T-*	1	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Diagram 1</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Diagram 2</b> </div> <div style="border: 1px solid black; padding: 5px;"> <b>Diagram 3</b> </div>
	1000	≤100	-25 to +70	IP 67	TC	TC	N/A	YE	RK 4.2T-*	1	
10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	PA 12	N/A	YE	RK 4T-*	2	
	2500	≤200	-30 to +85	IP 67	TC	PA 12	GN	YE	RK 4T-*	2	
10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	PA 12	N/A	YE	RK 4T-*	3	
	2500	≤200	-30 to +85	IP 67	TC	PA 12	GN	YE	RK 4T-*	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	TC	PA 12	GN	YE	RK 4T-*	3	
	500	≤200	-25 to +70	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	3	
10-30 VDC	400	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	



Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, eurofast® Connection</b> 	Bi 5U-EM18-AN6X-H1141/S395	M1635351	<i>Uprox</i>	5	3-Wire DC NPN
	Bi 5U-EM18H-AN6X2-H1141/S395	M1635146	<i>Uprox</i>	5	
	Bi 5U-EM18H-AN6X2-H1141/S395/S1589	M1635196	<i>armorguard</i> <i>Uprox</i>	5	
	Bi 5U-M18-AN6X-H1141/S395	M1635154	<i>Uprox</i>	5	
	Bi 5U-EM18-AP6X-H1141/S395	M1635342	<i>Uprox</i>	5	3-Wire DC PNP
	Bi 5U-EM18H-AP6X2-H1141/S395	M1635158	<i>Uprox</i>	5	
	Bi 5U-EM18H-AP6X2-H1141/S395/S1589	M1635197	<i>armorguard</i> <i>Uprox</i>	5	
	Bi 5U-EM18H-AP6X2-H1141/S395/S1610	M1635198	<i>armorguard</i>	5	
	Bi 5U-EM18M-AP6X2-H1141	M1635349	<i>Uprox</i>	5	
	Bi 5U-M18-AP6X-H1141/S395	M1635141	<i>Uprox</i>	5	
	Bi 8-M18M-AP6X-H1141	T4615083	<i>Extended Range</i>	8	4-Wire DC NPN
	Bi 5U-M18M-VN4X-H1141	M1581311	<i>Comp. Output</i>	5	
	Bi 5U-M18M-VP4X-H1141	M1581255	<i>Comp. Output</i>	5	4-Wire DC PNP
	Bi 5U-EM18M-VP4X-H1141	M1581268	<i>Uprox</i>	5	
<b>18 mm - Embeddable, eurofast Connection, Teflon Coated</b> 	Bi 5U-MT18-AN6X-H1141/S395	M1635251	<i>Uprox</i>	5	3-Wire DC NPN
	Bi 5U-MT18H-AN6X2-H1141/S395	M1635225	<i>Uprox</i>	5	
	Bi 5U-MT18H-AN6X2-H1141/S395/S1589	M1635290	<i>armorguard</i> <i>Uprox</i>	5	
	Bi 5U-MT18-AP6X-H1141/S395	M1635231	<i>Uprox</i>	5	3-Wire DC PNP
	Bi 5U-MT18H-AP6X2-H1141/S395	M1635220	<i>Uprox, Stoneface</i>	5	
	Bi 5U-MT18H-AP6X2-H1141/S395/S1589	M1635291	<i>armorguard</i> <i>Uprox</i>	5	
	Bi 5U-MT18M-AP6X2-H1141	M1635252	<i>Uprox</i>	5	
	Bi 5U-MT18H-AP6X2-H1141/S395/S1610	M1635293	<i>armorguard</i>	5	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	1	<b>Diagram 1</b> 
	2500	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKV 4T-*	1	
	2500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	1	
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	1	
10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	2	<b>Diagram 2</b> 
	2500	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKV 4T-*	2	
	2500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	2	
	2500	≤200	-30 to +85	IP 68	AG	WG	GN	YE	RKG 4T-*/S600	2	
	2500	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKV 4T-*	2	
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	500	≤200	-25 to +75	IP 97	CPB	PA 12	N/A	YE	RK 4T-*	2	
10-65 VDC	2500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	3	<b>Diagram 3</b> 
10-65 VDC	2500	≤200	-30 to +85	IP 67	SS	PA 12	N/A	YE	RK 4.4T-*	4	
10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	1	<b>Diagram 4</b> 
	2500	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RK 4T-*	1	
	2500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RK 4T-*	1	
10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	2	<b>Diagram 4</b> 
	2500	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RK 4T-*	2	
	2500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RK 4T-*	2	
	2500	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	2	
	2500	≤200	-30 to +85	IP 68	AG	WG	GN	YE	RK 4T-*/S600	2	

Barrels

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, Ext. Barrel Length, eurofast® Connection</b>  	Bi 5-M18E-AD4X-H1141	T4414591		5	2-Wire DC
	Bi 7-M18E-AD4X-H1141	T4414580	<i>Ext. Range</i>	7	
	Bi 5-M18E-AN6X-H1141	T4614697		5	3-Wire DC NPN
	Bi 5U-M18E-AN6X-H1141	M1635122	<i>Uprox</i>	5	
	Bi 5NF-EM18HE-AN6X2-H1141	M1615004	<i>Nonferrous</i>	5	
	Bi 8-EM18HE-AN6X-H1141/S1589	T4615193	<i>armorguard®, Ext. Range</i>	8	
	Bi 8-EM18HE-AN6X-H1141	T4615194	<i>Stoneface, Ext. Range</i>	8	
	Bi 8-M18E-AN6X-H1141	T4615190	<i>Ext. Range</i>	8	
	Bi 5-M18E-AP6X-H1141	T4614589		5	3-Wire DC PNP
	Bi 5NF-EM18HE-AP6X2-H1141	M1615000	<i>Nonferrous</i>	5	
	Bi 8-EM18HE-AP6X-H1141	T4615095	<i>Stoneface</i>	8	
	Bi 8-EM18HE-AP6X-H1141/S1589	T4615096	<i>armorguard, Ext. Range</i>	8	
	Bi 8-M18E-AP6X-H1141	T4615090	<i>Ext. Range</i>	8	
	Bi 8-EM18E-AP6X-H1141	T4615095-2	<i>Ext. Range</i>	8	
	Bi 5U-M18E-AP6X-H1141	M1635103	<i>Uprox</i>	5	
	Bi 8-EM18HE-AP6X-H1141/S1610	T4615095-1	<i>armorguard</i>	8	
	Bi 5FE-M18FE-AP6X-H1141	M1615009	<i>Ferrous Only</i>	5	
	Bi 5-M18E-VN4X-H1141	T1571890	<i>Comp. Output</i>	5	4-Wire DC NPN
	Bi 5-M18E-VP4X-H1141	T1561890	<i>Comp. Output</i>	5	4-Wire DC PNP
<b>18 mm - Embeddable, Ext. Barrel Length, eurofast connection, Teflon Coated</b>  	Bi 7-MT18HE-AD4X-H1141	T4414597	<i>Stoneface</i>	7	2-Wire DC
	Bi 7-MT18HE-AD4X-H1144	T4414598	<i>Stoneface</i>	7	
	Bi 7-MT18HE-AD4X-H1141/S1589	T4414588	<i>armorguard</i>	7	
	Bi 7-MT18HE-AD4X-H1144/S1589	T4414599	<i>armorguard</i>	7	
	Bi 5U-MT18E-AP6X2-H1141	M1635247	<i>Uprox</i>	5	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 2</b> 
	2500	≤200	-30 to +85	IP 68	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2500	≤200	0 to +60	IP 67	SS	SF	GN	YE	RK 4T-*	3	
	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	3	
	500	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RK 4T-*	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 3</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	2500	≤200	0 to +60	IP 67	SF	PA 12	GN	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	4	
	500	≤200	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	4	
	2500	≤200	-30 to +85	IP 68	AG	WG	N/A	YE	RKG 4T-*/S600	4	
	500	≤200	-25 to +70	IP 67	AG	WG	N/A	YE	RK 4T-*	4	
250	≤200	0 to +60	IP 67	CuZn	SS	N/A	YE	RK 4T-*	4		
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 4</b> 
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	<b>Diagram 5</b> 
10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*	1	<b>Diagram 6</b> 
	1000	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*/S674	2	
	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*	1	
	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4.2T-*/S674	2	
10-30 VDC	2500	≤200	-30 to +85	IP 68	TC	TC	GN	YE	RK 4T-*	4	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Nonembeddable, eurofast® Connection</b> 	Ni 8-M18-AD4X-H1141	T4414700		8	2-Wire DC
	Ni 8-M18-AD4X-H1144	T4411288		8	
	Ni 14-M18-AD4X-H1141	T4417241	Ext. Range	14	
	Ni 14-M18-AD4X-H1144	T4417290	Ext. Range	14	
	Ni 8-M18-AN6X-H1141	T4614800		8	3-Wire DC NPN
	Ni 10-EM18WD-AN6X-H1141	M4653433	Washdown	10	
	Ni 10-M18-AN6X-H1141	T4614892		10	
	Ni 10-M18WD-AN6X-H1141	M4653440	Washdown	10	
	Ni 12U-EM18-AN6X-H1141	M1645350	Uprox	12	
	Ni 12U-EM18-AN6X2-H1141	M1645355	Uprox	12	
	Ni 15U-EM18WD-AN6X-H1141	M1634835	Uprox Washdown	15	
	Ni 12U-M18-AN6X-H1141	M1645150	Uprox	12	
	Ni 12U-M18-AN6X2-H1141	M1645155	Uprox	12	
	Ni 14-M18-AN6X-H1141	T4611410	Ext. Range	14	
	Ni 8-M18-AP6X-H1141	T4614700		8	3-Wire DC PNP
	Ni 10-EM18WD-AP6X-H1141	M4653419	Washdown	10	
	Ni 10-M18-AP6X-H1141	T4641291		10	
	Ni 12U-EM18-AP6X-H1141	M1645340	Uprox	12	
	Ni 12U-EM18-AP6X2-H1141	M1645345	Uprox	12	
	Ni 12U-M18-AP6X-H1141	M1645140	Uprox	12	
Ni 12U-M18-AP6X2-H1141	M1645145	Uprox	12		
Ni 14-M18-AP6X-H1141	T4611400	Ext. Range	14		
Ni 8-M18-VN4X-H1141	T1571900	Comp. Outputs	8	4-Wire DC NPN	
Ni 14-M18-VN4X-H1141	T4590603	Ext. Range	14		
Ni 8-M18-VP4X-H1141	T1561900	Comp. Outputs	8	4-Wire DC PNP	
Ni 14-M18-VP4X-H1141	T4590602	Ext. Range	14		
Ni 10-M18-Y1X-H1141	M4015300		10	2-Wire NAMUR	
Ni 12U-M18-ASIX-H1140	M1901005	Uprox	12	2-Wire ASI-BUS	
<b>18 mm - Nonembeddable, eurofast connection, Teflon Coated</b> 	Ni 12U-MT18-AN6X-H1141	M1645250	Uprox	12	3-Wire DC NPN
	Ni 12U-MT18-AP6X-H1141	M1645240	Uprox	12	3-Wire DC PNP
	Ni 12U-MT18-AP6X2-H1141	M1645245	Uprox	12	
	Ni 12U-MT18H-AP6X-H1141/S1589	M1645292	armorguard® Uprox	12	
	Ni 12U-MT18H-AP6X2-H1141/S1589	M1645293	armorguard Uprox	12	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p> <p><b>Diagram 5</b></p> <p><b>Diagram 6</b></p> <p><b>Diagram 7</b></p> <p><b>Diagram 8</b></p>
	500	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*/S674	2	
	500	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
	500	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*/S674	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	500	≤200	-25 to +85	IP 68, IP 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKV 4T-*	3	
	1000	≤200	-30 to +85	IP 68, IP 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	GN	YE	RK 4T-*	3	
500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3		
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	500	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	4	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	4	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKV 4T-*	4	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	GN	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
5-30 VDC	500	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.21T-*	7	
18-33 VDC	200	N/A	-30 to +85	IP 68	CPB	PA 12	N/A	YE	RKC 254-*M	8	
10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	
10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	4	
	2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	4	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>18 mm - Nonembeddable, eurofast® Connection</b> 	Ni 12U-EM18-AN6X-H1141/S395	M1645351	<i>Uprox</i>	12	3-Wire DC NPN	
	Ni 12U-EM18H-AN6X2-H1141/S395/S1589	M1645490	<i>armorguard® Uprox</i>	12		
	Ni 12U-M18-AN6X-H1141/S395	M1645151	<i>Uprox</i>	12		
		Ni 12U-EM18-AP6X-H1141/S395	M1645342	<i>Uprox</i>	12	3-Wire DC PNP
		Ni 12U-EM18-AP6X2-H1141/S395	M1645304	<i>Uprox</i>	12	
		Ni 12U-EM18H-AP6X2-H1141/S395/S1589	M1645491	<i>armorguard Uprox</i>	12	
		Ni 12U-M18-AP6X-H1141/S395	M1645142	<i>Uprox</i>	12	
		Ni 12U-M18M-VN4X-H1141	M1581552	<i>Comp. Output</i>	12	
		Ni 12U-M18M-VP4X-H1141	M1581458	<i>Comp. Output</i>	12	
	<b>18 mm - Nonembeddable, eurofast Connection, Teflon Coated</b> 	Ni 12U-MT18-AN6X-H1141/S395	M1645251	<i>Uprox</i>	12	3-Wire DC NPN
Ni 12U-MT18H-AN6X2-H1141/S395/S1589		M1645290	<i>armorguard Uprox</i>	12		
		Ni 12U-MT18-AP6X-H1141/S395	M1645242	<i>Uprox</i>	12	3-Wire DC PNP
		Ni 12U-MT18-AP6X2-H1141/S395	M1645246	<i>Uprox</i>	12	
		Ni 12U-MT18H-AP6X2-H1141/S395/S1589	M1645291	<i>armorguard Uprox</i>	12	
<b>18 mm - Nonembeddable, Ext. Barrel Length eurofast Connection</b> 	Ni 8-M18E-AD4X-H1141	T4411210		8	2-Wire DC	
	Ni 14-M18E-AD4X-H1141	T4417292	<i>Ext. Range</i>	14		
		Ni 10-M18E-AN6X-H1141	T4614894		10	3-Wire DC NPN
		Ni 14-EM18HE-AN6X-H1141/S1589	T4611494	<i>armorguard</i>	14	
		Ni 14-M18E-AN6X-H1141	T4611483	<i>Ext. Range</i>	14	
		Ni 8-M18E-AP6X-H1141	T4614794		8	3-Wire DC PNP
		Ni 10-M18E-AP6X-H1141	T4641294		10	
		Ni 12U-M18E-AP6X-H1141	M1645143	<i>Uprox</i>	12	
		Ni 14-EM18HE-AP6X-H1141/S1589	T4611495	<i>armorguard</i>	14	
		Ni 14-M18E-AP6X-H1141	T4611489	<i>Ext. Range</i>	14	
		Ni 8-M18E-VN4X-H1141	T1571990	<i>Comp. Output</i>	8	4-Wire DC NPN
		Ni 8-M18E-VP4X-H1141	T1561990	<i>Comp. Output</i>	8	4-Wire DC PNP
	<b>18 mm - Nonembeddable, Ext. Barrel Length eurofast Connection, Teflon Coated</b> 	Ni 14-MT18HE-AN6X-H1141/S1589	T4611496	<i>armorguard</i>	14	3-Wire DC NPN
Ni 14-MT18HE-AP6X-H1141/S1589		T4611497	<i>armorguard</i>	14	3-Wire DC PNP	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	2	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p> <p><b>Diagram 5</b></p>
	2000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	2	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-65 VDC	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
10-65 VDC	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	2	
10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	3	
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	1000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	2	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	1000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	3	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	3	

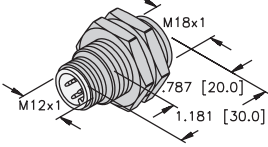
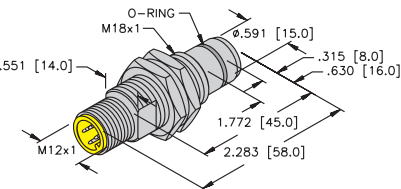
Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, eurofast® Connection</b> 	Bi 5-G18KK-AP6-H1141	M4670410	Short Barrel	5	3-Wire DC PNP
<b>18 mm - Embeddable, eurofast Connection, Pressure Resistant Barrel Sensor</b> 	BiD2-G180-AP6-H1141/S212	M1688500	5000 psi	2	3-Wire DC PNP
	BiD2-G180-Y0-H1141/S212	M1088500	5000 psi	2	2-Wire NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	N/A	RK 4T-*	2	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	N/A	RKV 4T-*	2	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
5-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	N/A	RKV 4.21T-*	3	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>

\* Length in meters.

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, <i>microfast</i>® Connection</b> 	Bi 5U-G18-ADZ30X2-B3331	M4281213	<i>Uprox</i>	5	2-Wire AC/DC Short-Circuit Protected
	Bi 5-G18-ADZ30X2-B3331	T4208092		5	
	Bi 8-G18-ADZ30X2-B3331	T4209301	<i>Ext. Range</i>	8	
<b>18 mm - Embeddable, <i>microfast</i> Connection, Teflon Coated</b> 	Bi 5-GT18-ADZ30X2-B3331	T4255491		5	2-Wire AC/DC Short-Circuit Protected
	Bi 5-GT18-ADZ30X2-B3331/S34	T4255400	<i>WFI</i>	5	
	Bi 5-GT18H-ADZ30X2-B3331/S34	T4255289	<i>WFI</i>	5	
	Bi 5-GT18H-ADZ30X2-B3331/S34/S1589	T4255283	<i>armorguard</i> ®	5	
	Bi 5U-GT18-ADZ30X2-B3331	M4281223	<i>Uprox</i>	5	
<b>18 mm - Embeddable, <i>microfast</i> Connection</b> 	Bi 5-G18-AZ3X-B3331	T4372098		5	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	KB 3T-*	1	<p><b>Diagram 1</b></p>
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	SS	PA 12	GN	RD	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*	1	
	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	KB 3T-*		
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	KB 3T-*	1	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, <i>microfast</i>® Connection</b> 	Bi 5-G18-AZ3X-B3431	T4372090		5	2-Wire AC/DC
<b>18 mm - Embeddable, <i>microfast</i> Right Angle Connection, Teflon Coated</b> 	Bi 5-GT18-ADZ30X2-B3431/S34	T4255605	WFI	5	2-Wire AC/DC Short-Circuit Protected
	Bi 5-GT18H-ADZ30X2-B3431/S34	T4255288	WFI	5	
	Bi 5-GT18H-ADZ30X2-B3431/S34/S1589	T4255282	armorguard®	5	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	KB 3T-*	1	<p><b>Diagram 1</b></p>
	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*	1	

\* Length in meters.

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Nonembeddable, microfast® connection</b> 	Ni 8-G18-ADZ30X2-B3331/S34	T4209100	WFI	8	2-Wire AC/DC Short-Circuit Protected
	Ni 12U-G18-ADZ30X2-B3331	M4281413	Uprox	12	
	Ni 14-G18-ADZ30X2-B3331	T4205403	Ext. Range	14	
	Ni 10-G18-AZ3X-B3331	T4372192		10	2-Wire AC/DC
	Ni 8-G18-AZ3X-B3331	T4350588		8	
<b>18 mm - Nonembeddable, microfast connection, Teflon Coated</b> 	Ni 8-GT18-ADZ30X2-B3331/S34	T4209101	WFI	8	2-Wire AC/DC Short-Circuit Protected
	Ni 12U-GT18-ADZ30X2-B3331	M4281423	Uprox	12	
<b>18 mm - Nonembeddable, Teflon Coated, microfast Right Angle Connection</b> 	Ni 8-GT18-ADZ30X2-B3431/S34	T4209201	WFI	8	2-Wire AC/DC Short-Circuit Protected

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	KB 3T-*	1	<p><b>Diagram 1</b></p>
	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	KB 3T-*	1	
20-250 VAC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	KB 3T-*	1	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	KB 3T-*	1	
	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	KB 3T-*	1	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	KB 3T-*	1	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, minifast® Connection</b> 	Bi 5-G18-AN6X-B1341	T4695200		5	3-Wire DC NPN
	Bi 5-G18-AP6X-B1341	T4696300		5	3-Wire DC PNP
	Bi 5-G18-AP6X-B1341/S34	M4691800	WFI	5	
<b>18 mm - Embeddable, Right Angle, minifast Connection</b> 	Bi 5-G18-AN6X-B1441	T4695600		5	3-Wire DC NPN
	Bi 5-G18-AP6X-B1441	T4696700		5	3-Wire DC PNP
	Bi 5-G18-AP6X-B1441/S34	M4691900	WFI	5	
<b>18 mm - Embeddable, minifast Connection</b> 	Bi 5-G18-ADZ30X2-B1331	T4208000		5	2-Wire AC/DC Short-Circuit Protected
	Bi 5U-G18-ADZ30X2-B1331	M4281212	Uprox	5	
	Bi 5-G18-AZ3X-B1331	T4372000		5	2-Wire AC/DC
<b>18 mm - Embeddable, minifast Connection, Teflon Coated</b> 	Bi 5-GT18-ADZ30X2-B1331	T4255290		5	2-Wire AC/DC Short-Circuit Protected
	Bi 5-GT18-ADZ30X2-B1331/S34	T4255200	WFI	5	
	Bi 5-GT18H-ADZ30X2-B1331/S34/S1589	T4255284	armorguard®, WFI	5	
	Bi 5U-GT18-ADZ30X2-B1331	M4281222	Uprox	5	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	1	<b>Diagram 1</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	<b>Diagram 2</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	1	<b>Diagram 3</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	RKM 30-*M	3	
	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	RKM 30-*M	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	RKM 30-*M	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	3	
	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	3	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 30-*M	3	
	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	RKM 30-*M	3	

Barrels

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, minifast® Right Angle Connection</b> 	Bi 5-G18-AZ3X-B1431	T4372400		5	2-Wire AC/DC Short-Circuit Protected
<b>18 mm - Embeddable, minifast Right Angle Connection, Teflon Coated</b> 	Bi 5-GT18-ADZ30X2-B1431	T4255690		5	2-Wire AC/DC Short-Circuit Protected
	Bi 5-GT18-ADZ30X2-B1431/S34	T4255600	WFI	5	
	Bi 5-GT18H-ADZ30X2-B1431/S34/S1589	T4255285	armorguard®	5	
<b>18 mm - Nonembeddable, minifast Connection</b> 	Ni 10-G18-AN6X-B1341	T4695300		10	3-Wire DC NPN
	Ni 10-G18-AP6X-B1341	T4696400		10	3-Wire DC PNP
<b>18 mm - Nonembeddable, minifast Right Angle Connection</b> 	Ni 10-G18-AN6X-B1441	T4695700		10	3-Wire DC NPN
	Ni 10-G18-AP6X-B1441	T4696800		10	3-Wire DC PNP
	Ni 10-G18-VN6X-B1441	T4699100	Comp. Output	10	4-Wire DC NPN
	Ni 10-G18-VP6X-B1441	T4699190	Comp. Output	10	4-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	RKM 30-*M	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	1	<p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p> <p><b>Diagram 5</b></p>
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 30-*M	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	3	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	3	<p><b>Diagram 5</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	4	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	5	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Nonembeddable minifast® Connection</b> 	Ni 12U-G18-ADZ30X2-B1331	M4281412	<i>Uprox</i>	12	2-Wire AC/DC Short-Circuit Protected
	Ni 14-G18-ADZ30X2-B1331	T4205407	<i>Extended Range</i>	14	
	Ni 10-G18-AZ3X-B1331	T4372100			10
<b>18 mm - Nonembeddable minifast Connection, Teflon Coated</b> 	Ni 8-GT18-ADZ30X2-B1331/S34	T4208801	<i>WFI</i>	8	2-Wire AC/DC Short-Circuit Protected
	Ni 8-GT18H-ADZ30X2-B1331/S34/S1589	T4208890	<i>armorguard®</i>	8	
	Ni 12U-GT18-ADZ30X2-B1331	M4281422	<i>Uprox</i>	12	
	Ni 14-GT18H-ADZ30X2-B1331/S1589	T4205484	<i>armorguard</i>	14	
<b>18 mm - Nonembeddable, Teflon Coated minifast Right Angle Connection</b> 	Ni 8-GT18-ADZ30X2-B1431/S34	T4208901	<i>WFI</i>	8	2-Wire AC/DC Short-Circuit Protected
	Ni 8-GT18H-ADZ30X2-B1431/S34/S1589	T4208990	<i>armorguard</i>	8	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	RKM 30-*M	1	<p><b>Diagram 1</b></p>
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	RKM 30-*M	1	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	RKM 30-*M	1	
	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	1	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	1	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 30-*M	1	
	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	RKM 30-*M	1	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 30-*M	1	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	1	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 30-*M	1	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>18 mm - Embeddable, Potted-In Cable, Partial Threading</b> 	Bi 5-M18-AD4X	T4411000		5	2-Wire DC	
	Bi 7-M18-AD4X	T4414535	Ext. Range	7		
	Bi 5U-EM18-AN6X	M1635320	Uprox	5	3-Wire DC NPN	
	Bi 5U-M18-AN6X	M1635120	Uprox	5		
	Bi 8-M18-AN6X	T4615130	Ext. Range	8		
	Bi 5-M18-AN6X	M4611100		5		
	Bi 5-M18-AP6X/S100	M4611004	High Temp. 100°C	5	3-Wire DC PNP	
	Bi 5U-EM18-AP6X	M1635300	Uprox	5		
	Bi 5U-M18-AP6X	M1635100	Uprox	5		
	Bi 8-M18-AP6X	T4615030	Ext. Range	8		
	Bi 5-M18-VN4X	T1571100	Comp. Outputs	5	4-Wire DC NPN	
	Bi 8-M18-VN4X	T4590703	Comp. Outputs	8		
	Bi 5-M18-VP4X	T1561100	Comp. Outputs	5	4-Wire DC PNP	
	Bi 8-M18-VP4X	T4590704	Comp. Outputs	8		
	<b>18 mm - Embeddable, Potted-In Cable, Partial Threading, Teflon Coated</b> 	Bi 5U-MT18-ADZ30X2	M4209410	Uprox	5	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	RK 4T-*	2	
10-30 VDC	1000	≤200	-25 to +100	IP 67	CPB	IRPA	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	2500	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	TC	TC	EPTR	GN	YE	2M/PVC	6	<b>Diagram 6</b> 

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, Potted-In Cable, Extended Length Barrel, Partial Threading</b> 	Bi 5-M18E-AD4X	T4411091		5	2-Wire DC
	Bi 5-EM18-AN6XLD	T4614605	<i>Load Dump</i>	5	3-Wire DC NPN
	Bi 5U-EM18E-AN6X	M1635321	<i>Uprox</i>	5	
	Bi 5U-M18E-AN6X	M1635121	<i>Uprox</i>	5	3-Wire DC PNP
	Bi 5-EM18-AP6XLD	T4614505	<i>Load Dump</i>	5	
	Bi 5U-EM18E-AP6X	M1635303	<i>Uprox</i>	5	
	Bi 5U-M18E-AP6X	M1635101	<i>Uprox</i>	5	4-Wire DC NPN
	Bi 5-M18E-VN4X	T1571190	<i>Comp. Outputs</i>	5	
Bi 5-M18E-VP4X	T1561190	<i>Comp. Outputs</i>	5	4-Wire DC PNP	
<b>18 mm - Embeddable, Potted-In Cable, Extended Length Barrel, Partial Threading, Teflon Coated</b> 	Bi 7-MT18HE-AD4X/S1589	T4414583	<i>armorguard</i>	7	2-Wire DC
<b>18 mm - Embeddable, Potted-In Cable, Partial Threading</b> 	Bi 7-EM18WD-AN6X	M4614533	<i>Washdown</i>	7	3-Wire DC NPN
	Bi 7-EM18WD-AP6X	M4614530	<i>Washdown</i>	7	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams												
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 												
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2													
	2500	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2													
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2													
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 2</b> 												
	2500	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3													
	2500	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3													
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 3</b> 												
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5													
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	WG	EPTR	N/A	YE	2M/PVC	1													
	10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	WG	EPTR	N/A	YE	2M/PVC		1	<b>Diagram 4</b> 										
															10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	WG	EPTR	N/A	YE
10-65 VDC												1000												
	10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	WG	EPTR	N/A	YE	2M/PVC		1	<b>Diagram 5</b> 										
10-65 VDC												1000			≤200	-25 to +70	IP 67	CPB	WG	EPTR	N/A	YE	2M/PVC	1
	10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	WG	EPTR	N/A	YE	2M/PVC		1											
10-30 VDC												1000		≤200	-10 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	2	
	10-30 VDC	1000	≤200	-10 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR		3											
10-30 VDC												1000		≤200	-10 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	
	10-30 VDC	1000	≤200	-10 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR		3											
10-30 VDC												1000		≤200	-10 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, Partial Threading, Potted-In Cable</b> 	Bi 5-M18T-AN6X	T4614100	<i>Extended Range</i>	5	3-Wire DC NPN
	Bi 8-M18T-AN6X	T4616100		8	
	Bi 5-M18T-AP6X	T4614000	<i>Extended Range</i>	5	3-Wire DC PNP
	Bi 8-M18T-AP6X	T4616000		8	
<b>18 mm - Embeddable, Partial Threading, Potted-In Cable</b> 	Bi 5-M18T-AZ3X 60MM	T4312000		5	2-Wire AC/DC
<b>18 mm - Embeddable, Partial Threading, Potted-In Cable</b> 	Bi 5-M18-AP6X/S120	M4611030	<i>High Temp. 120°C</i>	5	3-Wire DC PNP
<b>18 mm - Embeddable, Partial Threading, Potted-In Cable</b> 	Bi 5-EM18D-VP6X/S120	M4614900	<i>High Temp. 120°C</i>	5	4-Wire DC PNP
<b>18 mm - Embeddable, Partial Threading, Potted-In Cable</b> 	Bi 5-EM18-AP6/S907	M4617425	<i>High Temp. 160°C</i>	5	3-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
20-250 AC 10-300 VDC	20	≤500	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	4	<b>Diagram 3</b> 
10-30 VDC	100	≤200	-25 to +120	IP 67	CPB	PTFE	EPTR	N/A	YE	2M/PTFE	2	<b>Diagram 4</b> 
	100	≤200	-25 to +120	IP 67	SS	PTFE	PTFE	N/A	YE	2M/PTFE	3	
10-30 VDC	20	≤200	-25 to +160	IP 67	SS	PTFE	EPTR	N/A	YE	2M/PTFE	2	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, Full Threading, Potted-In Cable</b> 	Bi 5-G18-AN6X	T4671400	<i>Short Barrel</i>	5	3-Wire DC NPN
	Bi 5-G18-AN7X	T4740593	<i>TTL Compatible</i>	5	
	Bi 5-G18-AP6X	T4670400		5	3-Wire DC PNP
	Bi 5-EG18-Y0	T1006001		5	2-Wire NAMUR
	Bi 5-G18-Y0	T1006000		5	
	Bi 5-G18-Y0X	T4015000		5	
<b>18 mm - Embeddable, Full Threading, Potted-In Cable</b> 	Bi 5-EG18-AN6X	T4611101		5	3-Wire DC NPN
	Bi 5-G18-AN6X	T4641500		5	
	Bi 5-G18-AN7X	T4740500	<i>TTL Compatible</i>	5	
	Bi 8-G18-AN6X	T4616101	<i>Ext. Range</i>	8	
	Bi 5-EG18-AP6X	T4611001		5	3-Wire DC PNP
	Bi 5-G18-AP6X	T4641400		5	
<b>18 mm - Embeddable, Full Threading, Potted-In Cable</b> 	Bi 5-G18-ADZ30X2	T4212000		5	2-Wire AC/DC Short-Circuit Protected
	Bi 8-G18-ADZ30X2	T4209320	<i>Extended Range</i>	8	
	Bi 5-EG18-AZ3X	T4611190		5	2-Wire AC/DC
	Bi 5-G18-AZ3X	T4330400		5	
	Bi 5-G18-AZ3X2	T1374195		5	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
5-30 VDC	1000	Remote	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	N/A	2M/PVC	3	
	1000	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	N/A	2M/PVC	3	
	1000	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 3</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	1000	≤150	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 4</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	GN	RD	2M/PVC	4	
	20	≤400/300	-25 to +70	IP 67	SS	PA 12	EPTR	GN	RD	2M/PVC	4	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	RD	2M/PVC	4	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	4	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	4	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, Full Threading, Potted-In Cable, Teflon Coated</b> 	Bi 5-GT18-ADZ30X2	T4255090		5	2-Wire AC/DC
	Bi 5-GT18-ADZ30X2/S34	T4255091	WFI	5	
<b>18 mm - Embeddable, Pressure Resistant, Potted-In Cable</b> 	BiD2-G180-AP6/S212	M1688003	5000 psi	2	3-Wire DC PNP
	BiD2-G180-Y1/S212	M1088003	5000 psi	2	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	EPTR	GN	RD	2M/PVC	1	<div style="border: 1px solid black; padding: 5px;"> <p><b>Diagram 1</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p> </div>
	20	≤400/300	-25 to +70	IP 67	TC	TC	EPTR	GN	RD	2M/PVC	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	SS	PA 12	PA 12	N/A	N/A	2M/PVC	3	
5-30 VDC	2000	Remote	-10 to +70	IP 67	SS	PA 12	PA 12	N/A	N/A	2M/PVC	4	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Nonembeddable, Partial Threading, Potted-In Cable</b> 	Ni 8-M18-AD4X	T4411200		8	2-Wire DC
	Ni14-M18-AD4X	T4417235	<i>Extended Range</i>	14	
	Ni12U-M18-AN6X	M1645120	<i>Uprox</i>	12	3-Wire DC NPN
	Ni12U-EM18-AN6X	M1645320	<i>Uprox</i>	12	
	Ni14-M18-AN6X	T4611411	<i>Extended Range</i>	14	
	Ni 8-M18-AN6X	T4614889		8	
	Ni 8-M18-AP6X/S100	M4611201	<i>High Temp. 100°C</i>	8	3-Wire DC PNP
	Ni12U-EM18-AP6X	M1645300	<i>Uprox</i>	12	
	Ni12U-M18-AP6X	M1645100	<i>Uprox</i>	12	
	Ni14-M18-AP6X	T4611401	<i>Extended Range</i>	14	
	Ni 8-M18-AP6X	T4614395		8	
	Ni 8-M18-VN4X	T1571200	<i>Comp. Output</i>	8	4-Wire DC NPN
	Ni14-M18-VN4X	T4590600	<i>Extended Range</i>	14	
	Ni 8-M18-VP4X	T1561200	<i>Comp. Output</i>	8	4-Wire DC PNP
Ni14-M18-VP4X	T4590601	<i>Extended Range</i>	14		
	Ni12U-M18-ADZ30X2	M4282410	<i>Uprox</i>	12	2-Wire AC/DC Short-Circuit Protected
<b>18 mm - Nonembeddable, Partial Threading, Potted-In Cable, Teflon Coated</b> 	Ni12U-MT18-ADZ30X2	M4209420	<i>Uprox</i>	12	2-Wire AC/DC Short-Circuit Protected

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	500	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	1000	≤200	-25 to +100	IP 67	CPB	IRPA	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	2000	≤200	-30 to +85	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	EPTR	YE	RD	2M/PVC	6	<b>Diagram 6</b> 
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	TC	TC	EPTR	YE	RD	2M/PVC	6	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Nonembeddable, Extended Barrel Length, Partial Threading, Potted-In Cable</b> 	Ni 8-M18E-AD4X	T4411292		8	2-Wire DC
	Ni 12U-EM18E-AN6X	M1645321	<i>Uprox</i>	12	3-Wire DC NPN
	Ni 12U-M18E-AN6X	M1645110	<i>Uprox</i>	12	3-Wire DC NPN
	Ni 12U-EM18E-AP6X	M1645301	<i>Uprox</i>	12	3-Wire DC PNP
	Ni 12U-M18E-AP6X	M1645106	<i>Uprox</i>	12	3-Wire DC PNP
	Ni 8-M18E-VN4X	T1571290	<i>Comp. Output</i>	8	4-Wire DC NPN
Ni 8-M18E-VP4X	T1561290	<i>Comp. Output</i>	8	4-Wire DC PNP	
<b>18 mm - Nonembeddable, Partial Threading, Potted-In Cable</b> 	Ni 10-EM18WD-AN6X	M4653432	<i>Washdown</i>	10	3-Wire DC NPN
	Ni 10-EM18WD-AP6X	M4653420	<i>Washdown</i>	10	3-Wire DC PNP
<b>18 mm - Nonembeddable, Partial Threading Potted-In Cable</b> 	Ni 8-M18T-AN6X	T4614300		8	3-Wire DC NPN
	Ni 8-M18T-AP6X	T4614200		8	3-Wire DC PNP
<b>18 mm - Nonembeddable, Partial Threading Potted-In Cable</b> 	Ni 8-M18T-AZ3X	T4312100		8	2-Wire AC/DC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 2</b> 
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
10-30 VDC	1000	≤200	-10 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	2	<b>Diagram 3</b> 
10-30 VDC	1000	≤200	-10 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	<b>Diagram 4</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	CPB	N/A	YE	2M/PVC	2	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	CPB	N/A	YE	2M/PVC	3	<b>Diagram 6</b> 
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	CPB	N/A	RD	2M/PVC	6	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Nonembeddable, Partial Threading, Potted-In Cable</b> 	Ni 7-EM18D-VP6X/S120	M4632100	<i>High Temp. 120°C</i>	7	4-Wire DC PNP
<b>18 mm - Nonembeddable, Full Threading, Potted-In Cable</b> 	Ni10-G18K-AN6X	T4671500	<i>Short Barrel</i>	10	3-Wire DC NPN
	Ni10-G18K-AP6X	T4670500	<i>Short Barrel</i>	10	3-Wire DC PNP
	Ni10-G18-Y0	T1006100		10	2-Wire NAMUR
Ni10-G18-Y0X	T4015100		10		
<b>18 mm - Nonembeddable, Full Threading, Potted-In Cable</b> 	Ni10-G18-AN6X	T4641700		10	3-Wire DC NPN
	Ni10-G18-AN7X	T4740700	<i>TTL Compatible</i>	10	
	Ni10-G18-AP6X	T4641600		10	3-Wire DC PNP
<b>18 mm - Nonembeddable, Full Threading, Potted-In Cable</b> 	Ni14-G18-ADZ30X2	T4205402	<i>Extended Range</i>	14	2-Wire AC/DC Short-Circuit Protected
	Ni10-G18-AZ3X	T4330500		10	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-25 to +120	IP 67	SS	PTFE	PTFE	N/A	YE	2M/PTFE	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<p><b>Diagram 3</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
5-30 VDC	500	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	N/A	2M/PVC	4	<p><b>Diagram 4</b></p>
	500	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<p><b>Diagram 5</b></p>
	1000	≤150	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	5	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	5	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable, Terminal Chamber</b> 	Bi 5U-EG18SK-AN6X	M1635420	<i>Uprox</i>	5	3-Wire DC NPN
	Bi 5-G18SK-AN6X2	T4642500		5	
	Bi 5U-EG18SK-AP6X	M1635400	<i>Uprox</i>	5	3-Wire DC PNP
	Bi 5-G18SK-AP6X2	T4642400		5	
<b>18 mm - Embeddable, Terminal Chamber</b> 	Bi 5-G18SK-AZ3X2	T4331400		5	2-Wire AC/DC
<b>18 mm - Nonembeddable, Terminal Chamber</b> 	Ni 8-G18SK-AD4X	T4442200		8	2-Wire DC
	Ni 10-G18SK-AN6X2	T4642700		10	3-Wire DC NPN
	Ni 12U-EG18SK-AN6X	M1645420	<i>Uprox</i>	12	
	Ni 10-G18SK-AP6X2	T4642600		10	3-Wire DC PNP
Ni 12U-EG18SK-AP6X	M1645400	<i>Uprox</i>	12		
<b>18 mm - Nonembeddable, Terminal Chamber</b> 	Ni 10-G18SK-AZ3X2	T4331500		10	2-Wire AC/DC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



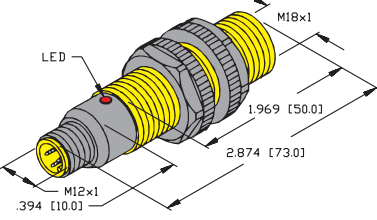
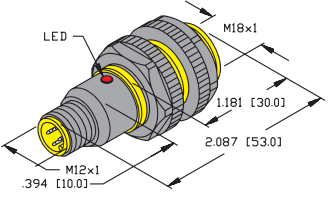
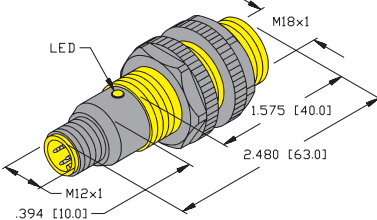
Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram	Wiring Diagrams
10-30 VDC	2500	≤200	-30 to +85	IP 67	SS	PA 12	N/A	N/A	YE	- - - -	1	<b>Diagram 1</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	1	
10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	2	<b>Diagram 2</b> 
	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	2	
20-250 VAC 10-300 VDC	20	≤500	-25 to +70	IP 67	CPB	PA 12	N/A	GN	RD	- - - -	3	<b>Diagram 3</b> 
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	N/A	YE	- - - -	4	<b>Diagram 4</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	1	
	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	N/A	YE	- - - -	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	2	<b>Diagram 4</b> 
	2000	≤200	-25 to +70	IP 67	SS	PA 12	N/A	N/A	YE	- - - -	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	GN	RD	- - - -	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>18 mm - Embeddable and Nonembeddable, Partial Threading, eurofast® Connection</b> 	Bi 5-S18-AD4X-H1141	T4452400		•	5	2-Wire DC	
	Ni 8-S18-AD4X-H1141	T4452600			8		
<b>18 mm - Embeddable and Nonembeddable, Partial Threading, eurofast Connection</b> 	Bi 5-S18-AN6X-H1141	T4652500		•	5	3-Wire DC NPN	
	Ni 8-S18-AN6X-H1141	T4652700			8		
	Bi 5-S18-AP6X-H1141	T4652400			•	5	3-Wire DC PNP
	Ni 8-S18-AP6X-H1141	T4652600			8		
	Bi 5-S18-VP4X-H1141	T1513401	<i>Comp. Output</i>	•	5	4-Wire DC PNP	
Bi 5-S18-Y0X-H1141	T4036095		•	5	2-Wire NAMUR		
<b>18 mm - Embeddable and Nonembeddable, Partial Threading, eurofast Connection</b> 	Bi 5U-S18-AN6X-H1141	M1635620	<i>Uprox</i>	•	5	3-Wire DC NPN	
	Ni 12U-S18-AN6X-H1141	M1645620	<i>Uprox</i>		12		
	Bi 5U-S18-AP6X-H1141	M1635600	<i>Uprox</i>	•	5	3-Wire DC PNP	
	Ni 12U-S18-AP6X-H1141	M1645600	<i>Uprox</i>		12		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) V/AC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4.2T-*	1	<b>Diagram 1</b> 
	500	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4.2T-*	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	2	<b>Diagram 2</b> 
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	3	<b>Diagram 3</b> 
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	3	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4.4T-*	4	<b>Diagram 4</b> 
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4.21T-*	5	<b>Diagram 5</b> 
10-30 VDC	2500	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	2	<b>Diagram 4</b> 
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	2	
10-30 VDC	2500	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	3	<b>Diagram 5</b> 
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	3	

Barrels

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>18 mm - Embeddable and Nonembeddable, Full Threading, eurofast® Connection</b> 	Ni 10-P18WD-AN6X-H1141	M4656804	Washdown		10	3-Wire DC NPN
	Ni 10-P18WD-AP6X-H1141	M4656803	Washdown		10	3-Wire DC PNP
<b>18 mm - Embeddable and Nonembeddable, Full Threading, minifast® Connection</b> 	Bi 5-P18-AN6X-B2341	T4697200		•	5	3-Wire DC NPN
	Bi 5-P18-AN6X-B2341/S100	M1677100	High Temp. 100°C	•	5	
	Ni 10-P18-AN6X-B2341	T4697800			10	
	Bi 5-P18-AP6X-B2341	T4697300		•	5	3-Wire DC PNP
Ni 10-P18-AP6X-B2341	T4697900			10		
Bi 5-P18-AP6X-B2341/S100	M4697321	High Temp. 100°C	•	5		
<b>18 mm - Embeddable and Nonembeddable, Full Threading, minifast Connection</b> 	Bi 5-P18-AZ3X-B2331	T4374800		•	5	2-Wire AC/DC
	Bi 5-P18-AZ3X-B2331/S100	T4374801	High Temp. 100°C	•	5	
	Ni 10-P18-AZ3X-B2331	T4375200			10	
	Ni 10-P18-AZ3X-B2331/S100	M4375201	High Temp. 100°C		10	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1500	≤200	-25 to +85	IP 68, 69K	PP	PP	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
	1500	≤200	-25 to +85	IP 68, 69K	PP	PP	N/A	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	3	<p><b>Diagram 3</b></p>
	1000	≤200	-25 to +100	IP 67	PA 12	IRPA	N/A	YE	RK 40-*M	3	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	3	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	4	<p><b>Diagram 4</b></p>
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	4	
	1000	≤200	-25 to +100	IP 67	PA 12	IRPA	N/A	YE	RK 40-*M	4	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	N/A	RD	RK 30-*M	5	<p><b>Diagram 5</b></p>
	20	≤400/300	-25 to +100	IP 67	PA 12	IRPA	N/A	YE	RK 30-*M	5	
	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	N/A	RD	RK 30-*M	5	
	20	≤400/300	-25 to +100	IP 67	PA 12	IRPA	N/A	YE	RK 30-*M	5	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>18 mm - Embeddable and Nonembeddable, Partial Threading, Potted-In Cable</b> 	Bi 5-S18-AD4X	T4456000		•	5	2-Wire DC	
	Ni 8-S18-AD4X	T4456200			8		
	Bi 5-S18-AN6X	T4656100			•	5	3-Wire DC NPN
	Bi 5-S18-AN7X	T1714000			•	5	
	Bi 5-S18-AN7X/S100	T1773400	High Temp. 100°C		•	5	
	Bi 5U-S18-AN6X	M1635520	Uprox		•	5	
	Ni 8-S18-AN6X	T4656300				8	
	Ni 8-S18-AN7X	T1714100				8	
	Ni 8-S18-AN7X/S100	T1773250	High Temp. 100°C			8	
	Ni 12U-S18-AN6X	M1645520	Uprox			12	
	Bi 5-S18-AP6X	T4656000			•	5	3-Wire DC PNP
	Bi 5-S18-AP7X/S100	T1754200	High Temp. 100°C		•	5	
	Bi 5U-S18-AP6X	M1635500	Uprox		•	5	
	Ni 8-S18-AP6X	T4656200				8	
	Ni 8-S18-AP7X/S100	T1749850	High Temp. 100°C			8	
	Ni 12U-S18-AP6X	M1645500	Uprox			12	
	Bi 5-S18-VN4X	T1522200	Comp. Output		•	5	4-Wire DC NPN
	Ni 8-S18-VN4X	T1522100	Comp. Output			8	
	Bi 5-S18-VP4X	T1513400			•	5	4-Wire DC PNP
	Bi 5-S18-VP4X/S100	M1513402	High Temp. 100°C		•	5	
	Ni 8-S18-VP4X	T1513500				8	
	Bi 5-S18-AZ3X	T4350400			•	5	2-Wire AC/DC
	Bi 5-S18-AZ3X/S100	M1373400	High Temp. 100°C		•	5	
	Ni 8-S18-AZ3X	T4350500				8	
	Ni 8-S18-AZ3X/S100	M1371800	High Temp. 100°C			8	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



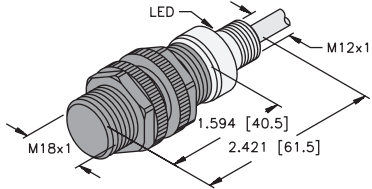
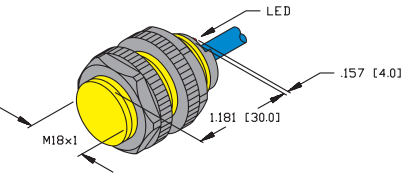
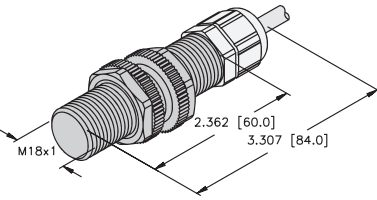
Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	1000	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	500	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	1000	≤150	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1000	≤150	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	2	
	2500	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1000	≤150	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1000	≤150	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	1000	≤150	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	3	
	2500	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
	1000	≤150	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
	500	≤200	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	5	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	RD	2M/PVC	6	<b>Diagram 6</b> 
	20	≤400/300	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	6	
	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	RD	2M/PVC	6	
	20	≤400/300	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	6	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>18 mm - Embeddable and Nonembeddable, Full Threading, Potted-In Cable</b> 	Ni 10-P18WD-AN6X	M4656802	Washdown		10	3-Wire DC NPN
	Ni 10-P18WD-AP6X	M4656801	Washdown		10	3-Wire DC PNP
<b>18 mm - Embeddable and Nonembeddable, Full Threading, Potted-In Cable</b> 	Bi 5-P18-Y0	T1009500		•	5	2-Wire NAMUR
	Bi 5-P18-Y0X	T4035000		•	5	
	Bi 5-P18-Y0/S100	M1024500	High Temp. 100°C	•	5	
	Ni 10-P18-Y0X	T4035100			10	
	Ni 10-P18-Y1	M1009600			10	
	Ni 10-P18-Y0/S100	M1031700	High Temp. 100°C		10	
<b>18 mm - Embeddable and Nonembeddable, Full Threading, Potted-In Cable</b> 	Bi 5-P18-AN6/S139-S90	M1660351	Submersible	•	5	3-Wire DC NPN
	Bi 5-P18-AP6/S139-S90	M1660350	Submersible	•	5	3-Wire DC PNP
	Ni 12U-P18-AP6/S139-S90 30M	M1650201	Submersible		12	
	Bi 5-P18-AZ3/S139-S90	M1384300	Submersible	•	5	2-Wire AC/DC
	Ni 8-P18-AZ3/S139-S90 10M	M1350003	Submersible		8	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1500	≤200	-25 to +85	IP 68, 69K	PP	PP	PVDF	N/A	YE	2M/PUR	2	<p><b>Diagram 1</b></p>
	1500	≤200	-25 to +85	IP 68, 69K	PP	PP	PVDF	N/A	YE	2M/PUR	3	<p><b>Diagram 2</b></p>
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	<p><b>Diagram 3</b></p>
	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
	1000	Remote	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	N/A	2M/PVC	1	
	500	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
	500	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	
	500	Remote	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	N/A	2M/PVC	1	
10-30 VDC	1000	≤200	-25 to +70	IP 68	POM	PA 12	EPTR	N/A	N/A	2M/PUR	2	<p><b>Diagram 4</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 68	POM	PA 12	EPTR	N/A	N/A	2M/PUR	3	<p><b>Diagram 4</b></p>
	1000	≤200	-25 to +70	IP 68	POM	PA 12	EPTR	N/A	N/A	2M/PUR	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 68	POM	PA 12	EPTR	N/A	N/A	2M/PUR	4	<p><b>Diagram 4</b></p>
	20	≤400/300	-25 to +70	IP 68	POM	PA 12	EPTR	N/A	N/A	2M/PUR	4	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>18 mm - Embeddable and Nonembeddable, Full Threading, Terminal Chamber</b> 	Bi 5-P18SK-Y1X	M4036000		•	5	2-Wire NAMUR
	Ni 10-P18SK-Y1X	M4036100			10	
<b>18 mm - Embeddable and Nonembeddable, Full Threading, Terminal Chamber</b> 	Bi 5-P18SK-AN6X2	T4657000		•	5	3-Wire DC NPN
	Bi 5U-P18SK-AN6X	M1635720	<i>Uprox</i>	•	5	
	Ni 10-P18SK-AN6X2	T4657200			10	
	Ni 12U-P18SK-AN6X	M1645720	<i>Uprox</i>		12	
	Bi 5-P18SK-AP6X2	T4656900		•	5	3-Wire DC PNP
	Bi 5U-P18SK-AP6X	M1635700	<i>Uprox</i>	•	5	
Ni 10-P18SK-AP6X2	T4657100			10		
Ni 12U-P18SK-AP6X	M1645700	<i>Uprox</i>		12		
<b>18 mm - Embeddable and Nonembeddable, Full Threading, Terminal Chamber</b> 	Bi 5-P18SK-AZ3X2	T4351400		•	5	2-Wire AC/DC
	Ni 10-P18SK-AZ3X2	T4351500			10	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	N/A	YE	- - - -	1	<p><b>Diagram 1</b></p>
	500	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	N/A	YE	- - - -	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	GN	YE	- - - -	2	<p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
	2500	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	N/A	YE	- - - -	2	
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	GN	YE	- - - -	2	
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	N/A	YE	- - - -	2	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	GN	YE	- - - -	3	<p><b>Diagram 4</b></p>
	2500	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	N/A	YE	- - - -	3	
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	GN	YE	- - - -	3	
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	N/A	YE	- - - -	3	
20-250 VAC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	N/A	GN	RD	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	N/A	GN	RD	- - - -	4	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Right Angle Housing, eurofast® Connection</b> 	Bi 5U-T18-AN6X2-H1141	M1635137	<i>Uprox</i>	5	3-Wire DC NPN
	Bi 5U-T18-AP6X2-H1141	M1635136	<i>Uprox</i>	5	3-Wire DC PNP
<b>18 mm - Right Angle Housing, Potted-In Cable</b> 	Bi 5U-T18-AN6X2/S90	M1635138	<i>Uprox</i>	5	3-Wire DC NPN
	Bi 5U-T18-AP6X2/S90	M1635135	<i>Uprox</i>	5	3-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	GN	YE	RKK 4T-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	GN	YE	RKK 4T-*	2	<p><b>Diagram 2</b></p>
10-30 VDC	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	GN	YE	2M/PUR	3	<p><b>Diagram 3</b></p>
10-30 VDC	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	GN	YE	2M/PUR	4	<p><b>Diagram 4</b></p>

\* Length in meters.

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>20 mm - Nonembeddable, Smooth Barrel, Potted-In Cable</b> 	Ni 10-K20-AN6X	M4664100		10	3-Wire DC NPN
	Ni 10-K20-AP6X	M4664000		10	3-Wire DC PNP
	Ni 10-K20-Y1	M1007200		10	2-Wire DC NAMUR
<b>20 mm - Nonembeddable, Smooth Barrel, Potted-In Cable</b> 	Ni 10-K20-AZ3X	M4358500		10	2-Wire AC/DC
<b>20 mm - Nonembeddable, Smooth Barrel, Terminal Chamber</b> 	Ni 10-K20SK-AN6X2	T4664800		10	3-Wire DC NPN
	Ni 10-K20SK-AP6X2	T4664693		10	3-Wire DC PNP
<b>20 mm - Nonembeddable, Smooth Barrel, Terminal Chamber</b> 	Ni 10-K20SK-AZ3X2	T4359200		10	2-Wire AC/DC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Output	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
5-30 VDC	500	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	<p><b>Diagram 2</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	<p><b>Diagram 3</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	YE	- - - -	5	<p><b>Diagram 4</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	YE	- - - -	6	<p><b>Diagram 5</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	RD	- - - -	7	<p><b>Diagram 6</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	EPTR	GN	RD	- - - -	7	<p><b>Diagram 7</b></p>

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, eurofast® Connection</b> 	Bi 10-M30-AD4X-H1141	T4417500		10	2-Wire DC
	Bi 12-M30-AD4X-H1141	T4417041	<i>Extended Range</i>	12	
	Bi 10-M30-AN6X-H1141	T4617600		10	3-Wire DC NPN
	Bi 10U-EM30-AN6X-H1141	M1636350	<i>Uprox</i>	10	
	Bi 10U-EM30H-AN6X2-H1141	M1636407	<i>Uprox, Stoneface</i>	10	
	Bi 10U-EM30H-AN6X2-H1141/S1589	M1636490	<i>armorguard, Uprox</i>	10	
	Bi 10U-M30-AN6X-H1141	M1636150	<i>Uprox</i>	10	
	Bi 10U-M30-AN6X2-H1141	M1636155	<i>Uprox</i>	10	
	Bi 12-EM30WD-AN6X-H1141	M4614544	<i>Washdown</i>	12	
	Bi 15-M30-AN6X-H1141	T4618600	<i>Extended Range</i>	15	
	Bi 15-EM30H-AN6X-H1141	T4618692	<i>Extended Range</i>	15	
	Bi 15-EM30H-AN6X-H1141/S1589	T4618693	<i>armorguard</i>	15	
	Bi 10-M30-AP6X-H1141	T4617500		10	3-Wire DC PNP
	Bi 10U-EM30-AP6X-H1141	M1636340	<i>Uprox</i>	10	
	Bi 10U-EM30H-AP6X2-H1141	M1636406	<i>Uprox, Stoneface</i>	10	
	Bi 10U-EM30H-AP6X2-H1141/S1589	M1636491	<i>armorguard, Uprox</i>	10	
	Bi 10U-M30-AP6X-H1141	M1636140	<i>Uprox</i>	10	
	Bi 10U-M30-AP6X2-H1141	M1636145	<i>Uprox</i>	10	
	Bi 12-EM30WD-AP6X-H1141	M4614541	<i>Washdown</i>	12	
	Bi 15-M30-AP6X-H1141	T4618500	<i>Extended Range</i>	15	
	Bi 15-EM30H-AP6X-H1141	T4618592	<i>Extended Range</i>	15	
	Bi 15-EM30H-AP6X-H1141/S1589	T4618593	<i>armorguard</i>	15	
	Bi 15-EM30H-AP6X-H1141/S1610	T4618589	<i>Weld/Armorguard</i>	15	
	Bi 10-M30-VN4X-H1141	T1571600	<i>Comp. Outputs</i>	10	4-Wire DC NPN
	Bi 10U-M30-VN4X-H1141	M1582352	<i>Uprox, Comp. Outputs</i>	10	
	Bi 15-M30-VN4X-H1141	T4570711	<i>Comp. Outputs</i>	15	
	Bi 10-M30-VP4X-H1141	T1561600	<i>Comp. Outputs</i>	10	4-Wire DC PNP
	Bi 10U-M30-VP4X-H1141	M1582253	<i>Uprox, Comp. Outputs</i>	10	
	Bi 15-M30-VP4X-H1141	T4570710	<i>Comp. Outputs</i>	15	
	Bi 10-M30-Y1X-H1141	M4020200			10
<b>30 mm - Embeddable, eurofast Connection, Stainless Steel</b> 	Bi 10-EM30F-AP6X-H1141	M4614537	<i>Stainless Steel Front Cap</i>	10	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	500	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	<b>Diagram 2</b> 
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	2	
	2000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKV 4T-*	2	
	2000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	2	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	GN	YE	RK 4T-*	2	
	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	2	
	300	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
	300	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RKG 4T-*/S600	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 3</b> 
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	GN	YE	RK 4T-*	3	
	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	300	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	300	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RKV 4T-*	3	
	300	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	3	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	<b>Diagram 4</b> 
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 5</b> 
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
	300	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
5-30 VDC	2000	Remote	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.21T-*	6	<b>Diagram 6</b> 
10-30 VDC	180	≤200	-25 to +80	IP 68, 69K	SS	SS	N/A	YE	RKV 4T-*	3	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, eurofast® Connection, Teflon Coated</b> 	Bi 12-MT30H-AD4X-H1141	T4417094	Stoneface	12	2-Wire DC
	Bi 12-MT30H-AD4X-H1141/S1589	T4417097	armorguard®	12	
	Bi 12-MT30H-AD4X-H1144	T4417095	Stoneface	12	
	Bi 12-MT30H-AD4X-H1144/S1589	T4417098	armorguard	12	
	Bi 10U-MT30-AN6X-H1141	M1636250	Uprox	10	3-Wire DC NPN
	Bi 10U-MT30H-AN6X2-H1141	M1636230	Stoneface, Uprox	10	
	Bi 10U-MT30H-AN6X2-H1141/S1589	M1636290	armorguard, Uprox	10	
	Bi 10U-MT30-AP6X-H1141	M1636240	Uprox	10	3-Wire DC PNP
	Bi 10-MT30-AP6X-H1141/S34	M1669420	WFI	10	
	Bi 10U-MT30-AP6X2-H1141	M1636245	Uprox	10	
	Bi 10-MT30-AP6X2-H1141/S34	M1669425	WFI	10	
	Bi 10-MT30-AP6X2-H1141/S34/S1589	M1669480	armorguard	10	
	Bi 10U-MT30H-AP6X2-H1141	M1636220	Stoneface, Uprox	10	
	Bi 10U-MT30H-AP6X2-H1141/S1589	M1636291	armorguard, Uprox	10	
	Bi 10U-MT30H-AP6X2-H1141/S1610	M1636292	armorGuard, Uprox	10	
<b>30 mm - Embeddable, eurofast Connection, Extended Barrel Length</b> 	Bi 10-M30E-AD4X-H1141	T4417501		10	2-Wire DC
	Bi 10NF-EM30HE-AN6X2-H1141	M1615005		10	3-Wire DC NPN
	Bi 15-M30E-AN6X-H1141	T4618690	Extended Range	15	
	Bi 10-M30E-AP6X-H1141	T4617593		10	3-Wire DC PNP
	Bi 10NF-EM30HE-AP6X2-H1141	M1615002		10	
	Bi 10U-EM30E-AP6X-H1141	M1636322	Uprox	10	
	Bi 10U-EM30HE-AP6X2-H1141	M1636415	Stoneface, Uprox	10	
	Bi 12-EM30EWD-AP6X-H1141	M4614548	Washdown	12	
	Bi 15-M30E-AP6X-H1141	T4618590	Extended Range	15	
	Bi 15-EM30HE-AP6X-H1141/S1610	T4618589-1	Armorguard	15	
	Bi 10-M30E-VN4X-H1141	T1571690	Comp. Outputs	10	4-Wire DC NPN
	Bi 10-M30E-VP4X-H1141	T1561690	Comp. Outputs	10	4-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
	500	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4.2T-*/S600	1	
	500	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*/S674	2	
	500	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4.2T-*/S674	2	
10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	<b>Diagram 2</b> 
	2000	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RK 4T-*	3	
	2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	3	
10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	4	<b>Diagram 3</b> 
	500	≤200	-25 to +70	IP 67	TC	TC	N/A	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	TC	TC	GN	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	4	
	2000	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RK 4T-*	4	
	2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	4	
	2000	≤200	-30 to +85	IP 67	AG	WG	GN	YE	RKG 4T-*/S600	4	
10-65 VDC	500	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 4</b> 
10-30 VDC	2000	≤200	0 to +60	IP 67	SS	SF	GN	YE	RKV 4T-*	3	
	300	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 5</b> 
	2000	≤200	0 to +60	IP 67	SS	SF	GN	YE	RKV 4T-*	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	4	
	2000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKV 4T-*	4	
	1000	≤200	-10 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	4	
	300	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	2000	≤200	-25 to +70	IP 67	AG	WG	N/A	YE	RK 4T-*	4	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	<b>Diagram 6</b> 
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	

Barrels

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	
<b>30 mm - Nonembeddable, eurofast® Connection</b> 	Ni15-M30-AD4X-H1141	T4417700		15	2-Wire DC	
	Ni20-M30-AD4X-H1141	T4466141	Extended Range	20		
	Ni20-M30-AD4X-H1144	T4466192	Extended Range	20		
	Ni15-M30-AN6X-H1141	T4617800			15	3-Wire DC NPN
	Ni20-EM30H-AN6X-H1141/S1589	T4670599	armorguard®	20		
	Ni20-EM30WD-AN6X-H1141	M4653435	Washdown	20		
	Ni20-M30-AN6X-H1141	T4670515	Extended Range	20		
	Ni20U-EM30-AN6X-H1141	M1646350	Uprox	20		
	Ni20U-EM30H-AN6X2-H1141/S1589	M1646191	armorguard, Uprox	20		
	Ni20U-M30-AN6X-H1141	M1646150	Uprox	20		
	Ni20U-M30-AN6X2-H1141	M1646155	Uprox	20		
	Ni15-M30-AP6X-H1141	T4617700			15	3-Wire DC PNP
	Ni15-M30-AP6X-H1141/S34	M1669500	WFI	15		
	Ni20-EM30H-AP6X-H1141/S1589	T4670590	armorguard	20		
	Ni20-EM30WD-AP6X-H1141	M4653422	Washdown	20		
	Ni20-M30-AP6X-H1141	T4670510	Extended Range	20		
	Ni20U-EM30-AP6X-H1141	M1646340	Uprox	20		
	Ni20U-EM30-AP6X2-H1141	M1646345	Uprox	20		
	Ni20U-EM30H-AP6X2-H1141/S1589	M1646490	armorguard, Uprox	20		
	Ni20U-M30-AP6X-H1141	M1646140	Uprox	20		
	Ni20U-M30-AP6X2-H1141	M1646145	Uprox	20		
	Ni15-M30-VN4X-H1141	T1571510	Comp. Outputs		15	4-Wire DC NPN
	Ni20-M30-VN4X-H1141	T4590606	Extended Range		20	
	Ni20U-M30-VN4X-H1141	M1582552	Uprox		20	
	Ni15-M30-VP4X-H1141	T1561700	Comp. Outputs		15	4-Wire DC PNP
	Ni20-M30-VP4X-H1141	T4590607	Extended Range		20	
	Ni20U-M30-VP4X-H1141	M1582457	Uprox		20	
	<b>30 mm - Nonembeddable, eurofast Connection, Teflon Coated</b> 	Ni20-MT30H-AN6X-H1141/S1589	T4670589	armorguard	20	3-Wire DC NPN
Ni20U-MT30-AN6X-H1141		M1646250	Uprox	20		
Ni20U-MT30-AN6X2-H1141		M1646255	Uprox	20		
Ni20U-MT30H-AN6X2-H1141/S1589		M1646290	armorguard, Uprox	20		
Ni20-MT30H-AP6X-H1141/S1589		T4670588	armorguard		20	3-Wire DC PNP
Ni20U-MT30-AP6X-H1141		M1646240	Uprox		20	
Ni20U-MT30-AP6X2-H1141		M1646245	Uprox		20	
Ni20U-MT30H-AP6X2-H1141/S1589		M1646291	armorguard, Uprox		20	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	200	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p> <p><b>Diagram 5</b></p> <p><b>Diagram 6</b></p>
	200	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	
	200	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*/S674	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	3	
	500	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	3	
	1500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
	1500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	3	
	1500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	3	
	1500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKG 4T-*/S600	4	
	500	≤200	-25 to +85	IP 68, 69K	SS	PVDF	N/A	YE	RK 4T-*	4	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
	1500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	YE	RKV 4T-*	4	
	1500	≤200	-30 to +85	IP 68	SS	PA 12	GN	YE	RKV 4T-*	4	
	1500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKG 4T-*/S600	4	
	1500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	4	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
	1500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	5	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
	1500	≤200	-30 to +85	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	6	
10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	3	
	1500	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	3	
	1500	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	3	
	1500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKG 4T-*/S600	4	
	1500	≤200	-30 to +85	IP 67	TC	TC	N/A	YE	RK 4T-*	4	
	1500	≤200	-30 to +85	IP 67	TC	TC	GN	YE	RK 4T-*	4	
	1500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKG 4T-*/S600	4	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Nonembeddable, eurofast® Connection, Extended Barrel Length</b> 	Ni 15-M30E-AD4X-H1141	T4417790		15	2-Wire DC
	Ni 15-M30E-AP6X-H1141	T4617791		15	3-Wire DC PNP
	Ni 15-M30E-VN4X-H1141	T1571590	Comp. Outputs	15	4-Wire DC NPN
	Ni 15-M30E-VP4X-H1141	T1561790	Comp. Outputs	15	4-Wire DC PNP
<b>30 mm - Embeddable, microfast® Connection</b> 	Bi 10-G30-ADZ30X2-B3131	T4207591		10	2-Wire AC/DC Short-Circuit Protected
	Bi 10U-G30-ADZ30X2-B3131	M4281613	Uprox	10	
	Bi 15-EG30H-ADZ30X2-B3131	T4207284	Stoneface	15	
	Bi 15-G30-ADZ30X2-B3131	T4207201		15	
	Bi 10-G30-AZ3X-B3131	T4372298		10	2-Wire AC/DC
<b>30 mm - Embeddable, microfast Connection, Teflon Coated</b> 	Bi 10-GT30-ADZ30X2-B3131/S34	T4256203	WFI	10	2-Wire AC/DC Short-Circuit Protected
	Bi 10-GT30H-ADZ30X2-B3131/S34	T4256094	Stoneface, WFI	10	
	Bi 10-GT30H-ADZ30X2-B3131/S34/S1589	T4255281	armorguard®, WFI	10	
	Bi 10U-GT30-ADZ30X2-B3131	M4281623	Uprox	10	
	Bi 10-GT30H-ADZ30X2-B3131/S34/S1610	T4207287-1	armorguard	10	
<b>30 mm - Nonembeddable, microfast Connection</b> 	Ni 15-G30-AZ3X-B3131	T1306090		15	2-Wire AC
	Ni 20-G30-ADZ30X2-B3131	T4205406		20	2-Wire AC/DC Short-Circuit Protected
	Ni 20U-G30-ADZ30X2-B3131	M4281813	Uprox	20	
<b>30 mm - Nonembeddable, microfast Connection, Teflon Coated</b> 	Ni 20U-GT30-ADZ30X2-B3131	M4281823	Uprox	20	2-Wire AC/DC Short-Circuit Protected

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	200	≤100	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4T-*	2	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	3	<b>Diagram 2</b>
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RK 4.4T-*	4	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	KB 3T-*	5	<b>Diagram 3</b>
	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	KB 3T-*	5	
	20	≤400/300	-25 to +70	IP 67	SS	SF	GN	RD	KBE 3T-*/S600	5	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	KB 3T-*	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	KB 3T-*	5	<b>Diagram 4</b>
	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	KBE 3T-*/S600	5	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*/S600	5	
	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	KB 3T-*	5	
	20	≤400/300	-25 to +70	IP 67	AG	WG	GN	YE	KBE 3T-*/S600	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	YE	KB 3T-*	5	<b>Diagram 5</b>
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	KB 3T-*	5	
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	KB 3T-*	5	

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, minifast® Connection</b> 	Bi 10-G30-AN6X-B1141	T4695400		10	3-Wire DC NPN
	Bi 10-G30-AP6X-B1141	T4696500		10	3-Wire DC PNP
<b>30 mm - Embeddable, minifast Right Angle Connection</b> 	Bi 10-G30-AN6X-B1441	T4695800		10	3-Wire DC NPN
	Bi 10-G30-AP6X-B1441	T4696900		10	3-Wire DC PNP
<b>30 mm - Embeddable, minifast Connection</b> 	Bi 10-G30-ADZ30X2-B1131	T4207500		10	2-Wire AC/DC Short-Circuit Protected
	Bi 10U-G30-ADZ30X2-B1131	M4281612	<i>Uprox</i>	10	
	Bi 15-EG30H-ADZ30X2-B1131	T4207292	<i>Extended Range</i>	15	
	Bi 15-G30-ADZ30X2-B1131	T4207202	<i>Extended Range</i>	15	
		Bi 10-G30-AZ3X-B1131	T4372200		10
<b>30 mm - Embeddable, minifast Connection</b> 	Bi 10-EG30-AZ3X-B1131/S120	M4372202	<i>High Temp. +120° C</i>	10	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	1	<p><b>Diagram 1</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	<p><b>Diagram 2</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	1	<p><b>Diagram 3</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	RKM 30-*M	3	
	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	RKM 30-*M	3	
	20	≤400/300	-25 to +70	IP 67	SS	SF	GN	RD	RKV 30-*M	3	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	RKM 30-*M	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	RKM 30-*M	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +120	IP 67	CPB	PTFE	N/A	YE	2M/PTFE	3	

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, minifast® Right Angle Connection</b> 	Bi 10-G30-AZ3X-B1431	T4372600		10	2-Wire AC/DC
<b>30 mm - Embeddable, minifast Connection, Teflon Coated</b> 	Bi 10-GT30-ADZ30X2-B1131/S34	T4256200	WFI	10	2-Wire AC/DC Short-Circuit Protected
	Bi 10-GT30-ADZ30X2-B1131	T4256290		10	
	Bi 10-GT30H-ADZ30X2-B1131/S34/S1589	T4255280	armorguard®, WFI	10	
	Bi 10U-GT30-ADZ30X2-B1131	M4281622	Uprox	10	
	Bi 10-GT30H-ADZ30X2-B1131/S34/S1610	T4207287	armorguard	10	
<b>30 mm - Nonembeddable, minifast Connection</b> 	Ni 15-G30-AN6X-B1141	T4695500		15	3-Wire DC NPN
	Ni 15-G30-AP6X-B1141	T4696600		15	3-Wire DC PNP
	Ni 15-G30-VN4X-B1141	M4590800	Comp. Outputs	15	4-Wire DC NPN
<b>30 mm - Nonembeddable, minifast Connection</b> 	Ni 15-G30-AZ3X-B1131	T4372300		15	2-Wire AC/DC
	Ni 20-G30-ADZ30X2-B1131	T4205405		20	2-Wire AC/DC Short-Circuit Protected
	Ni 20U-G30-ADZ30X2-B1131	M4281812		20	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A		RKM 30-*M	4	<p><b>Diagram 1</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	4	<p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
	20	≤400/300	-25 to +70	IP 67	TC	TC	GN	RD	RKM 30-*M	4	
	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 30-*M	4	
	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	RKM 30-*M	4	
	20	≤400/300	-25 to +70	IP 67	AG	WG	GN	YE	RKM 30-*M	4	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	RKM 30-*M	4	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	GN	RD	RKM 30-*M	4	
	20	≤400/300	-30 to +85	IP 67	CPB	PA 12	GN	YE	RKM 30-*M	4	

Barrels

\* Length in meters.

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Nonembeddable, minifast® Connection, Teflon Coated</b> 	Ni20U-GT30-ADZ30X2-B1131	M4281822		20	2-Wire AC/DC Short-Circuit Protected
<b>30 mm - Nonembeddable, Right Angle minifast Connection</b> 	Ni15-G30-AN6X-B1441	T4695590		15	3-Wire DC NPN
	Ni15-G30-AP6X-B1441	T4697000		15	3-Wire DC PNP
<b>30 mm - Nonembeddable, minifast Right Angle Connection</b> 	Ni15-G30-AZ3X-B1431	T4372700		15	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	20	≤400/300	-30 to +85	IP 67	TC	TC	GN	YE	RKM 30-*M	3	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	1	<p><b>Diagram 2</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	YE	RKM 40-*M	2	<p><b>Diagram 3</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	RD	RKM 30-*M	3	

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi 10-M30-AD4X	T4417000		10	2-Wire DC
	Bi 12-M30-AD4X	T4417035	<i>Extended Range</i>	12	
	Bi 10-EM30-AN6XLD	T4617109	<i>Load Dump</i>	10	3-Wire DC NPN
	Bi 10U-EM30-AN6X	M1636320	<i>Uprox</i>	10	
	Bi 10U-M30-AN6X	M1636120	<i>Uprox</i>	10	
	Bi 15-M30-AN6X	T4618620	<i>Extended Range</i>	15	
	Bi 10-M30-AN6X	T4617691		10	
	Bi 10-EM30-AP6XLD	T4617003	<i>Load Dump</i>	10	3-Wire DC PNP
	Bi 10-M30-AP6X/S100	M4617004	<i>High Temp. 100°C</i>	10	
	Bi 10U-EM30-AP6X	M1636300	<i>Uprox</i>	10	
	Bi 10U-M30-AP6X	M1636100	<i>Uprox</i>	10	
	Bi 15-M30-AP6X	T4618530	<i>Extended Range</i>	15	
	Bi 10-M30-VN4X	T1571400	<i>Comp. Outputs</i>	10	4-Wire DC NPN
	Bi 15-M30-VN4X	T4570712	<i>Extended Range</i>	15	
	Bi 10-M30-VP4X	T1561400	<i>Comp. Outputs</i>	10	4-Wire DC PNP
Bi 15-M30-VP4X	T4570713	<i>Extended Range</i>	15		
Bi 10U-MT30-ADZ30X2	M4209430	<i>Uprox</i>	10	2-Wire AC/DC Short-Circuit Protected	
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi 10NF-M30-AN6X	M1616100	<i>Nonferrous</i>	10	3-Wire DC NPN
	Bi 10NF-M30-AP6X	M1606100	<i>Nonferrous</i>	10	3-Wire DC PNP
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi 12-EM30WD-AN6X	M4614543	<i>Washdown</i>	12	3-Wire DC NPN
	Bi 12-EM30WD-AP6X	M4614540	<i>Washdown</i>	12	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	400	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	500	≤200	-25 to +100	IP 67	CPB	IRPA	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
	2000	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC		GN	RD	2M/PUR	6	<b>Diagram 6</b> 
10-30 VDC	500	≤200	0 to +60	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	10-30 VDC	500	≤200	0 to +60	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3
10-30 VDC		1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	2
	10-30 VDC	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3

Barrels

For material descriptions see page M22.

# Inductive Sensors

Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi 10-EM30D-VP6X/S120	M4617035	<b>High Temp. 120°C Washdown</b>	10	4-Wire DC PNP
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi 10-EM30-AP6/S907	M4614513	<b>High Temp. 160°C</b>	10	3-Wire DC PNP
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi 10-M30T-AN6X	T4619100		10	3-Wire DC NPN
	Bi 15-M30T-AN6X	T4618100	<b>Extended Range</b>	15	
	Bi 10-M30T-AP6X	T4619000		10	3-Wire DC PNP
	Bi 15-M30T-AP6X	T4618000	<b>Extended Range</b>	15	
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi 10-M30T-AZ3X	T4317000		10	2-Wire AC/DC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	100	≤200	-25 to +120	IP 68, 69K	SS	PTFE	PTFE	N/A	YE	2M/PTFE	3	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	200	≤200	-25 to +160	IP 65	SS	PTFE	EPTR	N/A	N/A	2M/PTFE	2	<p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	300	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	300	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	4	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Nonembeddable, Potted-In Cable</b> 	Ni15-M30-AD4X	T4417200		15	2-Wire DC
	Ni20-M30-AD4X	T4466135	<i>Extended Range</i>	20	
	Ni15-M30-AP6X/S100	M4617200	<i>High Temp. 100°C</i>	15	3-Wire DC NPN
	Ni20-M30-AN6X	T4670516	<i>Extended Range</i>	20	
	Ni20U-EM30-AN6X	M1646320	<i>Uprox</i>	20	
	Ni20U-M30-AN6X	M1646120	<i>Uprox</i>	20	3-Wire DC PNP
	Ni20-M30-AP6X	T4670511	<i>Extended Range</i>	20	
	Ni20U-EM30-AP6X	M1646300	<i>Uprox</i>	20	
	Ni20U-M30-AP6X	M1646100	<i>Uprox</i>	20	4-Wire DC NPN
	Ni15-M30-VN4X	T1571500	<i>Comp. Outputs</i>	15	
	Ni20-M30-VN4X	T4590604	<i>Extended Range</i>	20	
	Ni15-M30-VP4X	T1561500	<i>Comp. Outputs</i>	15	4-Wire DC PNP
Ni20-M30-VP4X	T4590605	<i>Extended Range</i>	20		
<b>30 mm - Nonembeddable, Potted-In Cable</b> 	Ni20-EM30WD-AN6X	M4653434	<i>Washdown</i>	20	3-Wire DC NPN
	Ni20-EM30WD-AP6X	M4653423	<i>Washdown</i>	20	3-Wire DC PNP
<b>30 mm - Nonembeddable, Potted-In Cable</b> 	Ni15-EM30D-VP6X/S120	M4617410	<i>High Temp. 120°C</i>	15	3-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	200	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	200	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	500	≤200	-25 to +100	IP 67	CPB	IRPA	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1500	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	
	1500	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	1500	≤200	-30 to +85	IP 68	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	
	1500	≤200	-30 to +85	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
10-65 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
10-30 VDC	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	2	<b>Diagram 4</b> 
10-30 VDC	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	
10-30 VDC	1000	≤200	-25 to +85	IP 68, 69K	SS	PVDF	EPTR	N/A	YE	2M/PUR	3	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +120	IP 67	SS	PTFE	PTFE	N/A	YE	2M/PTFE	3	

Barrels

For material descriptions see page M22.



# Inductive Sensors

Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
30 mm - Nonembeddable, Potted-In Cable 	Ni15-M30T-AN6X	T4619300		15	3-Wire DC NPN
	Ni15-M30T-AP6X	T4619200		15	3-Wire DC PNP
30 mm - Nonembeddable, Potted-In Cable 	Ni15-M30T-AZ3X	T4317100		15	2-Wire AC/DC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<p><b>Diagram 2</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	3	<p><b>Diagram 3</b></p>



Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi10-G30K-AD4X	T4670695	Short Barrel	10	2-Wire DC
	Bi10-G30K-AN6X	T4671600	Short Barrel	10	3-Wire DC NPN
	Bi10-G30K-AP6X	T4670600	Short Barrel	10	3-Wire DC PNP
	Bi15-G30K-AP6X	T4207300	Short Barrel	15	
	Bi10-G30-Y0	T1006200	Short Barrel	10	2-Wire DC NAMUR
	Bi10-G30-Y0X	T4020000	Short Barrel	10	
Bi10-G30-Y0X/S90	T4617691		10		
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi10-G30-AN6X	T4647500		10	3-Wire DC NPN
	Bi10-G30-AN7X	T1714800		10	
	Bi10-G30-AP6X	T4647400		10	3-Wire DC PNP
	Bi10-EG30-ADZ30X2	T4256095		10	2-Wire AC/DC Short-Circuit Protection
	Bi10-G30-ADZ30X2	T4207000		10	
	Bi15-G30-ADZ30X2	T4207200		15	
	Bi10-EG30-AZ3X	T4345699		10	2-Wire AC/DC
Bi10-G30-AZ3X	T4345400		10		
<b>30 mm - Embeddable, Potted-In Cable, Teflon Coated</b> 	Bi10-GT30-ADZ30X2/S34	T4256000	WFI	10	2-Wire AC/DC Short-Circuit Protection

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	<b>Diagram 2</b> 
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
5-30 VDC	200	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	N/A	2M/PVC	4	
	200	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
	200	Remote	-25 to +70	IP 67	CPB	EPTR	EPTR	N/A	YE	2M/PUR	4	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 3</b> 
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	SS	PA 12	EPTR	GN	RD	2M/PVC	5	<b>Diagram 4</b> 
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	GN	RD	2M/PVC	5	
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	GN	RD	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	TC	EPTR	GN	RD	2M/PVC	5	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Nonembeddable, Potted-In Cable</b> 	Ni 15-G30K-AN6X	T4671700	Short Barrel	15	3-Wire DC NPN
	Ni 15-G30K-AP6X	T4670700	Short Barrel	15	3-Wire DC PNP
	Ni 15-G30-Y0	T1006300		15	2-Wire DC NAMUR
	Ni 15-G30-Y0X	T4020100		15	
<b>30 mm - Nonembeddable, Potted-In Cable</b> 	Ni 15-G30-AN6X	T4647700		15	3-Wire DC NPN
	Ni 15-G30-AN7X	T1714900		15	
	Ni 15-G30-AP6X	T4647600		15	3-Wire DC PNP
	Ni 20-G30-ADZ30X2	T4205404		20	2-Wire AC/DC Short-Circuit Protected
	Ni 15-G30-AZ3X	T1306000		15	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<p><b>Diagram 2</b></p>
5-30 VDC	200	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	N/A	2M/PVC	3	<p><b>Diagram 3</b></p>
	200	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 4</b></p>
	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	<p><b>Diagram 3</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	GN	RD	2M/PVC	4	<p><b>Diagram 4</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	RD	2M/PVC	4	<p><b>Diagram 4</b></p>

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Embeddable, Terminal Chamber</b> 	Bi 10-G30SK-AN6X2	T4648500		10	3-Wire DC NPN
	Bi 10U-EG30SK-AN6X	M1636420	<i>Uprox</i>	10	
	Bi 10-G30SK-AP6X2	T4648400		10	3-Wire DC PNP
	Bi 10U-EG30SK-AP6X	M1636400	<i>Uprox</i>	10	
	Bi 10-G30SK-AZ3X2	T4346400		10	2-Wire AC/DC
	<b>30 mm - Nonembeddable, Terminal Chamber</b> 	Ni 15-G30SK-AN6X2	T4648700		15
Ni 20U-EG30SK-AN6X		M1646420	<i>Uprox</i>	20	
Ni 15-G30SK-AP6X2		T4648600		15	3-Wire DC PNP
Ni 20U-EG30SK-AP6X		M1646400	<i>Uprox</i>	20	
Ni 15-G30SK-AZ3X2		T4346500		15	2-Wire AC/DC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	2	
	2000	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	GN	RD	- - - -	3	
	10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	
1500		≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	CPB	PA 12	N/A	GN	YE	- - - -	2	
	1500	≤200	-30 to +85	IP 68	SS	PA 12	N/A	N/A	YE	- - - -	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	N/A	GN	RD	- - - -	3	



Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>30 mm - Embeddable/Nonembeddable, Partial Threading, eurofast® Connection</b> 	Bi 10-S30-AD4X-H1141	T4458000		•	10	2-Wire DC
	Ni 15-S30-AD4X-H1141	T4458200			15	
	Bi 10-S30-AN6X-H1141	T4658100		•	10	3-Wire DC NPN
	Bi 10U-S30-AN6X-H1141	M1636620	<i>Uprox</i>	•	10	
	Ni 15-S30-AN6X-H1141	T4658300			15	
	Ni 20U-S30-AN6X-H1141	M1646620	<i>Uprox</i>		20	
	Bi 10-S30-AP6X-H1141	T4658000		•	10	3-Wire DC PNP
	Bi 10U-S30-AP6X-H1141	M1636600	<i>Uprox</i>	•	10	
	Ni 15-S30-AP6X-H1141	T4658200			15	
	Ni 15-S30-AP6X-H1141/S97	M4658201	<i>Low Temp. -40°C</i>		15	
Ni 20U-S30-AP6X-H1141	M1646600	<i>Uprox</i>		20		
<b>30 mm - Embeddable/Nonembeddable, Full Threading, minifast® Connection</b> 	Bi 10-P30-AN6X-B2141	T4697400		•	10	3-Wire DC NPN
	Bi 10-P30-AN6X-B2141/S100	M4697421	<i>High Temp. 100°C</i>	•	10	
	Ni 15-P30-AN6X-B2141	T4697600			15	
	Bi 10-P30-AP6X-B2141	T4697500		•	10	3-Wire DC PNP
	Bi 10-P30-AP6X-B2141/S100	M4697521	<i>High Temp. 100°C</i>	•	10	
	Ni 15-P30-AP6X-B2141	T4697700			15	
<b>30 mm - Embeddable/Nonembeddable, Full Threading, minifast Connection</b> 	Bi 10-P30-AZ3X-B2131	T4374900		•	10	2-Wire AC/DC
	Bi 10-P30-AZ3X-B2131/S100	M1352600	<i>High Temp. 100°C</i>	•	10	
	Ni 15-P30-AZ3X-B2131	T4375400			15	

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



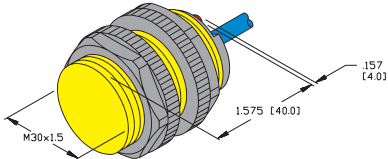
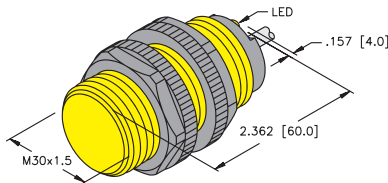
Voltage	Switching Freq. (Hz)	Operating Current AC/DC (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4.2T-*	1	<b>Diagram 1</b> 
	500	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4.2T-*	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	2	<b>Diagram 2</b> 
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	2	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	2	
	1500	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	2	
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	3	<b>Diagram 3</b> 
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	3	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	3	
	500	≤200	-40 to +70	IP 67	PA 12	PA 12	N/A	YE	RKK 4T-*	3	
	1500	≤200	-30 to +85	IP 68	PA 12	PA 12	N/A	YE	RKK 4T-*	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	4	<b>Diagram 4</b> 
	500	≤200	-25 to +100	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	4	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	4	
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	5	<b>Diagram 5</b> 
	500	≤200	-25 to +100	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	5	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 40-*M	5	
20-250 AC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	N/A	RD	RK 30-*M	6	<b>Diagram 6</b> 
	20	≤400/300	-25 to +100	IP 67	PA 12	IRPA	N/A	RD	RK 30-*M	6	
	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	N/A	RD	RK 30-*M	6	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>30 mm - Embeddable/Nonembeddable, Full Threading, Potted-In Cable</b>  	Bi 10-P30-Y0X	T4040000		•	10	2-Wire DC NAMUR
	Bi 10-P30-Y1	M1009700		•	10	
	Ni 15-P30-Y0X	T4040100			15	
	Ni 15-P30-Y1	M1009800			15	
<b>30 mm - Embeddable/Nonembeddable, Full Threading, Potted-In Cable</b>  	Bi 10-P30-VR7X	T1711101	Comp. Outputs	•	10	5-Wire Relay
	Ni 15-P30-VR7X	T1711102	Comp. Outputs		15	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current AC/DC (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
5-30 VDC	500	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	500	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	
	200	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
	200	Remote	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	N/A	2M/PVC	1	
9-30 VDC	N/A	≤40 mA	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	N/A	≤40 mA	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>30 mm - Embeddable/Nonembeddable, Partial Threading, Potted-In Cable</b>  	Bi 10-S30-AD4X	T4459000		•	10	2-Wire DC	
	Ni 15-S30-AD4X	T4459200			15		
	Bi 10-S30-AN6X	T4659100			•	10	3-Wire DC NPN
	Bi 10-S30-AN7X	T1720100	TTL Compatible	•	10		
	Bi 10-S30-AN7X/S100	T1777700	High Temp. 100°C	•	10		
	Bi 10U-S30-AN6X	M1636520	Uprox	•	10		
	Ni 15-S30-AN6X	T4659300			15		
	Ni 15-S30-AN6X/S100	T4659321	High Temp. 100°C		15		
	Ni 15-S30-AN6X/S97	M4659322	Low Temp. -40°C		15		
	Ni 15-S30-AN7X	T1720200	TTL Compatible		15		
	Ni 15-S30-AN7X/S100	T1777600	High Temp. 100°C		15		
	Ni 20U-S30-AN6X	M1646520	Uprox		20		
	Bi 10-S30-AP6X	T4659000			•	10	3-Wire DC PNP
	Bi 10-S30-AP6X/S100	M4659002	High Temp. 100°C	•	10		
	Bi 10-S30-AP6X/S97	M4659003	Low Temp. -40°C	•	10		
	Bi 10U-S30-AP6X	M1636500	Uprox	•	10		
	Ni 15-S30-AP6X	T4659200			15		
	Ni 20U-S30-AP6X	M1646500	Uprox		20		
	Bi 10-S30-VN4X	M1522300	Comp. Output	•	10	4-Wire DC NPN	
	Ni 15-S30-VN4X	T1522400	Comp. Output		15		
	Bi 10-S30-VP4X	T1512200	Comp. Output	•	10	4-Wire DC PNP	
	Ni 15-S30-VP4X	T1563000	Comp. Output		15		
	Bi 10-S30-VP4X/S100	M1514000	High Temp. 100°C	•	10		
	Bi 10-S30-AZ3X	T4355400			•	10	2-Wire AC/DC
	Bi 10-S30-AZ3X/S100	M1371900	High Temp. 100°C	•	10		
	Ni 15-S30-AZ3X	T4355500			15		
	Ni 15-S30-AZ3X/S100	M1375800	High Temp. 100°C		15		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	500	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	200	≤100	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	1	
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/Silicon	2	
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/Silicon	2	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
10-30 VDC	500	≤200	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	2	<b>Diagram 3</b> 
	1500	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	2	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
	500	≤200	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	3	
	500	≤200	-40 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/Silicon	3	
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	3	
10-65 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	5	
	500	≤200	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/Silicon	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	6	<b>Diagram 6</b> 
	20	≤400/300	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	6	
	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	EPTR	N/A	YE	2M/PVC	6	
	20	≤400/300	-25 to +100	IP 67	PA 12	IRPA	EPTR	N/A	YE	2M/PVC	6	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
<b>30 mm - Embeddable, Potted-In Cable, Partial Threading</b> 	Bi10NF-S30-AN6X	M1621500	<i>Nonferrous</i>	•	10	3-Wire DC NPN
	Bi10NF-S30-AP6X	M1611500	<i>Nonferrous</i>	•	10	3-Wire DC PNP
<b>30 mm - Embeddable/Nonembeddable, Full Threading, Potted-In Cable</b> 	Bi12-P30WD-AN6X	M4617121	<i>Washdown</i>	•	12	3-Wire DC NPN
	Ni20-P30WD-AN6X		<i>Washdown</i>		20	
<b>30 mm - Embeddable/Nonembeddable, Plastic, Terminal Chamber</b> 	Bi10-P30SK-AN6X2	T4660000		•	10	3-Wire DC NPN
	Bi10U-P30SK-AN6X	M1636720	<i>Uprox</i>	•	10	
	Ni15-P30SK-AN6X2	T4660200			15	
	Ni20U-P30SK-AN6X	M1646720	<i>Uprox</i>		20	
	Bi10-P30SK-AP6X2	T4659900		•	10	3-Wire DC PNP
	Bi10U-P30SK-AP6X	M1636700	<i>Uprox</i>	•	10	
	Ni15-P30SK-AP6X2	T4660100			15	
	Ni20U-P30SK-AP6X	M1646700	<i>Uprox</i>		20	
	Bi10-P30SK-AZ3X2	T4356400		•	10	2-Wire AC/DC Normally Open
	Ni15-P30SK-AZ3X2	T4356500			15	
<b>30 mm - Embeddable/Nonembeddable, Plastic, Terminal Chamber</b> 	Bi10-P30SR-AP6X	M1611600			10	2-Wire DC
	Bi10-P30SR-FZ3X2	M1342000		•	10	2-Wire AC
	Ni15-P30SR-FZ3X2	M1342100			15	
	Bi10-P30SR-VN4X2	M1575200	<i>Comp. Outputs</i>	•	10	4-Wire DC NPN
	Ni15-P30SR-VN4X2	M1575300	<i>Comp. Outputs</i>		15	
	Bi10-P30SR-VP4X2	M1565200	<i>Comp. Outputs</i>	•	10	4-Wire DC PNP
Ni15-P30SR-VP4X2	M1565300	<i>Comp. Outputs</i>		15		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current AC/DC (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤200	0 to +60	IP 67	CPB	PA 12	EPTR	N/A	YE	PVC	1	<b>Diagram 1</b> 
10-30 VDC	500	≤200	0 to +60	IP 67	CPB	PA 12	EPTR	N/A	YE	PVC	2	<b>Diagram 2</b> 
10-30 VDC	1000	≤200	-25 to +85	IP 68, 69K	PP	PP	PVDF	N/A	YE	2M/PUR	1	<b>Diagram 3</b> 
	1000	≤200	-25 to +85	IP 68, 69K	PP	PP	PVDF	N/A	YE	2M/PUR	1	
10-30 VDC	1000	≤200	-25 to +85	IP 68, 69K	PP	PP	PVDF	N/A	YE	2M/PUR	2	<b>Diagram 4</b> 
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	3	<b>Diagram 5</b> 
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	----	N/A	YE	----	3	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	3	
	1500	≤200	-30 to +85	IP 68	PA 12	PA 12	----	N/A	YE	----	3	
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	4	<b>Diagram 6</b> 
	2000	≤200	-30 to +85	IP 68	PA 12	PA 12	----	N/A	YE	----	4	
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	4	
	1500	≤200	-30 to +85	IP 68	PA 12	PA 12	----	N/A	YE	----	4	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	----	GN	RD	----	5	<b>Diagram 7</b> 
20	≤400/300	-25 to +70	IP 67	PA 12	PA 12	----	GN	RD	----	5		
10-30 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	5	<b>Diagram 7</b> 
20-250 VAC	20	≤500	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	5	<b>Diagram 7</b> 
	20	≤500	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	5	
10-65 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	6	<b>Diagram 7</b> 
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	6	
10-65 VDC	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	7	<b>Diagram 7</b> 
	500	≤200	-25 to +70	IP 67	PA 12	PA 12	----	GN	YE	----	7	

Barrels

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>40 mm - Nonembeddable, Smooth Plastic Barrel, minifast® Connection</b> 	Ni30-K40-VN4X-B2141	M4590400	Comp. Outputs	30	4-Wire DC NPN
	Ni30-K40-VP4X-B2141	M4590500	Comp. Outputs	30	4-Wire DC PNP
	Ni30-K40-AZ3X-B2131	M4375800		30	2-Wire AC/DC
<b>40 mm - Nonembeddable, Smooth Plastic Barrel, Potted-In Cable</b> 	Ni20-K40-AN6X	M1676900		20	3-Wire DC NPN
	Ni20-K40-AP6X	M1655900		20	3-Wire DC PNP
	Ni20-K40-Y1	M1007300		20	2-Wire DC NAMUR
<b>40 mm - Nonembeddable, Smooth Plastic Barrel, Potted-In Cable</b> 	Ni20-K40-AZ3X	M1306500		20	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current AC/DC (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	----	N/A	YE	RK 40-*M	1	<b>Diagram 1</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	----	N/A	YE	RK 40-*M	2	<b>Diagram 2</b> 
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	ABS	ABS	----	N/A	YE	RK 30-*M	3	<b>Diagram 3</b> 
10-30 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
10-30 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
5-30 VDC	100	Remote	-25 to +70	IP 67	ABS	ABS	EPTR	N/A	N/A	2M/PVC	6	<b>Diagram 6</b> 
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	ABS	ABS	EPTR	N/A	YE	2M/PVC	7	<b>Diagram 7</b> 



Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	
<b>40 mm - Smooth Plastic, Terminal Chamber</b>  	Bi15-K40SR-VN4X2	M1575500	Comp. Outputs	•	15	4-Wire DC NPN	
	Ni20-K40SR-VN4X2	M1575600	Comp. Outputs		20		
	Ni30-K40SR-VN4X2	M1575800	Comp. Outputs		30		
	Bi15-K40SR-VP4X2	M1565500	M1565500	Comp. Outputs	•	15	4-Wire DC PNP
	Ni20-K40SR-VP4X2	M1565600	M1565600	Comp. Outputs		20	
	Ni30-K40SR-VP4X2	M1565800	M1565800	Comp. Outputs		30	
	Bi15-K40SR-FZ3X2	M1342300	M1342300	Programmable Output	•	15	2-Wire AC/DC
	Ni20-K40SR-FZ3X2	M1342400	M1342400	Programmable Output		20	
	Ni30-K40SR-FZ3X2	M1342500	M1342500	Programmable Output		30	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	----	GN	YE	- - - -	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	ABS	ABS	----	GN	YE	- - - -	1	
	100	≤200	-25 to +70	IP 67	ABS	ABS	----	GN	YE	- - - -	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	----	GN	YE	- - - -	2	<b>Diagram 2</b> 
	100	≤200	-25 to +70	IP 67	ABS	ABS	----	GN	YE	- - - -	2	
	100	≤200	-25 to +70	IP 67	ABS	ABS	----	GN	YE	- - - -	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	ABS	ABS	----	GN	RD	- - - -	3	<b>Diagram 3</b> 
	20	≤400/300	-25 to +70	IP 67	ABS	ABS	----	GN	RD	- - - -	3	
	20	≤400/300	-25 to +70	IP 67	ABS	ABS	----	GN	RD	- - - -	3	

Barrels

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>47 mm - Embeddable, minifast® Connection</b> 	Bi25-G47-VN4X-B2141	M4590300	Comp. Outputs	25	4-Wire DC NPN
	Bi25-G47-VP4X-B2141	M4590200	Comp. Outputs	25	4-Wire DC PNP
	Bi20-G47-AZ3X-B2131	M4375900		20	2-Wire AC/DC
<b>47 mm - Embeddable, Potted-In Cable</b> 	Bi20-G47-AN4X	M1574500		20	3-Wire DC NPN
	Bi20-G47-AP4X	M1564500		20	3-Wire DC PNP
	Bi20-G47-AZ3X	M1308800		20	2-Wire AC/DC
<b>47 mm - Nonembeddable, Potted-In Cable</b> 	Ni25-G47-AN4X	M1574600		25	3-Wire DC NPN
	Ni25-G47-AP4X	M1564600		25	3-Wire DC PNP
	Ni25-G47-AZ3X	M1308900		25	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	----	N/A	YE	RKM 40-*M	1	<b>Diagram 1</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	----	N/A	YE	RKM 40-*M	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	----	N/A	YE	RKM 30-*M	3	<b>Diagram 2</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	6	<b>Diagram 3</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	5	<b>Diagram 5</b> 
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	6	<b>Diagram 6</b> 

Barrels

\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>47 mm - Embeddable, Terminal Chamber</b> 	Bi25-G47SR-VN4X2	M1574800	<i>Comp. Outputs</i>	25	4-Wire DC NPN
	Bi25-G47SR-VP4X2	M1564800	<i>Comp. Outputs</i>	25	4-Wire DC PNP
	Bi25-G47SR-FZ3X2	M1342700	<i>Programmable Output</i>	25	2-Wire AC/DC
<b>47 mm - Nonembeddable, Terminal Chamber</b> 	Ni40-G47SR-VN4X2	M1575000	<i>Comp. Outputs</i>	40	4-Wire DC NPN
	Ni40-G47SR-VP4X2	M1565000	<i>Comp. Outputs</i>	40	4-Wire DC PNP
	Ni40-G47SR-FZ3X2	M1342800	<i>Programmable Outputs</i>	40	2-Wire AC/DC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) AC/DC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	----	GN	YE	- - - -	1	<p><b>Diagram 1</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	----	GN	YE	- - - -	2	<p><b>Diagram 2</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	----	GN	YE	- - - -	3	<p><b>Diagram 3</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	----	GN	YE	- - - -	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	----	GN	YE	- - - -	2	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	CPB	PA 12	----	GN	YE	- - - -	3	

Barrels

For material descriptions see page M22.



# Capacitive Sensors

## Capacitive Sensor Selection Guide



Embeddable/Nonembeddable Rectangular				
Housing	5.5 mm	8 mm	10 mm	14 mm
Sensing Range	5 - 10 mm	5 mm	8 mm	10 mm
Pages	E19	E19	E21	E21



Embeddable/Nonembeddable Metal Barrel			
Housing	12 mm	18 mm	30 mm
Sensing Range	3 mm	5 mm	10 mm
Pages	E29	E31	E33 - E35

Capacitive Sensor Selection Guide



Embeddable/Nonembeddable Rectangular			
Housing	20 mm	40 mm	80 mm
Sensing Range	20 mm	20 mm	50 mm
Pages	E23 - E25	E27	E27



Embeddable/Nonembeddable Plastic Barrel					
Housing	12 mm	18 mm	30 mm	34 mm	40
Sensing Range	3 mm	5 mm	10 mm	15 - 20 mm	15 - 20 mm
Pages	E29	E37 - E39	E41 - E43	E45 - E47	E47

Capacitive

# Capacitive Sensors

## Package Inspection

One of the major benefits of capacitive sensors is their ability to sense through low-dielectric materials. With the sensitivity properly adjusted, these sensors can be used to “see through” an object wall to detect its contents.

From inspecting jars through a cardboard box to sensing ammonia in a vat - capacitive sensors are made for these applications. In addition, capacitive sensors have the ability to sense most materials including wood, plastics, cardboard, glass, grain, all metals and most fluids. The versatility of these sensors can help you save time and run more efficiently.



## Grain and Plastic Pellet Detection

The wide sensitivity band of **TURCK** sensors allows for detection of a variety of granular or powdered materials. Capacitive sensors are widely used to monitor the level of plastic pellets in the hoppers of injection molding machines. **TURCK's** new “BCF” line of sensors are ideal for this application.

**TURCK** Intrinsically Safe NAMUR sensors are also used in grain elevators to monitor the levels of materials ranging from rice and barley malt to corn and soybeans.

## Small Parts Detection

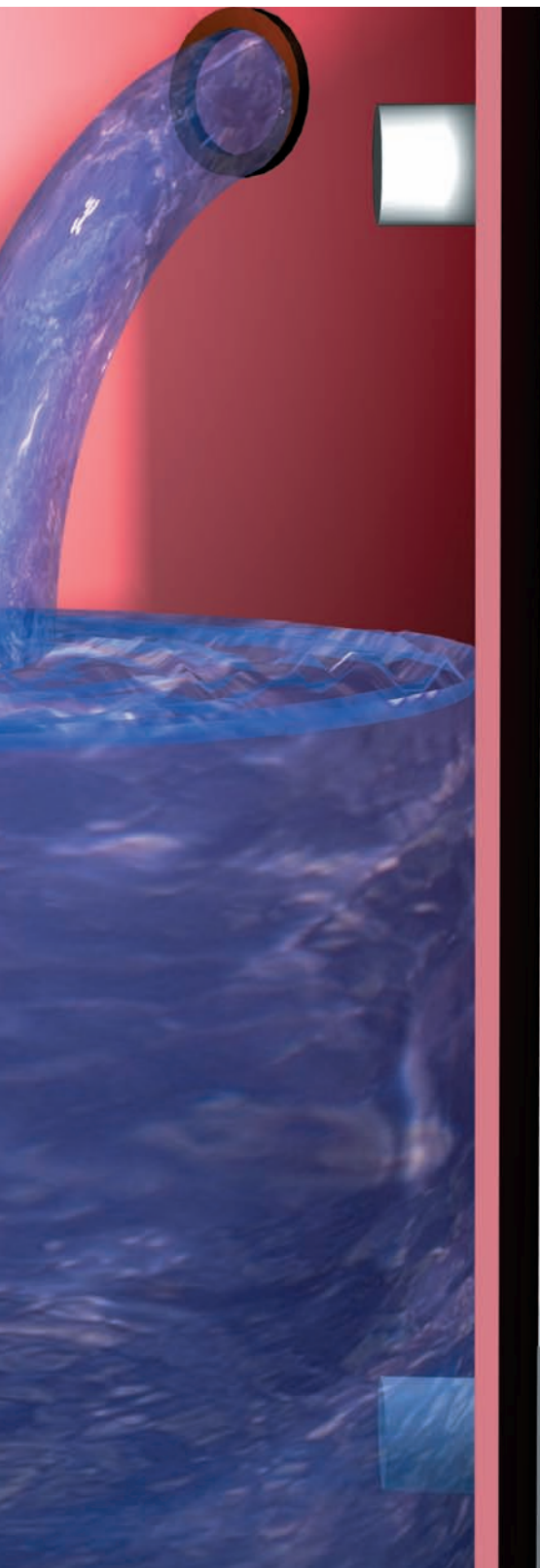
Another great use for capacitive sensors is to detect small items as they come down the assembly line. They can be used to count product or sense proper operation of the line. Choose from many styles with short-circuit and overload protection in AC, DC and Intrinsically Safe NAMUR.



## Capacitive Sensors Work Where Others Don't!

TURCK presents... The industry's most extensive line of capacitive sensors

You may know that **TURCK** has the broadest product offering in inductive sensors, but did you also know that we have the most extensive line of capacitive sensors?



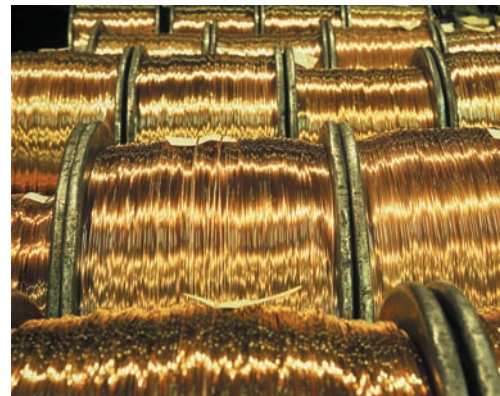
**TURCK's Q-Pak™** capacitive sensors are available in packages up to 10 times narrower than conventional barrel-style sensors. Also our PVDF sensors offer incredible resistance to harsh chemical environments found in the semiconductor and chemical industries.

### Liquid Level Detection

Capacitive sensors have the ability to “see through” lower dielectric materials, such as plastic or glass, to detect higher dielectric ones. This allows capacitive sensors to detect levels of many types of materials either directly through the wall for plastic tanks, or by utilizing a sight glass or tank well for metal tanks. With **TURCK's** Intrinsically Safe NAMUR sensors, PVDF models and Teflon® tank wells, even explosive or corrosive materials can be safely sensed.

### Wire Break Detection

**TURCK** capacitive sensors are ideal for sensing wire breakage. Our sensors will detect even the smallest wires of any metal. The long sensing ranges allow the wire to bounce during the process without causing false outputs.



Capacitive

# Capacitive Sensors

## Sensitivity Adjustments

Many applications require adjusting the sensitivity of the capacitive sensor in order to reliably detect the target material. Although the potentiometer is factory set for an operating distance of 0.7 to 0.8 times the rated operating distance, it can be easily changed. Some sensors even feature a remote potentiometer, allowing adjustments to be made in locations away from the sensor.

Most **TURCK** capacitive sensors are listed as embeddable. By increasing the sensitivity, the embeddable sensor can be changed into a non-embeddable version with enhanced sensing capabilities.



## Noise Immunity

Capacitive sensors were originally designed for use in level detection applications in areas that were generally far away from other electrical equipment. As factory automation has become more prevalent throughout industrial markets, these capacitive sensors have gravitated into new environments where electrical noise levels are greatly increased. Electrical noise can be produced by various sources including variable frequency drives, electromechanical motors and standard walkie-talkie devices. These “noisy” environments can have adverse effects on sensing devices causing them to operate improperly and unreliably

**TURCK** recognizes this and has developed a new circuit for its capacitive sensors. These new “BCF” sensors incorporate a **unique filter principle**, making them immune to most industrial noise. This principle involves a fixed oscillator frequency combined with a rectifier filter providing superior noise immunity over the competition.

**TURCK’s fixed oscillator** allows the sensor to maintain a constant frequency regardless of sensitivity adjustment. This fixed frequency is high enough to ignore most of the “standard” noise levels seen on plant floors

Electrical noise is mostly symmetrical which makes it easier to identify and separate from the sensor’s input signal. The **TURCK rectifier filter** is able to block this noise allowing only the “useful” input signal, which is in phase with the oscillator frequency, to pass.

These two innovative electrical techniques give **TURCK** the best defense against industrial noise. The list of specifications and test results below demonstrates how **TURCK** meets or exceeds all of the rigid standards established by CE. In fact, the criteria set forth by CE is so stringent that most capacitive sensors offered on the market today cannot pass any or all of these testing requirements. If you have a capacitive sensor application located in a “noisy” environment choose the new “BCF” sensors from **TURCK** to ensure your process operates smoothly.

Capacitive

Test Type		CE “Product” Standard	CE “Generic” Standard	TURCK “BCF” Noise Immune Capacitive Sensors
Immunity to Electrostatic Discharge (ESD)	IEC 1000-4-2 EN 61000-4-2	4 kV Direct Contact 8 kV Airborne	4 kV Direct Contact 8 kV Airborne	8 kV Direct Contact 30 kV Airborne
Immunity to Radiated Electromagnetic Fields. Radio Frequency Interference (RFI)	IEC 1000-4-3 EN 61000-4-3	3 V/M 80-1000 MHz	10V/M 80-1000 MHz	15 V/M 80-1000 MHz
Immunity to Electrical Fast Transients (Burst-High Voltage)	IEC 1000-4-4 EN 61000-4-4	2000 V	2000 V	3000 V
Immunity to Conducted R.F. Voltage (Line coupled Noise)	IEC 1000-4-6 EN 61000-4-6	Undefined	10 V 150 kHz-80 MHz	>10 V 150 kHz-230 MHz
Immunity to Surges (lightning strike)	IEC 255-5	1kV, 500Ω DC	Undefined	1kV, 500Ω DC 5kV, 500Ω AC

# Capacitive Sensors

## Capacitive Sensor Part Number Key

**B C 20 - K 40 SR - F Z 3 X2** Wiring Options Special Option Codes

### Mounting

- B = Embeddable
- N = Nonembeddable

### Principle of Operation

- C = Capacitive
- CF = Capacitive (Noise immune)

### Rated Operating Distance (mm)

### Housing Style

#### Barrel - Metal

- M = Partial Threading, Chrome Plated Brass

#### Barrel - Plastic

- K = Smooth
- KT = PVDF, Smooth
- P = Full Threading
- PT = PVDF, Full Threading
- S = Partial Threading

#### Rectangular

- Q = Metal or Plastic, Various Rectangular Styles

#### Limit Switch

- CP = *combiprox*<sup>®</sup>, Plastic Housing, Terminal Chamber Base with Removable Sensor Head

### Number of LEDs

Examples:

- Blank = No LEDs
- X2 = 2 LEDs

### Voltage Range

#### AC/DC: (No SCP\*\*)

- 3 = 20-250 VAC

#### DC:

- 4 = 10-65 VDC, Polarity Protected, Pulsed SCP\*\*
- 6 = 10-30 VDC, Polarity Protected, Pulsed SCP

\*\*SCP = Short-Circuit and Overload Protection

### Output

- N = NPN Transistor (Current Sinking)
- P = PNP Transistor (Current Sourcing)
- Z = 2-Wire AC or 2-Wire AC/DC

### Output Function

- A = Normally Open (N.O.)
- F = Connection Programmable (N.O. or N.C.)
- R = Normally Closed (N.C.)
- V = Complementary Outputs: One N.O., One N.C.
- Y0 = NAMUR Output, Requires Switching Amplifier

### Housing Modifier

- SR = Straight Terminal Chamber

### Housing Diameter/Height (mm)

Wiring Options

A) Connectorized Sensor

BC10-M30-AP4X- **H1 1 4 1**

Connector Family

- B1 = *minifast*®, Metal, Male
- B2 = *minifast*®, Plastic, Male
- B3 = *microfast*®, Metal, Male
- H1 = *eurofast*®, Metal or Plastic, Male
- V1 = *picofast*®, Metal, Male

Connector / Sensor Transition

1 = Straight

Factory Code

Example:  
1 = Standard  
3 = N.C. DC Output on Pin 4 (for US)

Number of Pins

B) Potted Cable

BC 5-S18-AP4X- **7M**

Cable Length

Blank = 2 Meter cable  
7M = 7 Meter cable

Capacitive

Special Option Codes

BC 5-S18-AP4X- **/S..**

Option Code

Example:  
/S250 = No Potentiometer  
/S400 = Rear LED's



# Capacitive Sensors

## Applications

- **Liquid Level Control** for both explosive and non-explosive materials.
- **Package Inspection** for product content and/or fill level.
- **Wire-Break Detection** for wire sizes down to .003".
- **Plastic Pellet Detection** in a hopper for injection molding processes.
- **Grain or Food Products Level Detection**; intrinsically safe models available.
- **Small Metal Parts Detection**; greater sensing range than comparable inductive sensors.

## Operating Principle

The active element is formed by two metallic electrodes positioned much like an "opened" capacitor (Figure 1). Electrodes A and B are placed in a feedback loop of a high frequency oscillator. When no target is present, the sensor's capacitance is low, therefore the oscillation amplitude is small. When a target approaches the face of the sensor, it increases the capacitance. This increase in capacitance results in an increased amplitude of oscillation. The amplitude of oscillation is measured by an evaluating circuit that generates a signal to turn on or off the output.

Figure 1

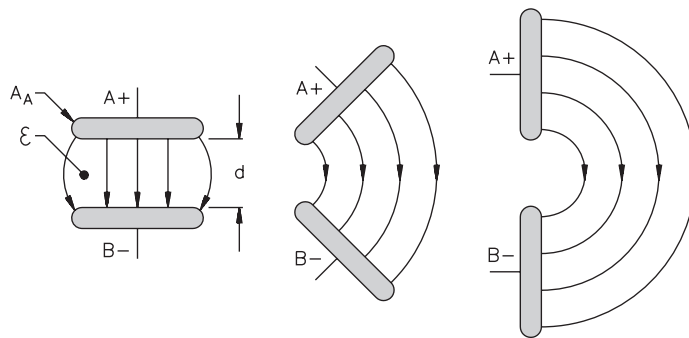
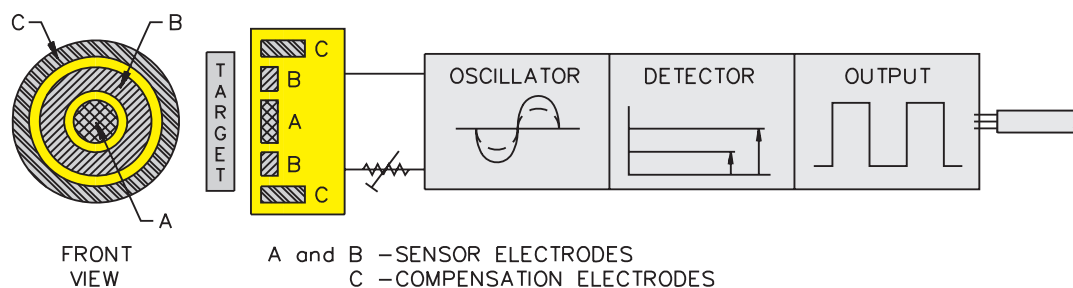


Figure 2



Operating Principle

Capacitance is a function of the surface area of either electrodes (A or B), the distance between the electrodes (d), and the dielectric constant of the material ( $\epsilon$ ) between the electrodes (Figure 1).

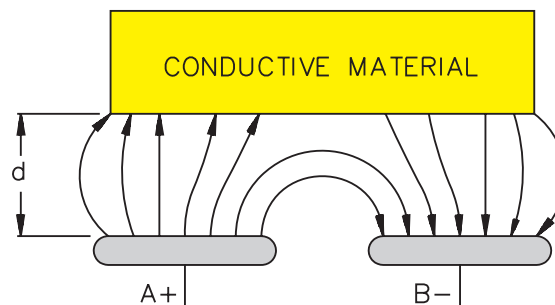
$$C = \frac{\epsilon \times A}{d}$$

C = capacitance of sensor  
 A = surface area of either electrode  
 d = distance between two electrodes  
 $\epsilon$  = dielectric constant of material between the electrodes

When a **Conductive Target** enters the sensor's field, it forms a counter electrode to the active face of the sensor, thus decreasing the distance between the electrodes (d) and increasing their average surface area (Figure 3). The capacitance with a metal target present is always greater than the capacitance of the circuit in the absence of the target.

Reduction factors for different metals are not a consideration when using capacitive sensors.

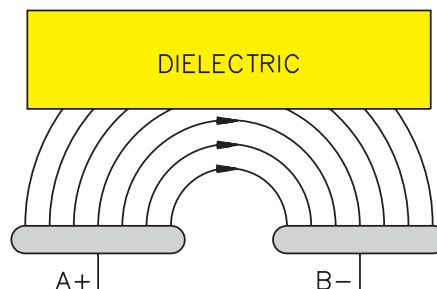
Figure 3



When a **Non-Conductive Target** enters the sensor's field, it acts as an electrical insulator between electrodes A and B (Figure 4).

The dielectric constant of the material ( $\epsilon$ ) is a measure of its insulation properties. All liquids and solids have a greater dielectric constant than air ( $\epsilon_{\text{air}} = 1$ ). Therefore, the capacitance with a non-metallic target present is always greater than the capacitance of the circuit in the absence of the target.

Figure 4



# Capacitive Sensors

## Sensitivity Adjustment

Capacitive sensors can be adjusted two ways in order to sense a target consistently.

1. **Physical adjustment** - moving the sensor towards or away from the target is the preferred method of adjusting sensitivity when the sensor is not in direct contact with the target. This allows materials to be moved into or out of range while leaving the sensor at the factory setting or after re-calibration to the nominal operating distance  $S_n$ .
2. **Adjustment of the potentiometer** - turning the potentiometer in a clockwise direction increases the sensitivity of the sensor. The potentiometer is factory-set for an operating distance of 0.7 to 0.8  $S_n$  to a grounded standard target (Figure 5). It should be adjusted in increments of no greater than a quarter-turn (Figure 6). Increasing the sensitivity results in a greater operating distance to both conductive and non-conductive targets.

Figure 5

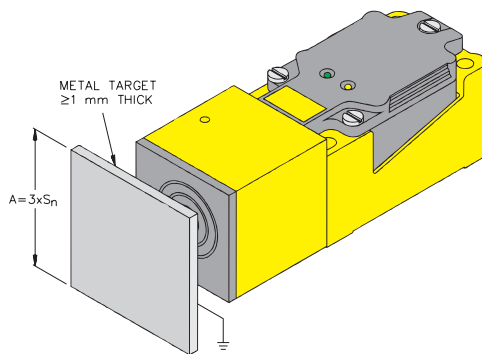
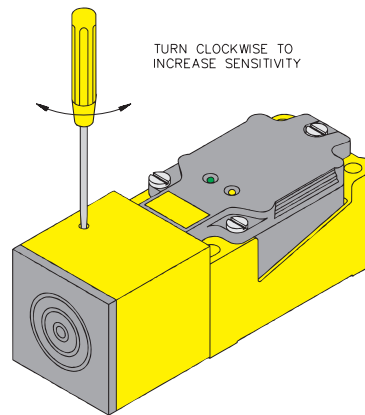
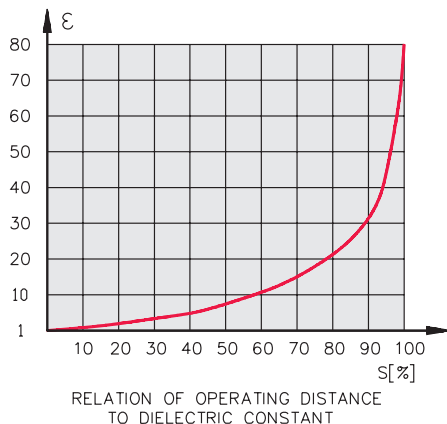


Figure 6



When sensing non-conductive targets, the larger the dielectric constant of a material, the greater the achievable operating distance (Figure 7). Adjusting the potentiometer affects the total curve; for example, if the potentiometer is adjusted for less sensitivity, it will have less operating distance to all materials.

Figure 7



In general terms, the larger the dielectric constant of a material, the greater the achievable operating distance.

When detecting organic materials the sensing distance will depend largely on the water content ( $\epsilon_{\text{water}} = 88$ ).

It should be noted that a large increase in sensitivity will cause the sensor to become nonembeddable, and may result in an unstable switching point that can be influenced by environmental changes such as temperature, humidity, dust, etc.

At adjustments of  $S > S_n$ , the differential travel (hysteresis) can also increase.

**Example Application 1 - Adjustment**

**Problem:**

Can a BC20-K40SR-FZ3X2 be used to sense the presence of ammonia from behind a .125" glass panel?

**Solution:**

The dielectric constants for these materials can be found on pages 15 and 16.

Dielectric ( $\epsilon_r$ ) of ammonia:	20
Dielectric ( $\epsilon_r$ ) of glass:	10

From Figure 7,  $\epsilon_r = 20$  corresponds to 80% Sn;  $\epsilon_r = 10$  corresponds to 60% Sn.

Since Sn = 20 mm for a BC20:	S for ammonia = 16 mm
	S for glass = 12 mm

The difference is 4 mm. The glass thickness = .125", or 3.1 mm. This application will work with a 0.9 mm margin. This means that by adjusting the potentiometer there should be a reasonable distinction between the glass and the ammonia as seen by the sensor.

To set up the sensor for this application, the sensing face of the sensor should be flush against the sight glass.

1. With no ammonia present (if possible) turn the potentiometer clockwise until the sensor turns on. If the sensor is already on, skip step one.
2. Next, turn the potentiometer counter clockwise until the sensor turns off.
3. Now add the ammonia so that it covers the glass panel.
4. Once again, turn the potentiometer counter clockwise, *counting the number of turns* until the sensor turns off.\*
5. Divide the number of turns by two and turn the potentiometer back clockwise that amount.

Using this process will allow for a margin of error in either direction. If this application had called for something other than ammonia, like molasses, that tends to leave buildup behind, step 1 above should be performed *with the buildup present (if possible)*.

\* If sensor does not turn off after 10 full turns, turn back the potentiometer clockwise between 3 to 5 turns. Minor adjustments may need to be made to achieve desired setting.

Capacitive

**Example Application 2 - Mounting**

**Problem:**

A metal tank containing a water-based solution has a 1" outside diameter sight glass. What sensor and bracket could be used for monitoring the liquid level?

**Solution:**

The QF 5.5 flat style can be used on non-conductive tubing up to 1.0 inch in diameter with the standard mounting straps provided with the sensor (Figure 8).

Other mounting straps for larger diameters are available upon request (consult factory).

**Figure 8**



# Capacitive Sensors

## Plastic Material Descriptions

ABS - Acrylonitrile-Butadiene-Styrene	Impact resistant, rigid. Resistant to aqueous acids, alkalis, salts, alcohols, oils, concentrated hydrochloric acid; disintegrated by concentrated sulfuric or nitric acids, esters, ketones.
PA - Polyamide (nylon)	Good mechanical strength, temperature resistant.
PA, Amorphous (Trogamid T)	Similar properties to nylon, but transparent. Hard, rigid, good chemical resistance.
PA 12-GF30	Nylon 12, 30% glass filled.
PA 66-GF25-V0	Nylon 66, 25% glass filled, self-extinguishing.
PBT - Polybutylene Terephthalate (when glass reinforced, Crastin <sup>®</sup> )	Good mechanical strength; resistant to abrasion; resistant to alcohols, oils, some acids, trichloroethylene.
PBT-GF30-V0	PBT, 30% glass filled, self-extinguishing.
POM - Polyoxymethylene / Polyacetal (Delrin <sup>®</sup> )	High impact resistance; good mechanical strength; good resistance to oils, alcohols, alkalis, gasoline, xylene, toluene. Dielectric constant 3.7.
PP - Polypropylene	Good mechanical strength. Resistant to acids. Temperature resistant.
PTFE - Polytetrafluoroethylene (Teflon <sup>®</sup> )*	Optimum resistance against high temperature and chemicals; low dielectric constant (2.0).
PUR - Polyurethane	Elastic, resistant to abrasion, impact-resistant, oil- and grease-tolerant.
PVC - Polyvinylchloride	Good mechanical strength, viscosity to impact; resistant to acids, alkalis.
PVDF - Polyvinylidene fluoride (Kynar <sup>®</sup> )	Resistant to high and low temperatures, good resistance to chemicals (similar to PTFE), high mechanical strength.

## Matrix of TURCK Sensor Materials

Housing Style	ABS	PA, Trog. T	PA	PBT	PP	PUR	PVC	PVDF	Brass	Zinc
CP40			X*	X						
CP80		X	X*	X						
G, M (potted-in cable)			X			X*	X*		X	
G, M (connector)			X						X	
K40SR, P30SR	X		X*							
K34			X*	X			X*			
KT34								X		
P, S (potted-in cable)			X			X*	X*			
P, S (connector)			X							
PT30								X		
Q08			X				X*		X*	X
Q10, Q14, Q20				X		X*	X*		X*	
QF5.5					X	X*				
S185						X*	X*	X		

\* Optional part, ie cable gland, connector, cable, bracket, etc.

## Chemical Compatibility

The information in this chart is derived from reputable industry sources and is to be used only as a guide in selecting materials suitable for your application. **TURCK** does not warrant in any fashion that the information in this chart is accurate or complete, or that any material is suitable for any purpose.

Most ratings listed here apply to a 48-hour exposure period.

Ratings: A - No effect    B - Minor effect    C - Moderate effect    D - Severe effect  
 φ - No specific data, but probable rating.    ND - No data

	ABS	Trog. T	PA 12	PBT	POM	PTFE	PUR	PVC	PVDF	306 SS	Brass	Zinc	PP
Ammonia, liquid	B	B	A	B	C/D	A	C	A	A	B	D	A	A
Chlorine anhydrous liquid	ND	ND	D	D	C	A	C	D	A	C	D	ND	D
De-ionized water	ND	ND	A	ND	ND	A	ND	A	A	A	A	ND	A
Formic acid	D	D	D	A	C	A	C	A	A	A/B	D	D	A
Gasoline	D	A	A	A	A	A	A	C	A	A	A	ND	B
Hydrochloric acid <40%	A	A/B	D	A	C	A	D	B	A	D	D	D	B
Hydrofluoric acid <50%	C	D	D	B	D	A	C	B	A	D	D	ND	A
Methanol	D	D	B	A	A	A	B	A	A	A	A	A	A
Phosphoric acid <40%	B <sup>φ</sup>	D	B	A	D	A	D <sup>φ</sup>	B	B	D	D	D	A
Potassium hydroxide <15%	A	A	C	B	B	A	C	A	A	B	D	ND	A
Sodium hydroxide <55%	A	A	C	B	B	A	B	A	D	B	D	D	A
Sodium hypochlorite ≤13%	B	ND	B	A	C	A	B	A	A	C	D	A	A
Sulfuric acid <75%	B	A	D	A	D	A	C	A	A	D	D	D	A
Toluene	D	A	A	A	A	A	C	D	A	A	A	ND	C
Trichloroethylene	D	A	C	A	B	A	D	D	B	A/B	A	A	C

Capacitive

## Industrial Products and their Dielectric Constants

Material	Dielectric Constant
ABS resin, pellet	1.5 - 2.5
Acetic Acid	4.1
Acetone	19.5
Acetyl bromide	16.5
Acrylic resin	2.7 - 4.5
Air	1.0
Alcohol, industrial	16 - 31
Alcohol, isopropyl	18.3
Ammonia	15 - 25
Aniline	5.5 - 7.8
Aqueous solutions	50 - 80
Asbestos	3.0
Ash (fly)	1.7
Bakelite	3.6
Barley powder	3.0 - 4.0
Benzene	2.3
Benzyl acetate	5
Butane	1.4
Cable sealing compound	2.5
Calcium carbonate	9.1
Carbon Dioxide	1.6
Carbon tetrachloride	2.2
Celluloid	3.0
Cellulose	3.2 - 7.5
Cement	1.5 - 2.1
Cement powder	5 - 10
Cereal	3 - 5
Charcoal	1.2 - 1.8
Chlorine, liquid	2.0
Coke	1.1 - 2.2
Corn	5 - 10
Ebonite	2.7 - 2.9

Material	Dielectric Constant
Epoxy resin	2.5 - 6
Ethanol	24
Ethyl bromide	4.9
Ethylene Chloride	10.5
Ethylene Dichloride	11.0
Ethylene glycol	38.7
Ethylene Oxide	14.0
Ferrous Oxide	14.2
Fired Ash	1.5
Flour	2.5 - 3.0
Formic Acid	59.0
Freon® R22 & 502, liquid	6.1
Gasoline	2.2
Glass	3.1 - 10
Glass, raw material	2.0 - 2.5
Glycerine	47
Hexane	1.9
Hydrochloric Acid	4.6
Hydrogen cyanide	95.4
Hydrogen peroxide	84.2
Ice, -5C	2.85
Ice, -18C	3.16
Isobutylamine	4.5
Lime, shell	1.2
Marble	8.0 - 8.5
Melamine resin	4.7 - 10.2
Methane, liquid	1.7
Methanol	33.6
Mica, white	4.5 - 9.6
Milk, powdered	3.5 - 4
Nitrobenzene	36
Neoprene	6 - 9

**Industrial Products and their Dielectric Constants**

Material	Dielectric Constant
Nylon	4 - 5
Oil, for transformer	2.2 - 2.4
Oil, paraffin	2.2 - 4.8
Oil, peanut	3.0
Oil, petroleum	2.1
Oil, soybean	2.9 - 3.5
Oil, turpentine	2.2
Paint	5 - 8
Paraffin	1.9 - 2.5
Paper	1.6 - 2.6
Paper, hard	4.5
Paper, oil saturated	4.0
Perspex	3.2 - 3.5
Petroleum	2.0 - 2.2
Phenol	9.9 - 15
Phenol resin	4.9
Polyacetal (Delrin®)	3.6
Polyamide (nylon)	2.5
Polycarbonate	2.9
Polyester resin	2.8 - 8.1
Polyethylene	2.3
Polypropylene	2.0 - 2.3
Polystyrene	3.0
Polyvinyl Chloride resin	2.8 - 3.1
Porcelain	4.4 - 7
Press board	2 - 5
Propane, liquid	1.6
Propylene, liquid	11.9
Quartz glass	3.7
Rice, dry	3.5

Material	Dielectric Constant
Rubber	2.5 - 35
Salt	6.0
Sand	3 - 5
Shellac	2.0 - 3.8
Silicon dioxide	4.5
Silicone rubber	3.2 - 9.8
Silicone varnish	2.8 - 3.3
Soybean	2.8
Styrene resin	2.3 - 3.4
Sugar	3.0
Sugar, granulated	1.5 - 2.2
Sulfur	3.4
Sulfuric acid	84
Teflon®, PCTFE	2.3 - 2.8
Teflon, PTFE	2.0
Toluene	2.3
Trichloroethylene	3.4
Urea resin	6.2 - 9.5
Urethane	3.2
Vaseline	2.2 - 2.9
Vinyl Chloride	2.8
Water	48 - 88
Wax	2.4 - 6.5
Wood, dry	2 - 7
Wood, pressed board	2.0 - 2.6
Wood, wet	10 - 30
Xylene	2.4
Zinc Oxide	1.7
Zirconium Oxide	12.5
Zirconium Silicate	5.0



# Capacitive Sensors

## Temperature and Environmental Conditions

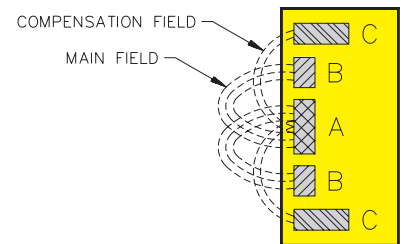
### Compensation Electrode

In practice, sensors can be affected by water droplets, humidity, dust, etc., causing false outputs. To combat this effect each **TURCK** sensor incorporates a compensating electrode (C) which forms part of a negative feedback circuit (Figure 9).

When contaminants are on the sensor face, they affect the sensor's main field, as well as its compensation field. The negative feedback circuit detects the increase in both fields, and can filter out the effects of the contaminants.

When a large target comes into the sensor's main field, the compensation field is not affected, thus the negative feedback circuit can distinguish a difference between the two fields, and the sensor generates an output.

Figure 9



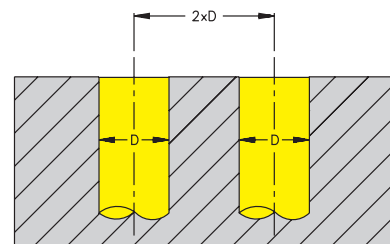
A and B – SENSOR ELECTRODES  
C – COMPENSATION ELECTRODES

## Mounting

Most capacitive sensors manufactured by **TURCK** are embeddable, which ensures that the electric field is only effective in front of the active face. They are suitable for flush mounting at the factory setting in any material (conductive & nonconductive).

When sensors are flush mounted, the effect on the operating distance is minimal and can be overcome by adjustment of the potentiometer. Minimum separation distances must be observed to avoid the possibility of interference between the two sensors' fields. (Figure 11)

Figure 11



**Operating Distance (Sensing Range) Considerations**

The operating distance (S) of the different models is basically a function of the diameter of the sensing coil. Maximum operating distance is achieved with the use of a standard or larger target. Rated operating distance (Sn) for each model is given in the manual.

**Standard Target**

An earth-grounded square piece of carbon steel having a thickness of 1 mm (0.04 in) is used as a standard target to determine the following operating tolerances. The length and width of the square is equal to three times the rated operating distance.

**Operating Distance = S**

The operating distance is the distance at which the target approaching the sensing face along the reference axis causes the output signal to change.

**Rated Operating Distance = Sn**

The rated operating distance is a conventional quantity used to designate the operating distance. It does not take into account either manufacturing tolerances or variations due to external conditions such as voltage and temperature. (Figure 10)

**Effective Operating Distance = Sr     $0.9 S_n \leq S_r \leq 1.1 S_n$**

The effective operating distance is the operating distance of an individual proximity sensor at a constant rated voltage and 23°C (73°F). It allows for manufacturing tolerances.

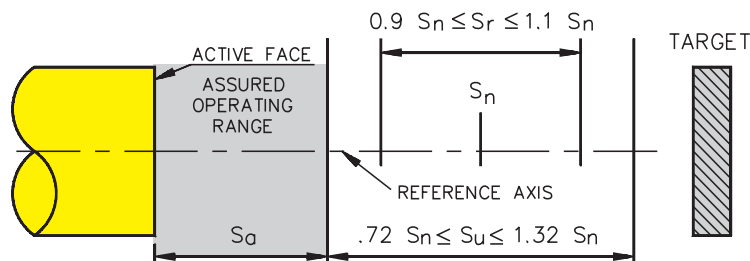
**Usable Operating Distance = Su     $0.72 S_n \leq S_u \leq 1.32 S_n$**

The usable operating distance is the operating distance of an individual proximity sensor measured over the operating temperature range at 85% to 110% of its rated voltage. It allows for external conditions and for manufacturing tolerances.

**Assured Operating Range = Sa     $0 \leq S_a \leq 0.72 S_n$**

The assured actuating range is between 0 and 72% of the rated operating distance. It is the range within which the correct operation of the proximity sensor under specified voltage and temperature ranges is assured. (Figure 12)

**Figure 12**



Capacitive

# Capacitive Sensors - Rectangular



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>5.5 mm - Embeddable, Potted-In Cable</b> 	BC 5-QF5.5-AN6X2/S250	S2620120	No Potentiometer	5	5	3-Wire DC NPN
	BC10-QF5.5-AN6X2	S2620121		10	10	
	BC10-QF5.5-AN6X2/S250	S2620119	No Potentiometer	10	10	
	BC10-QF5.5-AN6X2/S932	S2620137	Covered Pot.	10	10	
	BC 5-QF5.5-AP6X2/S250	S2620116	No Potentiometer	5	5	3-Wire DC PNP
	BC10-QF5.5-AP6X2	S2620117		10	10	
	BC10-QF5.5-AP6X2/S250	S2620115	No Potentiometer	10	10	
	BC10-QF5.5-AP6X2/S932	S2620109	Covered Pot.	10	10	
	BC 5-QF5.5-Y1X/S250	S2030000	No Potentiometer	5	5	2-Wire DC NAMUR
	<b>8 mm - Embeddable, Potted-In Cable</b> 	BC 5-Q08-AN6X2	S2620100	No Potentiometer	5	5
BC 5-Q08-AP6X2		S2620000	No Potentiometer	5	5	3-Wire DC PNP
<b>8 mm - Embeddable, pcofast® Connector</b> 	BC 5-Q08-AN6X2-V1131	S2621100	No Potentiometer	5	5	3-Wire DC NPN
	BC 5-Q08-AP6X2-V1131	S2621000	No Potentiometer	5	5	3-Wire DC PNP

"/S250" designates without potentiometer.

"/S932" designates Covered potentiometer.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing Mat.	Face/ Front Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	100	≤200	-25 to +70	IP 67	PP	PP	GN	YE	2M/PUR	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	PP	PP	GN	YE	2M/PUR	1	
	100	≤200	-25 to +70	IP 67	PP	PP	GN	YE	2M/PUR	1	
	100	≤200	-25 to +70	IP 67	PP	PP	GN	YE	2M/PUR	1	
10-30 VDC	100	≤200	-25 to +70	IP 67	PP	PP	GN	Ye	2M/PUR	2	<b>Diagram 2</b> 
	100	≤200	-25 to +70	IP 67	PP	PP	GN	YE	2M/PUR	2	
	100	≤200	-25 to +70	IP 67	PP	PP	GN	YE	2M/PUR	2	
	100	≤200	-25 to +70	IP 67	PP	PP	GN	YE	2M/PUR	2	
5-30 VDC	100	Remote	-25 to +70	IP 67	PP	PP	N/A	YE	2M/PUR	5	
10-30 VDC	100	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	1	<b>Diagram 3</b> 
10-30 VDC	100	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	2	<b>Diagram 4</b> 
10-30 VDC	100	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	3	<b>Diagram 5</b> 
10-30 VDC	100	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	PKG 3Z-*	4	

\* Length in meters.

Capacitive

For material descriptions see page M22.

# Capacitive Sensors - Rectangular



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>10 mm - Embeddable, Potted-In Cable</b> 	BC 8-Q10-AN6X2/S250	S2621203	No Potentiometer	8	8	3-Wire DC NPN
	BC 8-Q10-AP6X2/S250	S2621200	No Potentiometer	8	8	3-Wire DC PNP
<b>10 mm - Embeddable, picofast® Connector</b> 	BC 8-Q10-AN6X2-V1131/S250	S2621202	No Potentiometer	8	8	3-Wire DC NPN
	BC 8-Q10-AP6X2-V1131/S250	S2621201	No Potentiometer	8	8	3-Wire DC PNP
<b>14 mm - Embeddable, Potted-In Cable</b> 	BC10-Q14-AN4X2	M2530010		10	15	3-Wire DC NPN
	BC10-Q14-AN4X2/S400	M2530005	Rear LED	10	15	
	BC10-Q14-AP4X2	M2530001		10	15	3-Wire DC PNP
	BC10-Q14-AP4X2/S400	M2530003	Rear LED	10	15	
	BC10-Q14-VN4X2	M2530030	Comp. Outputs	10	15	4-Wire DC NPN
	BC10-Q14-VP4X2	M2530020	Comp. Outputs	10	15	4-Wire DC PNP
<b>14 mm - Embeddable, picofast Connector</b> 	BC10-Q14-AN4X2-V1131	M2530011		10	15	3-Wire DC NPN
	BC10-Q14-AN4X2-V1131/S400	M2530006	Rear LED	10	15	
	BC10-Q14-AP4X2-V1131	M2530002		10	15	3-Wire DC PNP
	BC10-Q14-AP4X2-V1131/S400	M2530004	Rear LED	10	15	

"/S250" in part number designates without potentiometer.

"/S400" in part number designates rear LED location on back of sensor opposite front face.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing Mat.	Face/ Front Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	<b>Diagram 2</b> 
10-30 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	3	<b>Diagram 3</b> 
10-30 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	4	<b>Diagram 4</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	1	<b>Diagram 5</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	<b>Diagram 6</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	5	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	6	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	3	
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	3	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	4	
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	PKG 3M-*	4	

Capacitive

\* Length in meters.

For material descriptions see page M22.

# Capacitive Sensors - Rectangular



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
	BC20-Q20-AN4X2	M2530110		20	30	3-Wire DC NPN
	BC20-Q20-AN4X2/S400	M2530104	Rear LED	20	30	
	BC20-Q20-AP4X2	M2530100		20	30	3-Wire DC PNP
	BC20-Q20-AP4X2/S400	M2530102	Rear LED	20	30	
	BC20-Q20-VN4X2/S400		Comp. Outputs	20	30	4-Wire DC NPN
	BC20-Q20-VP4X2/S400	M2530122	Comp. Outputs	20	30	4-Wire DC PNP
	BC20-Q20-AZ3X2	M4352000		20	30	2-Wire AC
	BC20-Q20-AZ3X2/S400	M2310005	Rear LED	20	30	

"S400" in part number designates rear LEDs, located on back of sensor opposite of sensing face.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	<b>Diagram 2</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	2	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	3	<b>Diagram 3</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	4	<b>Diagram 4</b> 
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	5	<b>Diagram 5</b> 
	20	≤500	-25 to +70	IP 67	PBT	PBT	GN	YE	2M/PVC	5	

Capacitive

For material descriptions see page M22.



# Capacitive Sensors - Rectangular



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>20 mm - Embeddable, eurofast® Connector</b> 	BC20-Q20-AN4X2-H1141	M2530111		20	30	3-Wire DC NPN
	BC20-Q20-AN4X2-H1141/S400	M2530105	Rear LED	20	30	
	BC20-Q20-AP4X2-H1141	M2530101		20	30	3-Wire DC PNP
	BC20-Q20-AP4X2-H1141/S400	M2530103	Rear LED	20	30	
	BC20-Q20-VN4X2-H1141	M2530131		20	30	4-Wire DC NPN
	BC20-Q20-VN4X2-H1141/S400	M2530124	Comp. Outputs	20	30	
	BC20-Q20-VP4X2-H1141	M2530121		20	30	4-Wire DC PNP
	BC20-Q20-VP4X2-H1141/S400	M2530123	Comp. Outputs	20	30	

"/S400" in part number designates rear LEDs, located on back of sensor opposite of sensing face.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	<b>Diagram 2</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4T-*	2	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	3	<b>Diagram 3</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	3	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	4	<b>Diagram 4</b> 
	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	RK 4.4T-*	4	

Capacitive

\* Length in meters.

For material descriptions see page M22.

# Capacitive Sensors - Rectangular



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>40 mm - Embeddable, Terminal Chamber</b> 	BC20-CP40-VN4X2	M2515700	Comp. Outputs	20	30	4-Wire DC NPN
	BC20-CP40-VP4X2	M2515600	Comp. Outputs	20	30	4-Wire DC PNP
	BC20-CP40-FZ3X2	M2311500	Prog. Outputs	20	30	2-Wire AC
<b>80 mm - Nonembeddable, Terminal Chamber</b> 	NC50-CP80-VN4X2	M2580112	Comp. Outputs	NA	50	4-Wire DC NPN
	NC50-CP80-VP4X2	M2580212	Comp. Outputs	NA	50	4-Wire DC PNP
	NC50-CP80-FZ3X2	M2310610	Prog. Outputs	NA	50	2-Wire AC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.

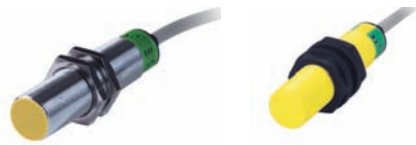


Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing Mat.	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	<b>Diagram 1</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	<b>Diagram 2</b> 
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	<b>Diagram 3</b> 
10-65 VDC	200	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	
10-65 VDC	200	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	

Capacitive

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>12 mm - Embeddable, eurofast® Connector</b> 	BC 3-M12-AN6X-0.2M-RS 4T	M2601190		3	N/A	3-Wire DC NPN
	BC 3-M12-AP6X-0.2M-RS 4T	M2601091		3	N/A	3-Wire DC PNP
<b>12 mm - Embeddable, Potted-In Cable</b> 	BC 3-M12-AN6X	M2601100		3	N/A	3-Wire DC NPN
	BC 3-M12-AP6X	M2601000		3	N/A	3-Wire DC PNP
<b>12 mm - Embeddable, eurofast Connector</b> 	BC 3-S12-AN6X-0.2M-RS 4T	M2601390		3	4.5	3-Wire DC NPN
	BC 3-S12-AP6X-0.2M-RS 4T	M2601291		3	4.5	3-Wire DC PNP
<b>12 mm - Embeddable, Potted-In Cable</b> 	BC 3-S12-AN6X	M2601300		3	4.5	3-Wire DC NPN
	BC 3-S12-AP6X	M2601200		3	4.5	3-Wire DC PNP
	BC 3-S12-AP6X/S100	M2601201	High Temp. 100°C	3	4.5	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing Mat.	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	100	≤200	-25 to +70	IP 67	CPB	ABS	PA 12	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	100	≤200	-25 to +70	IP 67	CPB	ABS	PA 12	N/A	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
10-30 VDC	100	≤200	-25 to +70	IP 67	CPB	ABS	PA 12	N/A	YE	2M/PVC	3	<p><b>Diagram 3</b></p>
10-30 VDC	100	≤200	-25 to +70	IP 67	CPB	ABS	PA 12	N/A	YE	2M/PVC	4	<p><b>Diagram 4</b></p>
10-30 VDC	100	≤200	-25 to +70	IP 67	PA 12	ABS	PA 12	GN	YE	RK 4T-*	1	
10-30 VDC	100	≤200	-25 to +70	IP 67	PA 12	ABS	PA 12	GN	YE	RK 4T-*	2	
10-30 VDC	200	≤200	-25 to +70	IP 67	PA 12	ABS	PA 12	N/A	YE	2M/PVC	3	
10-30 VDC	100	≤200	-25 to +70	IP 67	PA 12	ABS	PA 12	N/A	YE	2M/PVC	4	
	100	≤200	-25 to +100	IP 67	PA 12	ABS	PA 12	N/A	YE	2M/PVC	4	

Capacitive

\* Length in meters..

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>18 mm - Embeddable, eurofast® Connector</b> 	BC 5-M18-AN4X-0.2M-RS 4T	M2504091		5	N/A	3-Wire DC NPN
	BC 5-M18-AP4X-0.2M-RS 4T	M2504090		5	N/A	3-Wire DC PNP
<b>18 mm - Embeddable, microfast® Connector</b> 	BC 5-M18-AZ3X-0.2M-SB 3T	M2305090		5	N/A	2-Wire AC
<b>18 mm - Embeddable, Potted-In Cable</b> 	BC 5-M18-AN4X	M2504002		5	N/A	3-Wire DC NPN
	BC 5-M18-AP4X	M2504001		5	N/A	3-Wire DC PNP
	BC 5-M18-AZ3X	M2305000		5	N/A	2-Wire AC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing Mat.	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PBT	PUR	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PBT	PUR	N/A	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
20-250 AC	20	≤500	-25 to +70	IP 67	CPB	PBT	PUR	N/A	YE	KB 3T-*	5	<p><b>Diagram 3</b></p>
20-250 AC	20	≤500	-25 to +70	IP 67	CPB	PBT	PUR	N/A	YE	KB 3T-*	6	<p><b>Diagram 4</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PBT	PUR	N/A	YE	2M/PVC	3	<p><b>Diagram 5</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PBT	PUR	N/A	YE	2M/PVC	4	<p><b>Diagram 6</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	CPB	PBT	PUR	N/A	YE	2M/PVC	6	<p><b>Diagram 6</b></p>

Capacitive

\* Length in meters.

For material descriptions see page M22.



# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>30 mm - Embeddable, eurofast® Connector</b> 	BC10-M30-AN4X-H1141	M2501300		10	N/A	3-Wire DC NPN
	BC10-M30-AP4X-H1141	M2501200		10	N/A	3-Wire DC PNP
	BC10-M30-VN4X-H1141	M2502120	Comp. Outputs	10	N/A	4-Wire DC NPN
	BC10-M30-VP4X-H1141	M2502010	Comp. Outputs	10	N/A	4-Wire DC PNP
<b>30 mm - Embeddable, microfast Connector</b> 	BC10-M30-AZ3X-B3131	M2310030		10	N/A	2-Wire AC

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing Mat.	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	RK 4.4T-*	3	<p><b>Diagram 3</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	RK 4.4T-*	4	<p><b>Diagram 4</b></p>
20-250 AC	20	≤500	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	KB 3T-*	5	<p><b>Diagram 5</b></p>

\* Length in meters.

Capacitive

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
	BC10-M30-VN4X	M2502100	Comp. Outputs	10	N/A	4-Wire DC NPN
	BC10-M30-VP4X	M2502000	Comp. Outputs	10	N/A	4-Wire DC PNP
	BC10-M30-AZ3X	M2310000	10		N/A	2-Wire AC

"S250" in part number designates without potentiometer.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	2M/PVC	2	<p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	CPB	PA 12	PA 66	N/A	YE	2M/PVC	3	

Capacitive

\* Length in meters.

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output	
<b>18 mm - Embeddable, eurofast® Connector</b> 	BC 5-S18-AN4X-0.2M-RS 4T	M2503192		5	7.5	3-Wire DC NPN	
	BC 5-S18-AN4X-H1141/S250	M2503602		5	7.5		
	BCF 5-S18-AN4X-0.2M-RS 4T	M2503089	Noise Immune	5	7.5		
		BC 5-S18-AP4X-0.2M-RS 4T	M2503492		5	7.5	3-Wire DC PNP
		BC 5-S18-AP4X-H1141/S250	M2503602		5	7.5	
		BCF 5-S18-AP4X-0.2M-RS 4T	M2503099	Noise Immune	5	7.5	
<b>18 mm - Embeddable, eurofast Connector</b> 	BC 5-S185-AN4X-0.3M-RS 4T	M2503590	Chemical Resistant	5	7.5	3-Wire DC NPN	
	BC 5-S185-AP4X-0.2M-RS 4T	M2503591	Chemical Resistant	5	7.5	3-Wire DC PNP	
<b>18 mm - Embeddable, microfast® Connector</b> 	BC 5-S18-AZ3X-0.2M-SB 3T	M2305590		5	7.5	2-Wire AC	

"/S250" in part number designates without potentiometer.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	End Cap	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	1	
	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	2	<b>Diagram 2</b> 
	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	2	
	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	2	
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	1	<b>Diagram 3</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	GN	YE	RK 4T-*	2	
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	PUR	N/A	YE	KB 3T-*	3	

\* Length in meters.

Capacitive

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>18 mm - Embeddable, Potted-In Cable</b> 	BC 5-S18-AN4X	M2503100		5	7.5	3-Wire DC NPN
	BCF 5-S18-AN4X	M2503012	Noise Immune	5	7.5	
	BC 5-S18-AP4X	M2503000		5	7.5	3-Wire DC PNP
	BCF 5-S18-AP4X	M2503011	Noise Immune	5	7.5	
	BCF 5-S18-AP4X/S90	M2503014	Noise Immune	5	7.5	
	BC 5-S18-AZ3X	M2305500			5	7.5
<b>18 mm - Embeddable, Potted-In Cable</b> 	BC 5-S185-AN4X	M2503550	Chemical Resistant	5	7.5	3-Wire DC NPN
	BC 5-S185-AN4X/S100	M2503551	High Temp. 100°C	5	7.5	
	BC 5-S185-AP4X	M2503500	Chemical Resistant	5	7.5	3-Wire DC PNP
	BC 5-S185-AP4X/S100	M2503502	High Temp. 100°C	5	7.5	
<b>18 mm - Embeddable, Potted-In Cable</b> 	BC 5-S18-Y0X	M2006000		5	7.5	2-Wire DC NAMUR

"S100" in part number designates high temperature sensor.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	End Cap	Power LED	Output LED	Cable Length/ Material	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	2	
	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PUR	2	
20-250 VAC	20	≤500	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PUR	N/A	YE	2M/PVC	1	<b>Diagram 4</b> 
	100	≤200	-25 to +100	IP 67	PVDF	PUR	N/A	YE	2M/PVC	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PUR	N/A	YE	2M/PVC	2	<b>Diagram 4</b> 
	100	≤200	-25 to +100	IP 67	PVDF	PUR	N/A	YE	2M/PVC	2	
5-30 VDC	100	Remote	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	4	

Capacitive

For material descriptions see page M22.



# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>30 mm - Embeddable, eurofast® Connector</b> 	BC10-S30-VN4X-H1141	M2506010	Comp. Outputs	10	15	4-Wire DC NPN
	BCF10-S30-VN4X-H1141	M2506016	Noise Immune	10	15	
	BC10-S30-VP4X-H1141	M2506100	Comp. Outputs	10	15	4-Wire DC PNP
	BCF10-S30-VP4X-H1141	M2506117	Noise Immune	10	15	
<b>30 mm - Embeddable, microfast® Connector</b> 	BC10-S30-AZ3X-B3131	M2310710	Noise Immune	10	15	2-Wire AC
	BCF10-S30-AZ3X-B3131	M2506012				

"/S250" in part number designates without potentiometer.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	End Cap	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	RK 4.4T-*	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	RK 4.4T-*	2	
	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	RK 4.4T-*	2	
20-250 VAC	20	≤500	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	KB 3T-*	3	
	20	≤500	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	KB 3T-*	3	

\* Length in meters.

Capacitive

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>30 mm - Embeddable, Potted-In Cable</b> 	BC10-S30-VN4X	M2506000	Comp. Outputs	10	15	4-Wire DC NPN
	BCF10-S30-VN4X	M2506011	Noise Immune	10	15	4-Wire DC NPN
	BC10-S30-VP4X	M2506110	Comp. Outputs	10	15	4-Wire DC PNP
	BCF10-S30-VP4X	M2506111	Noise Immune	10	15	4-Wire DC PNP
	BC10-S30-AZ3X	M2310700		10	15	2-Wire AC
	BCF10-S30-AZ3X	M2506015	Noise Immune	10	15	2-Wire AC
	BC10-S30-Y0X	M2010000		10	15	2-Wire DC NAMUR
<b>30 mm - Embeddable, Potted-In Cable</b> 	BC10-PT30-VN4X2	M2507020	Chemical Resistant	10	15	4-Wire DC NPN
	BC10-PT30-VP4X2	M2507010	Chemical Resistant	10	15	4-Wire DC PNP
	BC10-PT30-AZ3X	M2350001	Chemical Resistant	10	15	2-Wire AC
	BC10-PT30-Y0X	M2020000	Chemical Resistant	10	15	2-Wire DC NAMUR
<b>30 mm - Embeddable, Terminal Chamber</b> 	BC10-P30SR-VN4X2	M2505100	Comp. Outputs	10	15	4-Wire DC NPN
	BC10-P30SR-VP4X2	M2505000	Comp. Outputs	10	15	4-Wire DC PNP
	BC10-P30SR-VP4X2/S359-2M	M2505001	Comp. Outputs	10	15	4-Wire DC PNP
	BC10-P30SR-FZ3X2	M2310400	Prog. Outputs	10	15	2-Wire AC

"/S359" designates Capacitive sensor with external potentiometer located on 2 meter cable.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



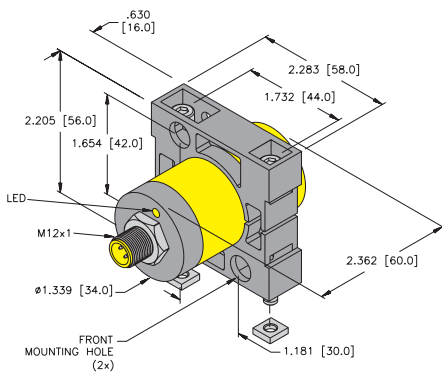
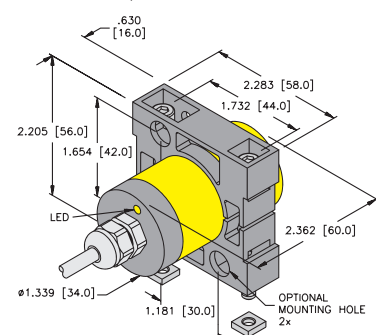
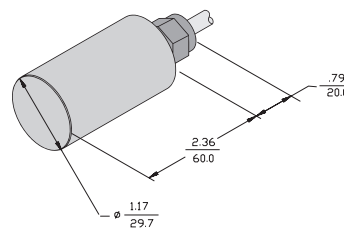
Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	End Cap	Power LED	Output LED	Cable Length/ Material	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	2M/PVC	1	<b>Diagram 1</b> 
	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	2M/PVC	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	2M/PVC	2	<b>Diagram 2</b> 
	100	≤200	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	2M/PVC	2	
20-250 VAC	20	≤500	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	2M/PVC	3	<b>Diagram 3</b> 
	20	≤500	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	2M/PVC	3	
5-30 VDC	100	N/A	-25 to +70	IP 67	PA 12	PA 66	N/A	YE	2M/PVC	4	<b>Diagram 4</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PVDF	GN	YE	2M/PVDF	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PVDF	GN	YE	2M/PVDF	2	<b>Diagram 5</b> 
20-250 VAC	20	≤500	-25 to +70	IP 67	PVDF	PVDF	N/A	YE	2M/PVDF	3	
5-30 VDC	100	Remote	-25 to +70	IP 67	PVDF	PVDF	N/A	YE	2M/PVDF	4	<b>Diagram 6</b> 
10-65 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	GN	YE	- - - -	5	
10-65 VDC	100	≤200	-25 to +70	IP 67	ABS	ABS	GN	YE	- - - -	6	<b>Diagram 5</b> 
	100	≤200	-25 to +70	IP 67	ABS	ABS	GN	YE	- - - -	6	
20-250 VAC	20	≤500	-25 to +70	IP 67	ABS	ABS	GN	YE	- - - -	3	<b>Diagram 6</b> 

Capacitive

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>34 mm - Embeddable, eurofast® Connector</b> 	BC15-K34-AN4X-H1141	M2502125		15	23	3-Wire DC NPN
	BC15-K34-AP4X-H1141	M2502126		15	23	3-Wire DC PNP
<b>34 mm - Embeddable, Potted-In Cable</b> 	BC15-K34-VN4X*	M2502127	Comp. Outputs	15	23	4-Wire DC NPN
	BC15-K34-VP4X*	M2502124	Comp. Outputs	15	23	4-Wire DC PNP
	BC15-K34-AZ3X	M2310008		15	23	2-Wire AC
	BCF15-K34-AZ3X	M2502136	Noise Immune	15	23	
<b>34 mm - Nonembeddable, Potted-In Cable</b> 	NC20-KT34-VN4X2	M2550100	Chemical Resistant	N/A	20	4-Wire DC NPN
	NC20-KT34-VP4X2	M2550300	Chemical Resistant	N/A	20	4-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	N/A	YE	RK 4T-*	2	<p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	N/A	YE	2M/PVC	3	<p><b>Diagram 5</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	N/A	YE	2M/PVC	4	<p><b>Diagram 5</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	ABS	N/A	YE	2M/PVC	5	<p><b>Diagram 5</b></p>
	20	≤500	-25 to +70	IP 67	PBT	ABS	N/A	YE	2M/PVC	5	
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PVDF	GN	YE	2M/PVDF	3	<p><b>Diagram 5</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PVDF	GN	YE	2M/PVDF	4	<p><b>Diagram 5</b></p>

\* Length in meters.

Capacitive

For material descriptions see page M22.

# Capacitive Sensors - Barrels



Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
<b>34 mm - Embeddable, Terminal Chamber</b> 	BC15-K34SR-VN4X2	M2502128	<i>Comp. Outputs</i>	15	23	4-Wire DC NPN
	BC15-K34SR-VP4X2	M2502129	<i>Comp. Outputs</i>	15	23	4-Wire DC PNP
	BC15-K34SR-FZ3X2	M2310009	<i>Prog. Outputs</i>	15	23	2-Wire AC
<b>40 mm - Embeddable, Terminal Chamber</b> 	BC20-K40SR-VN4X2	M2510100	<i>Comp. Outputs</i>	20	30	4-Wire DC NPN
	BC20-K40SR-VP4X2	M2510000	<i>Comp. Outputs</i>	20	30	4-Wire DC PNP
	BC20-K40SR-FZ3X2	M2310300	<i>Prog. Outputs</i>	20	30	2-Wire AC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	End Cap	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	GN	YE	- - - -	1	<p><b>Diagram 1</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	GN	YE	- - - -	2	<p><b>Diagram 2</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	ABS	GN	YE	- - - -	3	<p><b>Diagram 3</b></p>
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	GN	YE	- - - -	1	
10-65 VDC	100	≤200	-25 to +70	IP 67	PBT	ABS	GN	YE	- - - -	2	<p>-OR-</p>
20-250 VAC	20	≤500	-25 to +70	IP 67	PBT	ABS	GN	YE	- - - -	3	

Capacitive

For material descriptions see page M22.



**Analog Sensor Selection Guide**



Embeddable/Nonembeddable Rectangular				
<b>Housing</b>	<b>8 mm</b>	<b>14 mm</b>	<b>20 mm</b>	<b>20 mm</b>
<b>Sensing Range</b>	7 mm	10 mm	15 mm	40 - 70 mm
<b>Pages</b>	F7	F7	F9	F11



Embeddable/Nonembeddable Barrels				
<b>Housing</b>	<b>4 mm</b>	<b>5 mm</b>	<b>6.5 mm</b>	<b>8 mm</b>
<b>Sensing Range</b>	1.5 mm	1.5 mm	1.5 mm	1.5 mm
<b>Pages</b>	F15	F15	F15	F15



Embeddable/Nonembeddable Barrels				
<b>Housing</b>	<b>18 mm</b>	<b>30 mm</b>	<b>14 mm</b>	<b>18 mm</b>
<b>Sensing Range</b>	5 - 8 mm	10 - 15 mm	20 mm	40 - 70 mm
<b>Pages</b>	F21	F23	F25	F25

Analog Sensor Selection Guide



Embeddable/Nonembeddable Rectangular			
Housing	40 mm	40 mm	80 mm
Sensing Range	15 - 25 mm	15 - 25 mm	50 mm
Pages	F13	F13	F13

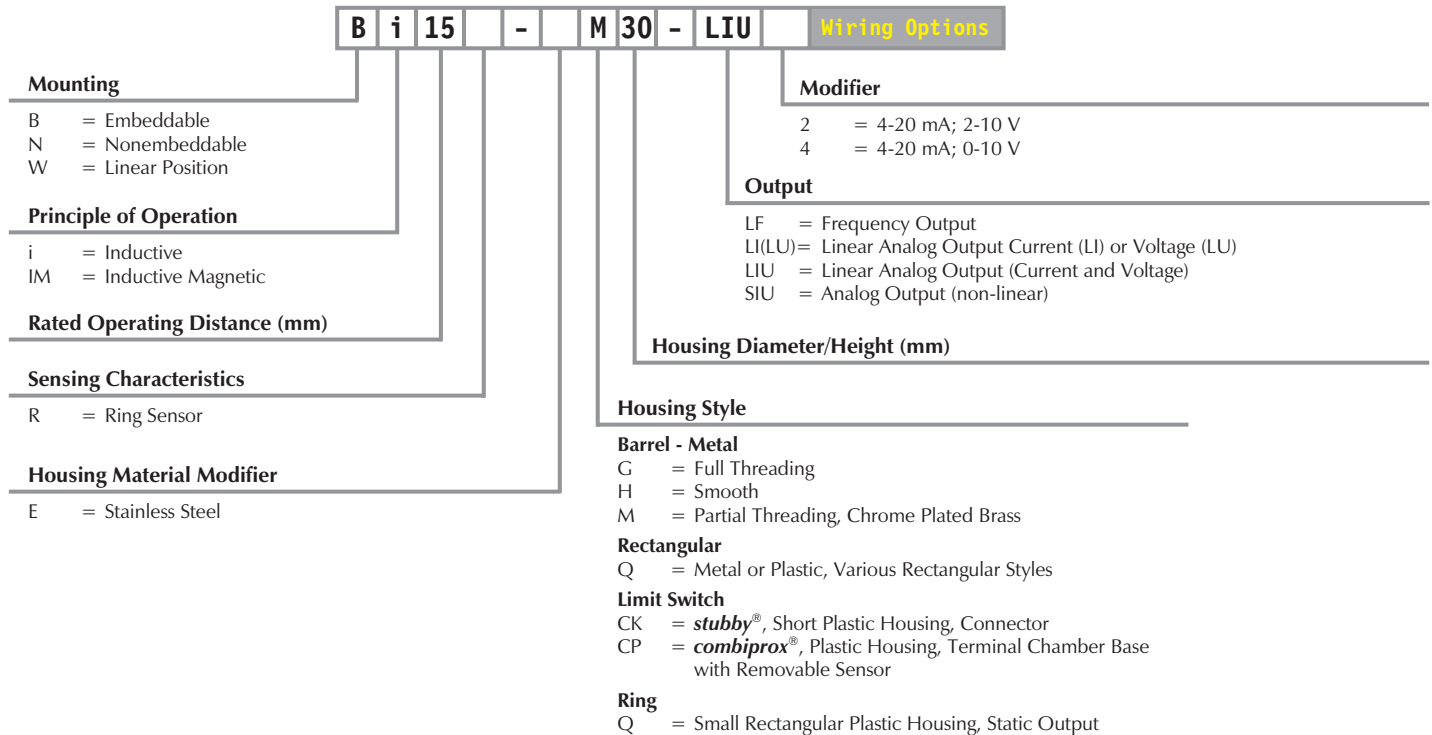


Embeddable/Nonembeddable Barrels				
Housing	12 mm	18 mm	30 mm	12 mm
Sensing Range	2 - 5 mm	5 - 10 mm	10 - 15 mm	2 - 5 mm
Pages	F17	F17	F19	F21

Analog

# Inductive - analog+ Sensors

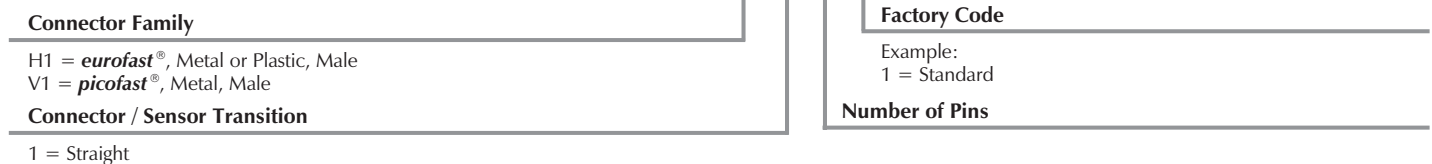
## Analog Sensor Part Number Key



## Wiring Options

### A) Connectorized Sensor

Bi15-M30-LIU- **H1 1 4 1**



### B) Potted Cable

Bi 5-M18-LIU- **7M**



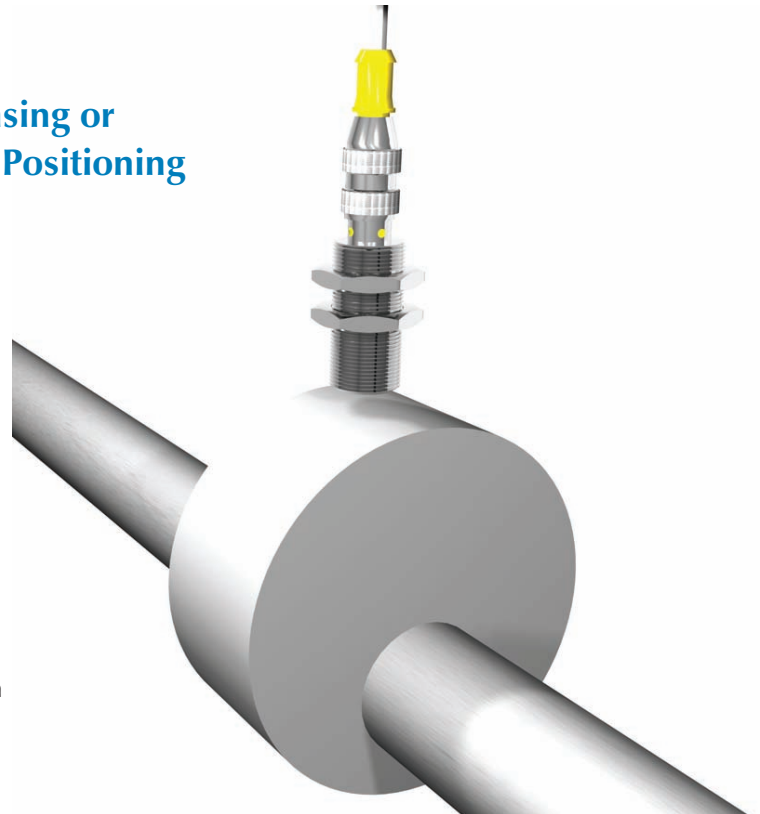
## Common Applications for Linear Analog Sensors

### Position Feeding Over an Angled Target



- **Actuation Over an Angled Surface**  
Provide a 4-20 mA and/or 0-10 V output based upon target position.

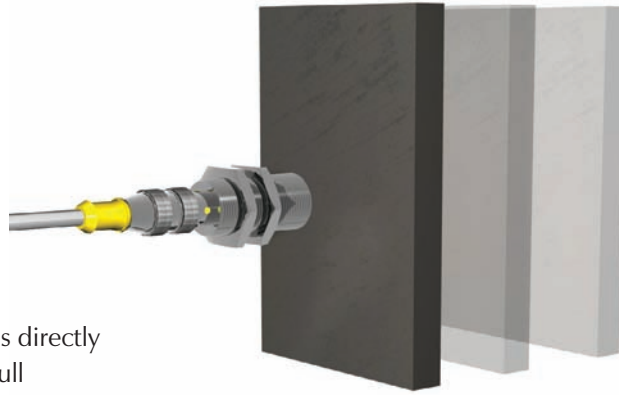
### Eccentricity Sensing or Absolute Angle Positioning



- **Sense Pieces of Different Shape and Size (of ferritic or nonferritic materials)**  
Provide analog feedback on rotary cam position applications.

Analog

## Common Applications for Linear Analog Sensors

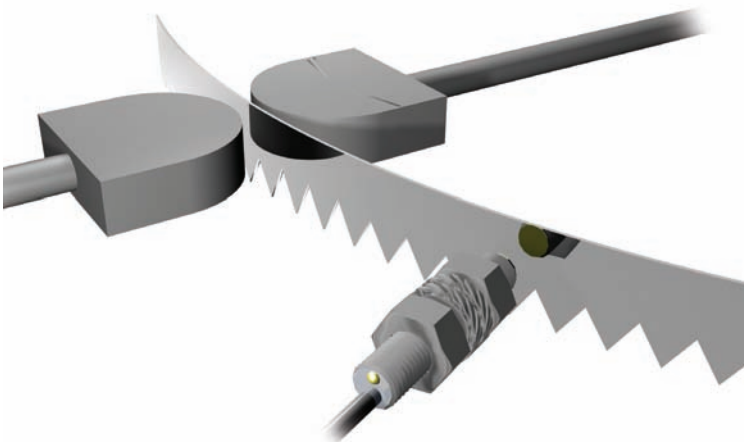


**Direct  
Actuation**

- ***Direct Actuation***

The highest accuracy is achieved if the sensor is directly actuated by the target. In order to utilize the full measuring range, it is important to work with an appropriately sized target. This may also be a moving part of the machine.

### Part Deflection



- ***Tensile Stress Control Applications***

Measure the deflection of a metal target by using a guide mechanism and an analog sensor.

## Identification and Sorting of Small Parts



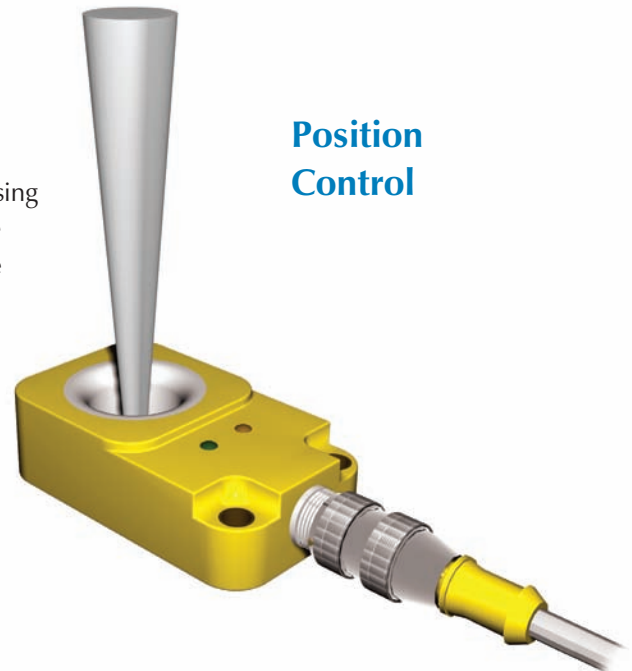
- **Identification of Small Parts**

When parts fall through a ring style sensor; screws, rivets, or other small parts of different size generate a characteristic output signal so that the target can be easily identified.

- **Position Control**

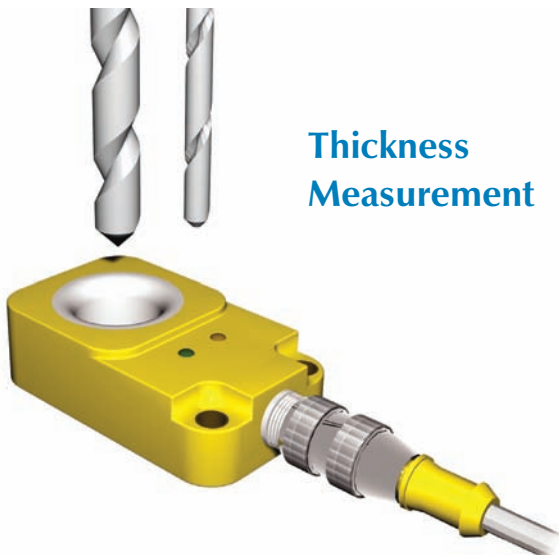
Position control can be easily accomplished by means of a cone shaped target. Measuring ranges can be adapted to specific sensing needs by using targets with an appropriate conical shape. These sensors enable precise and simple position detection, even if the targets feature a slight offset.

## Position Control



Analog

## Thickness Measurement



- **Thickness Measurement**

Detection and measurement of tools (drill bits, taps, etc.) can be accomplished to ensure proper size.

# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>8 mm - Embeddable, Potted-In Cable</b> 	Bi 7-Q08-LIU	S1534605		1-4	200	4-Wire DC Current and Voltage
<b>14 mm - Embeddable, picofast® Quick Disconnect</b> 	Bi10-Q14-LIU-V1141	M1534603		3-8	140	4-Wire DC Current and Voltage
<b>14 mm - Embeddable, Potted-In Cable</b> 	Bi10-Q14-LIU	M1534602		3-8	140	4-Wire DC Current and Voltage

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	Zinc	PA 12	2M/PVC	1	<p><b>Diagram 1</b></p>
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2.8, 5.6	PBT	PBT	PKG 4M-*	2	<p><b>Diagram 2</b></p>
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2.8, 5.6	PBT	PBT	2M/PVC	1	

\* Length in meters.

Analog

For material descriptions see page M22.



# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>20 mm - Embeddable, eurofast® Quick Disconnect</b> 	Bi15-Q20-LIU-H1141	M1534601		4-11	110	4-Wire DC Current and Voltage
<b>20 mm - Embeddable, Potted-In Cable</b> 	Bi15-Q20-LIU	M1534600		4-11	110	4-Wire DC Current and Voltage

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2.2, 4.4	PBT	PBT	RK 4.4T-*	2	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2.2, 4.4	PBT	PBT	2M/PVC	1	

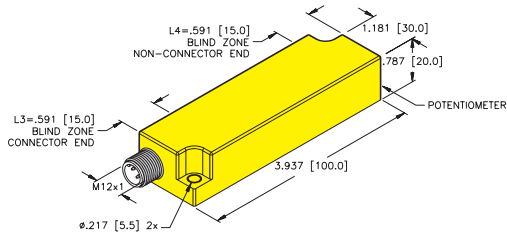
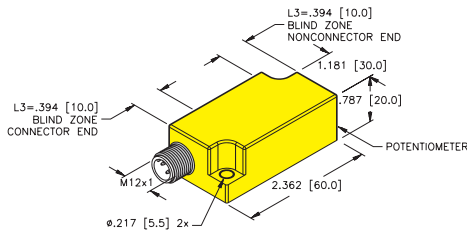
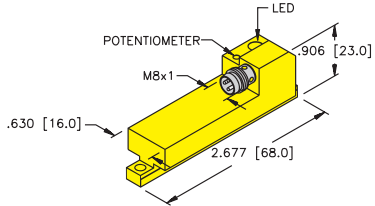
\* Length in meters.

For material descriptions see page M22.

# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
23 mm - Embeddable, <i>picofast</i> ® Quick Disconnect	WIM40-STL68-LIU5X-V1141	M1536601	14-54	1000	4-Wire DC Current and Voltage
	WIM40-NTL68-LIU5X-V1141	M1536602	14-54	1000	
20 mm - Embeddable, <i>eurofast</i> ® Quick Disconnect	WIM40-Q20L60-LIU5-H1141	M1539280	10-50	1000	4-Wire DC Current and Voltage
	WIM40-Q20L60-LIU5-H1141/S400	M1536605	10-50	1000	
20 mm - Embeddable, <i>eurofast</i> Quick Disconnect	WIM70-Q20L100-LIU5-H1141	M1539276	15-85	1000	4-Wire DC Current and Voltage



## Actuation Magnet

Part Number	ID Number
DM-Q12	M6900367

Material: Plastic

Inches (mm)

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/4-20 mA	-25 to +70	IP 67	20, 32	PBT	PBT	PKG 4M-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	0-10 V/4-20 mA	-25 to +70	IP 67	20, 32	PBT	PBT	PKG 4M-*	1	
15-30 VDC	0-10 V/4-20 mA	-25 to +70	IP 67	20, 32	PBT	PBT	RK 4.4T-*	2	<p><b>Diagram 2</b></p>
	0-10 V/4-20 mA	-25 to +70	IP 67	20, 32	PBT	PBT	RK 4.4T-*	2	
15-30 VDC	0-10 V/4-20 mA	-25 to +70	IP 67	20, 32	PBT	PBT	RK 4.4T-*	2	

\* Length in meters.

For material descriptions see page M22.

# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>40 mm - Embeddable and Non-embeddable, eurofast® Quick Disconnect</b>  	Bi15-CK40-LIU-H1141	M1537890	4-11	110	4-Wire DC Current and Voltage
	Ni25-CK40-LIU-H1141	M1537891	5-25	30	
	Ni25-CK40-LIU2-H1141	M1537892	5-25	30	4-Wire DC Current and Voltage
<b>40 mm - Embeddable and Nonembeddable, Terminal Chamber</b>  	Bi15-CP40-LIU	M1535700	4-11	110	4-Wire DC Current and Voltage
	Ni25-CP40-LIU	M1535547	5-25	30	
<b>80 mm - Nonembeddable, eurofast Connector</b>  	Ni50-Q80-LIU-H1141	M1535545	10-50	30	4-Wire DC Current and Voltage

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2.2, 4.4	PBT	PBT	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	0-10 V/0-20 mA	-10 to +70	IP 67	0.6, 1.2	PBT	PBT	RK 4.4T-*	1	
15-30 VDC	2-10 V/4-20 mA	-10 to +70	IP 67	0.6, 0.96	PBT	PA 66	RK 4.4T-*	1	
	0-10 V/0-20 mA	-10 to +70	IP 67	2.2, 4.4	PBT	PBT	- - - -	2	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	0.6, 1.2	PBT	PBT	- - - -	2	
	0-10 V/0-20 mA	-10 to +70	IP 67	0.6, 1.2	PBT	PBT	RK 4.4T-*	1	

\* Length in meters.

For material descriptions see page M22.

# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>4 mm - Embeddable eurofast connection</b> *SIU indicates non-linear measuring range. 	Bi 1.5-EH04-0.3M-M12-SIU-H1141*	M1533001		0.1-1.5	200	4-Wire DC Current and Voltage
<b>5 mm - Embeddable eurofast connection</b> *SIU indicates non-linear measuring range. 	Bi 1.5-EG05-0.3M-M12-SIU-H1141*	M1533005		0.1-1.5	200	4-Wire DC Current and Voltage
<b>6.5 mm - Embeddable, Potted-In Cable</b> 	Bi 1.5-EH6.5-LU	S1533002		0.25-1.25	200	3-Wire DC Voltage
<b>8 mm - Embeddable, Potted-In Cable</b> 	Bi 1.5-EG08-LU	S1533003		0.25-1.25	200	3-Wire DC Voltage
<b>8 mm - Embeddable, eurofast Quick Disconnect</b> 	Bi 1.5-EG08-LU-H1341	S1533004		0.25-1.25	200	3-Wire DC Voltage

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	SS	PA 12	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	SS	PA 12	RK 4.4T-*	1	<p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
15-30 VDC	0-10 V	-10 to +70	IP 67	4, N/A	SS	PA 12	2M/PVC	2	<p><b>Diagram 3</b></p>
15-30 VDC	0-10 V	-10 to +70	IP 67	4, N/A	SS	PA 12	2M/PVC	2	<p><b>Diagram 3</b></p>
15-30 VDC	0-10 V	-10 to +70	IP 67	4, N/A	SS	PA 12	RK 4T-*	3	<p><b>Diagram 3</b></p>

Analog

For material descriptions see page M22.



# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>12 mm - Embeddable eurofast® Connection</b> 	Bi 2-M12-LIU-H1141	M1535533		1-2.5	200	4-Wire DC Current and Voltage
	Bi 4-M12-LIU-H1141	M1535531	<i>Ext. Range</i>	0.5-3	200	
<b>12 mm - Nonembeddable eurofast Connection</b> 	Ni 5-M12-LIU-H1141	M1535535		0.5-4	100	4-Wire DC Current and Voltage
<b>18 mm - Embeddable eurofast® Connection</b> 	Bi 5-M18E-LIU-H1141	M1536205		2-4	200	4-Wire DC Current and Voltage
	Bi 8-M18E-LIU-H1141	M1535561		1-5	200	
	Bi 5-M18E-LI2-H1141	M1536204			2-4	200
<b>18 mm - Nonembeddable eurofast Connection</b> 	Ni 8-M18E-LIU-H1141	M1536302		1-5	100	4-Wire DC Current and Voltage
	Ni 10-M18E-LIU-H1141	M1535562	<i>Ext. Range</i>	1-7	100	

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	CPB	PA 12	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	CPB	PA 12	RK 4.4T-*	1	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2, 4	CPB	PA 12	RK 4.4T-*	1	<p><b>Diagram 2</b></p>
	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	CPB	PA 12	RK 4.4T-*	1	
15-30 VDC	4-20 mA	-10 to +70	IP 67	N/A, 6.4	CPB	PA 12	RK 4T-*	2	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2, 4	CPB	PA 12	RK 4.4T-*	1	<p><b>Diagram 2</b></p>
	0-10 V/0-20 mA	-10 to +70	IP 67	2, 4	CPB	PA 12	RK 4.4T-*	1	

Analog

For material descriptions see page M22.

# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>30 mm - Embeddable, eurofast® Connection</b> 	Bi10-M30E-LIU-H1141	M1537003		3-8	140	4-Wire DC Current and Voltage
	Bi15-M30E-LIU-H1141	M1535563	Ext. Range	2-10	140	
	Bi10-M30E-LI2-H1141	M1537002			3-8	140
<b>30 mm - Nonembeddable, eurofast Connection</b> 	Ni15-M30E-LIU-H1141	M1535564		2-12	60	4-Wire DC Current and Voltage

For detailed sensor specifications see Section M.



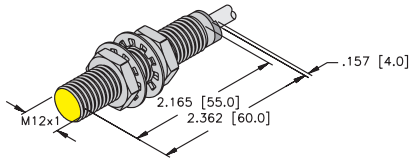
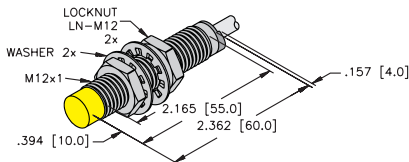
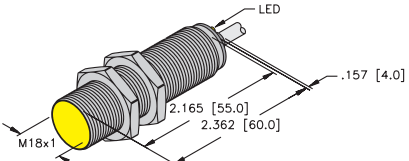
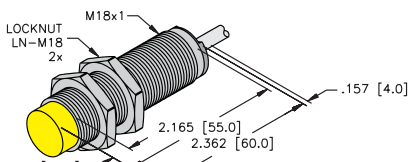
Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2.8, 5.6	CPB	PA 12	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	0-10 V/0-20 mA	-10 to +70	IP 67	2.8, 5.6	CPB	PA 12	RK 4.4T-*	1	
15-30 VDC	4-20 mA	-10 to +70	IP 67	N/A, 4.48	CPB	PA 12	RK 4T-*	2	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	1.2, 2.4	CPB	PA 12	RK 4.4T-*	1	

\* Length in meters.

For material descriptions see page M22.

# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>12 mm - Embeddable, Potted-In Cable</b> 	Bi 2-M12-LIU	M1535534		1-2.5	200	4-Wire DC Current and Voltage
	Bi 4-M12-LIU	M1535532	<i>Ext. Range</i>	0.5-3	200	
<b>12 mm - Nonembeddable, Potted-In Cable</b> 	Ni 5-M12-LIU	M1535536		0.5-4	100	4-Wire DC Current and Voltage
<b>18 mm - Embeddable, Potted-In Cable</b> 	Bi 5-M18-LIU	M1536000		2-4	200	4-Wire DC Current and Voltage
	Bi 8-M18-LIU	M1535538	<i>Ext. Range</i>	1-5	200	4-Wire DC Current and Voltage
	Bi 8-M18-LF10	M1535529	<i>Ext. Range</i>	1-5	200	3-Wire DC Frequency Output
	Bi 8-M18-LUAP6X	M4615010	<i>Switch Point Adj.</i>	1-5	200	4-Wire DC Voltage
	Bi 8-M18-LI-EXI	M1535528	<i>Ext. Range</i>	1-5	200	2-Wire DC NAMUR Current
<b>18 mm - Nonembeddable, Potted-In Cable</b> 	Ni 8-M18-LIU	M1536100	<i>Ext. Range</i>	1-5	100	4-Wire DC Current and Voltage
	Ni 10-M18-LIU	M1535540	<i>Ext. Range</i>	1-7	100	

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	CPB	PA 12	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p> <p><b>Diagram 4</b></p>
	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	CPB	PA 12	2M/PVC	1	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2, 4	CPB	PA 12	2M/PVC	1	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	4, 8	CPB	PA 12	2M/PVC	1	
15-30 VDC	1-10 kHz	-10 to +70	IP 67	N/A	CPB	PA 12	2M/PVC	2	
15-30 VDC	0-10 V	-10 to +70	IP 67	N/A, 8	CPB	PA 12	2M/PVC	3	
14-30 VDC	4-20 mA	-10 to +70	IP 67	N/A, 8	CPB	PA 12	2M/PVC	4	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2, 4	CPB	PA 12	2M/PVC	1	
	0-10 V/0-20 mA	-10 to +70	IP 67	2, 4	CPB	PA 12	2M/PVC	1	

Analog

For material descriptions see page M22.

# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>30 mm - Embeddable, Potted-In Cable</b> 	Bi10-M30-LIU	M1535500		3-8	140	4-Wire DC Current and Voltage
	Bi15-M30-LIU	M1535543	<i>Ext. Range</i>	2-10	140	
	Bi15-M30-LUAP6X	M4618510	<i>Switch Point Adj.</i>	2-10	140	4-Wire DC Voltage
	Bi15-M30-LI-EXI	M1535554	<i>Ext. Range</i>	2-10	140	2-Wire DC NAMUR Current
<b>30 mm - Nonembeddable, Potted-In Cable</b> 	Ni15-M30-LIU	M1535300	<i>Ext. Range</i>	2-12	60	4-Wire DC Current and Voltage

For detailed sensor specifications see Section M.



Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cord, Cable Length/Mat.	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	2.8, 5.6	CPB	PA 12	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	0-10 V/0-20 mA	-10 to +70	IP 67	2.8, 5.6	CPB	PA 12	2M/PVC	1	
15-30 VDC	0-10 V	-10 to +70	IP 67	2.8, N/A	CPB	PA 12	2M/PVC	2	
14-30 VDC	4-20 mA	-10 to +70	IP 67	N/A, 4.48	CPB	PA 12	2M/PVC	3	
15-30 VDC	0-10 V/0-20 mA	-10 to +70	IP 67	1.2, 2.4	CPB	PA 12	2M/PVC	1	

For material descriptions see page M22.



# Inductive - analog+ Sensors



Housing Style	Part Number	ID Number	Features	Linear Operating Distance (mm)	Response Freq. (Hz)	Output
<b>14 mm - Embeddable, Ring Sensor, Potted-In Cable</b> 	Bi20R-Q14-LU	M1535546		1-19	140	3-Wire DC Voltage
<b>18 mm - Embeddable, Probe Style, Potted-In Cable</b> 	Wi70-M18-LIU5	M1536600		0-70	200	4-Wire DC Current and Voltage
<b>18 mm - Embeddable, Probe Style, Potted-In Cable</b> 	Wi40-M18-LIU5	M1536603		0-40	40	4-Wire DC Current and Voltage

For detailed sensor specifications see Section M.

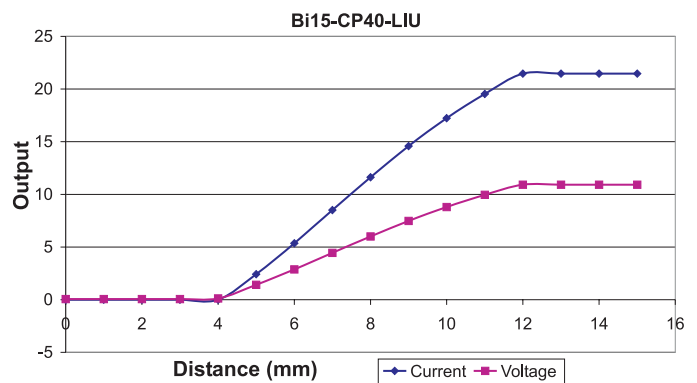
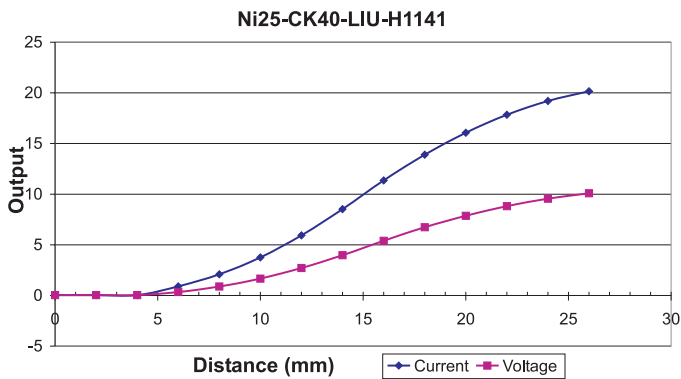
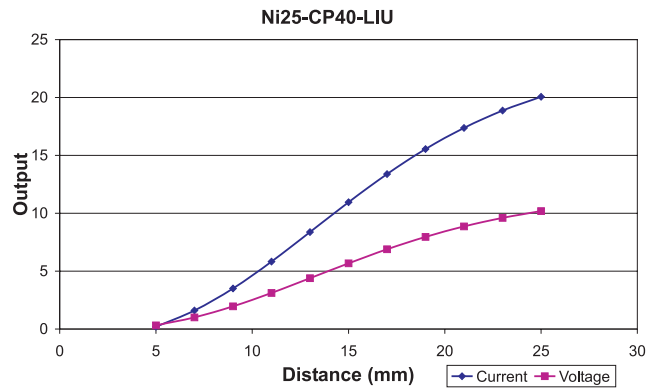
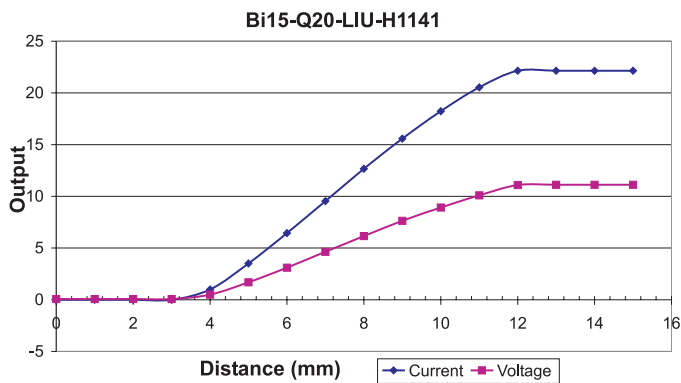
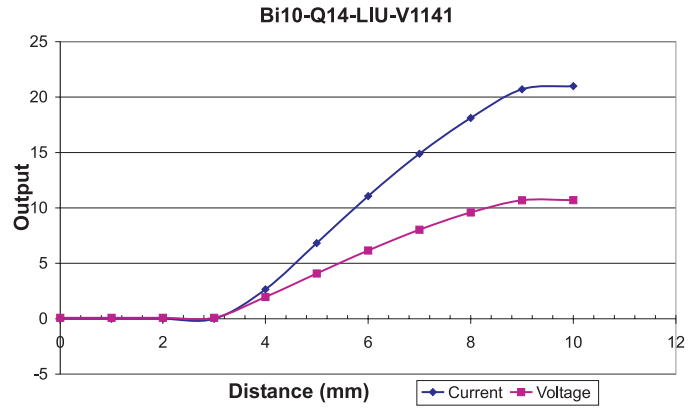
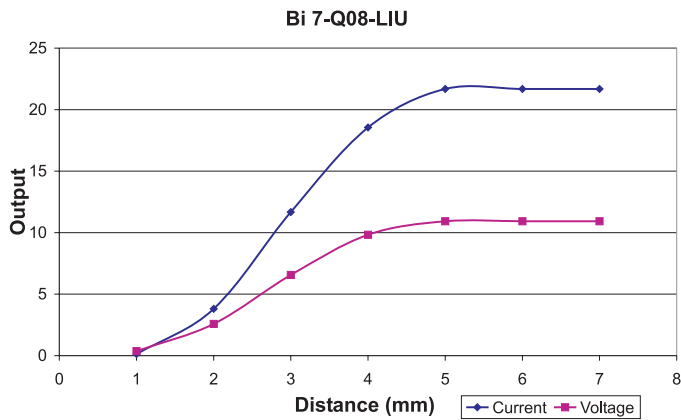


Voltage	Output Voltage/Current	Operating Temp. (°C)	Protection	Slew Rate V/ms, mA/ms	Housing	Face	Mating Cordset	Wiring Diagram #	Wiring Diagrams
15-30 VDC	0-10 V	-10 to +70	IP 67	2.8, N/A	PBT	PBT	2M/PVC	1	<p><b>Diagram 1</b></p>
15-30 VDC	0-10 V/4-20 mA	-10 to +70	IP 67	4, 6.4	CPB	PA 12	2M/PVC	2	<p><b>Diagram 2</b></p>
15-30 VDC	0-10 V/4-20 mA	-10 to +70	IP 67	0.8, 1.2	CPB	PA 12	2M/PVC	2	

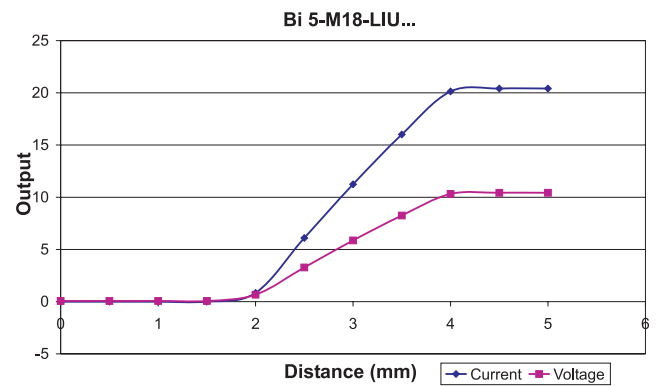
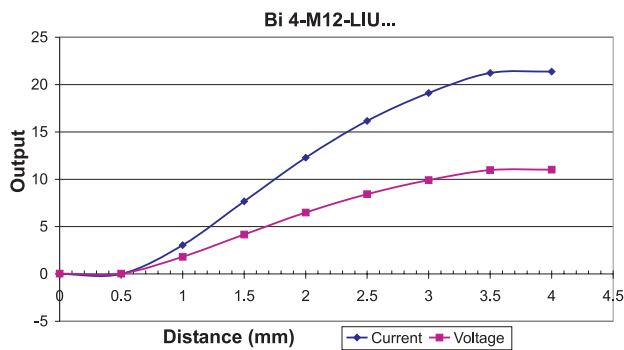
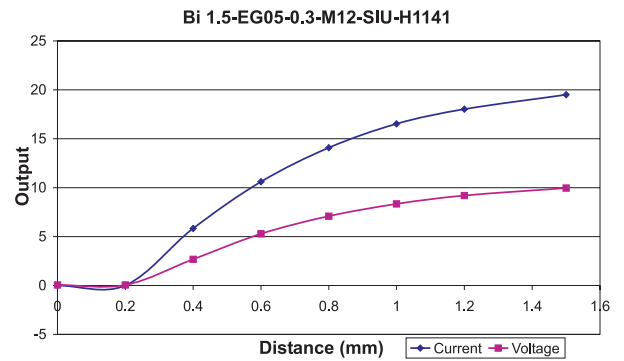
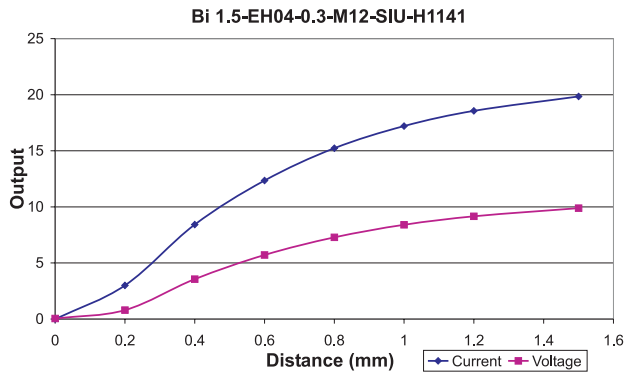
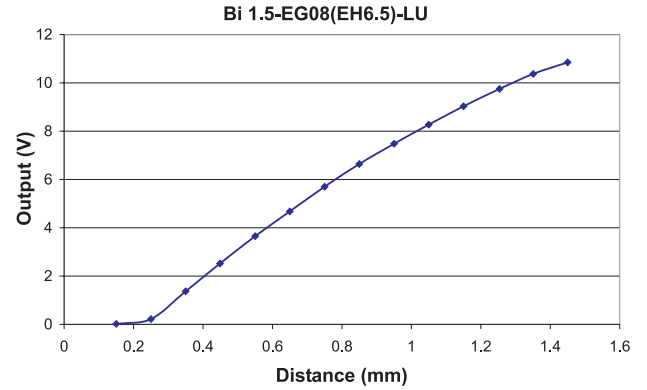
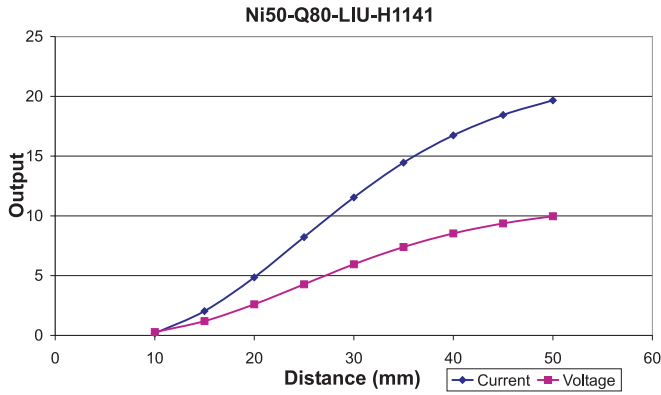
For material descriptions see page M22.

# Inductive - analog+

## Sensors



For detailed sensor specifications see Section M.

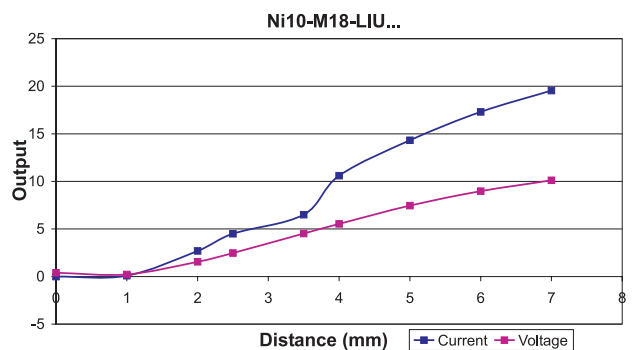
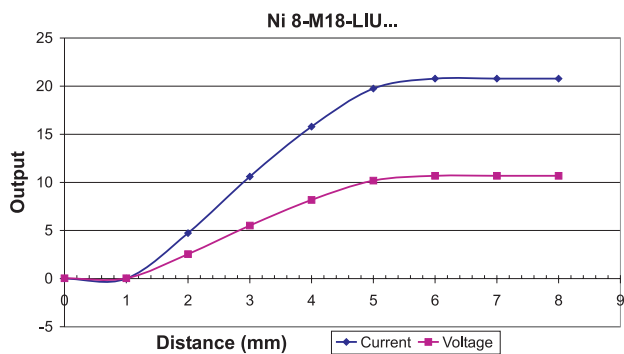
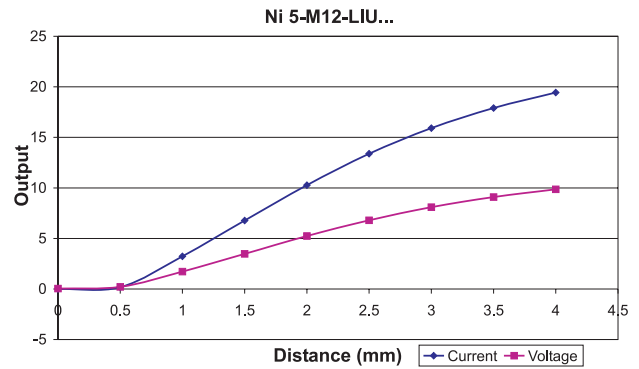
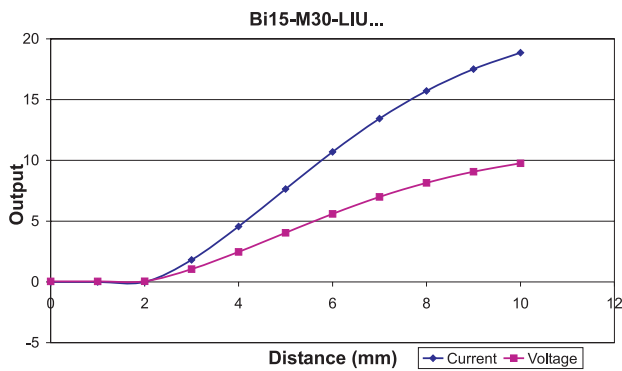
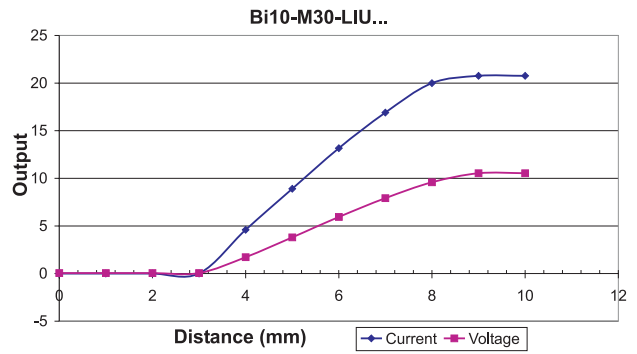
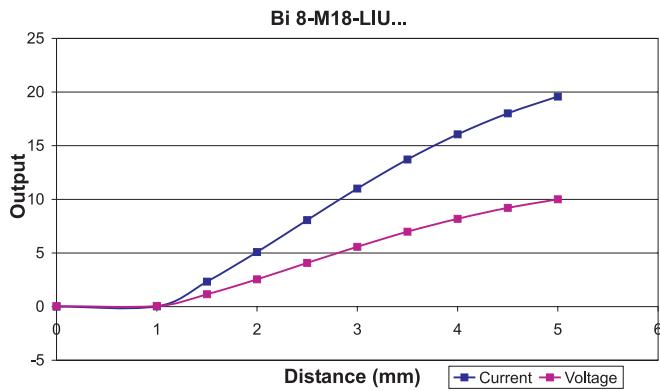


Analogue

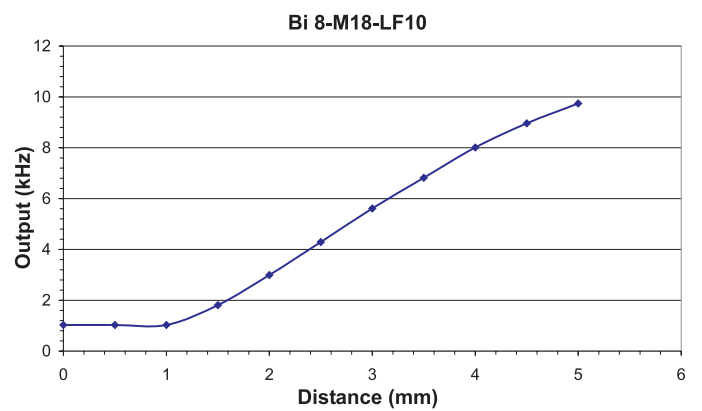
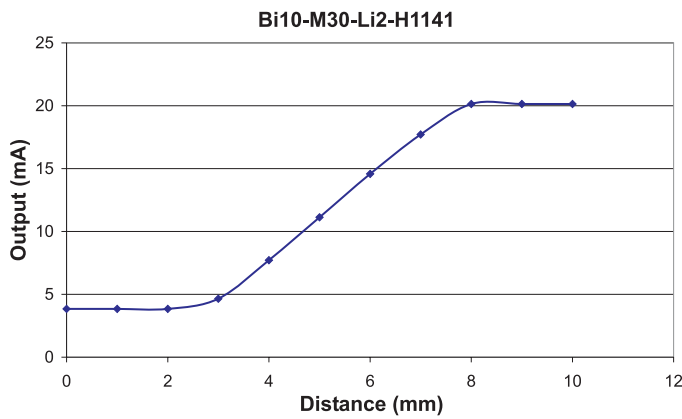
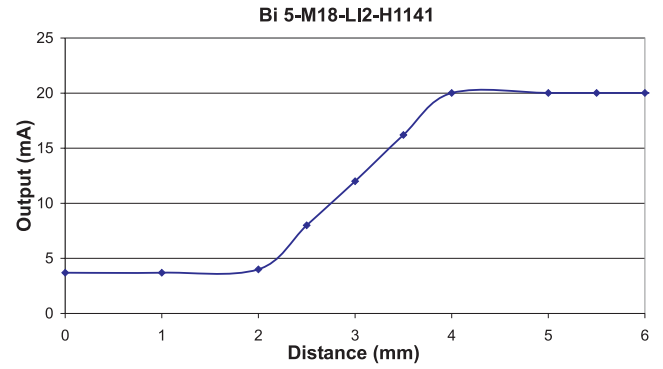
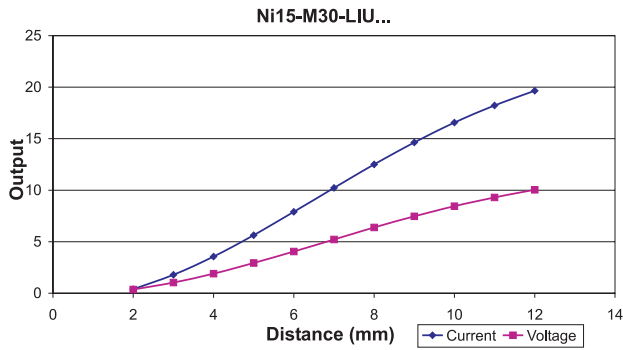
For material descriptions see page M22.

# Inductive - analog+

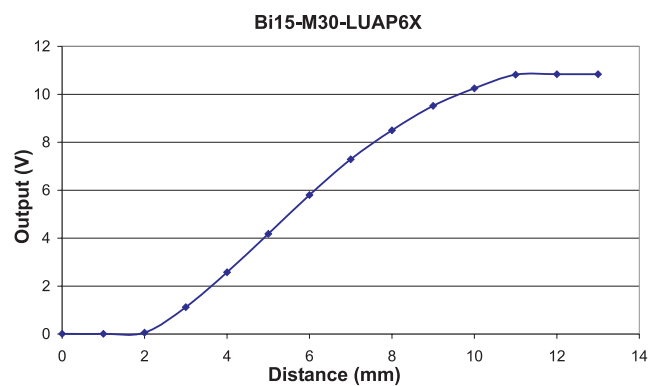
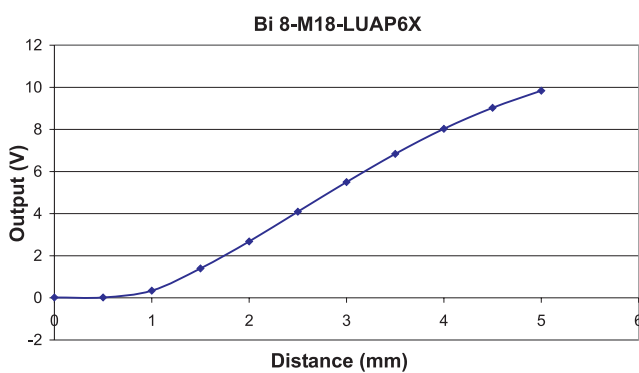
## Sensors



For detailed sensor specifications see Section M.



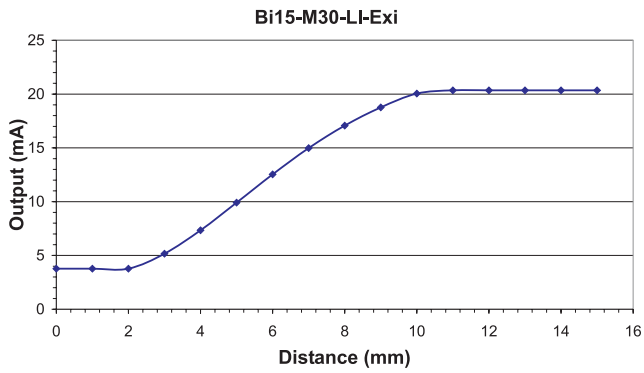
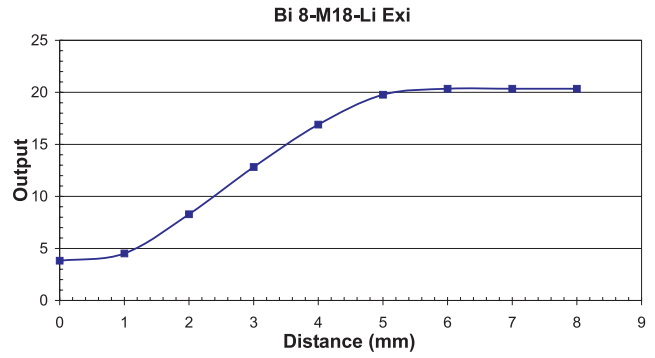
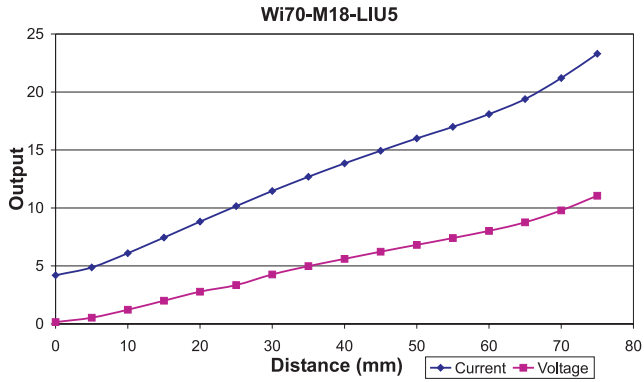
Analogue



For material descriptions see page M22.

# Inductive - analog+

## Sensors



For detailed sensor specifications see Section M.

TURCK mold-on connectors available  
on all cable sensors. See page A5.



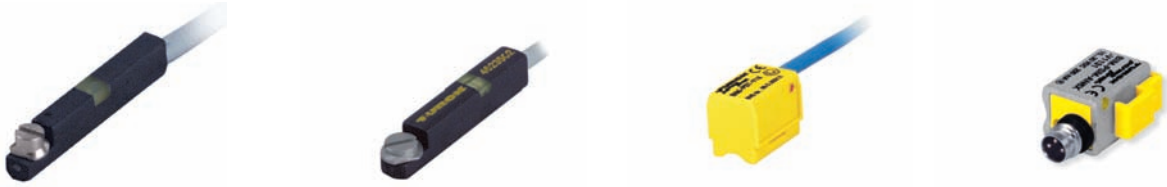
## Notes:

For material descriptions see page M22.



# Inductive Cylinder Position Sensors

## Cylinder Sensor Selection Guide



Cylinder Position Sensors				
Housing	INR	INT	PST	PSM
Pages	G23	G25 - G29	G31	G31



Cylinder Position Sensors				
Housing	IKM	A23	NST	EG08
Pages	G39	G39 - G41	G43	G45

**Cylinder Sensor Selection Guide**



Cylinder Position Sensors				
<b>Housing</b>	<b>KST</b>	<b>QST</b>	<b>AKT</b>	<b>IKE/IKT</b>
<b>Pages</b>	<b>G33</b>	<b>G33</b>	<b>G35</b>	<b>G35 - G37</b>



**Cylinder**

Cylinder Position Sensors				
<b>Housing</b>	<b>M12</b>	<b>CRS</b>	<b>Worldclamp</b>	<b>Powerclamp</b>
<b>Pages</b>	<b>G47</b>	<b>G49 - G51</b>	<b>G53 - G55</b>	<b>G57</b>

# Inductive Cylinder Position Sensors

**B IM - A23 - A DZ 30 X2** Wiring Options Special Option Codes

## Mounting

- B = Embeddable
- N = Nonembeddable

## Principle of Operation

- IM = Inductive Magnet Operated
- R = Reed
- I = Inductive

## Housing Material Modifier

- E = Stainless Steel (Barrel styles only)

## Housing Style

### Barrel - Metal

- G = Full Threading, Generally Chrome Plated Brass
- M = Partial Threading, Chrome Plated Brass

### permaprox®

- A23 = Metal, Clamp-on; Active Face Centered
- AKT = Plastic, Clamp-on; Active Face Centered
- IKE = Metal, Clamp- or Strap-on; Active Face on End
- IKM = Metal, Clamp- or Strap-on; Active Face on End
- IKT = Metal, Clamp- or Strap-on; Active Face Centered
- INT = Plastic, Groove Mt. or Strap-On; Active Face on End
- INR = Plastic, Groove Mt. or Strap-On; Active Face on End
- KST = Metal/Plastic, Strap-on; Active Face Centered
- NST = Plastic, Clamp-on; Active Face Centered
- PSM = Metal/Plastic, Strap-on; Active Face on End
- PST = Plastic, Strap-on; Active Face on End
- QST = Plastic, Clamp-on; Active Face on End

### Cylinder Rotatable

- CRS = Cylinder Rotatable Sensor with Probe, Metal

### Rectangular

- Q = Metal or Plastic, Various Rectangular Styles

### Slot

- K = Slot Sensor, Plastic Housing

### Special

- ISI = Special Sensors for Norgren Clamps

## Number of LEDs

Examples:

- Blank = No LEDs
- X2 = 2 LEDs

## Voltage Range

### AC/DC: (No SCP\*\*)

- 3 = 20-250 VAC, 10-300 VDC
- 71 = 3-140 VAC, 4-200 VDC (Relay Output)

### AC/DC: (Latched SCP)

- 30 = 20-250 VAC, 10-300 VDC
- 32 = 20-250 VAC, 10-300 VDC

### DC:

- 4 = 10-65 VDC, Polarity Protected, Pulsed SCP\*\*
- 6 = 10-30 VDC, Polarity Protected, Pulsed SCP
- 7 = 10-30 VDC (Relay Output)
- 41 = 10-65 VDC, Polarity Protected, Pulsed SCP

\*\*SCP = Short-Circuit and Overload Protection

## Output

- D = 2-Wire DC (Transistor Output)
- DZ = 2-Wire AC/DC, (Power MOSFET Output)
- G = 2-Wire DC, Low Voltage Drop
- N = NPN Transistor (Current Sinking)
- P = PNP Transistor (Current Sourcing)
- R = Relay Output
- Z = 2-Wire AC or 2-Wire AC/DC

## Output Function

- A = Normally Open (N.O.)
- R = Normally Closed (N.C.)
- Y1 = NAMUR Output, Requires Switching Amplifier

## Housing Diameter/Height (mm) or CRS Probe Length (mm = Number/10)

### Or Secondary Barrel Modifier (E)

- E = Extended Barrel Length

## Wiring Options

### A) Connectorized Sensor

BIM-IKT-AP6X- **B3 1 3 1**

**Connector Family**

- B1 = *minifast*®, Metal, Male
- B3 = *microfast*®, Metal, Male
- H1 = *eurofast*®, Metal or Plastic, Male
- V1 = *picofast*®, Metal, Male

**Connector / Sensor Transition**

1 = Straight

**Factory Code**

Example:  
1 = Standard

**Number of Pins**

### B) Potted Cable

BIM-IKT-AP6X- **7M**

**Cable Length**

Blank = 2 Meter cable  
7M = 7 Meter cable

Cylinder

## Special Option Codes

BIM-A23-ADZ30X2-B1131 **/S34**

**Option Code**

Example:  
/S34 = Weld Field Immune  
/S235 = Special Calibration

# Inductive Cylinder Position Sensors

## Cylinder Position Sensors “INT” and “INR” Styles

**TURCK permaprox**® cylinder position sensors are used for the detection of magnet equipped pistons on pneumatic and other types of cylinders. These non-contact sensors are able to determine the position of the cylinder piston without diminishing the integrity of the cylinder itself. This allows the sensors to operate without intruding upon the cylinder, keeping the system completely intact.



Cylinder brackets allow TURCK sensors to mount on most cylinder styles including round, tie-rod, extruded profile groove and dovetail versions.

**TURCK** has taken the approach of using only two sensor styles along with various adapter brackets to fit each individual cylinder’s requirements. The “INT” and “INR” housings were designed to fit into specific grooves found in extruded profile type cylinders as stand alone devices without the need for any additional brackets. The INT style was made to fit into a 5.2 mm “T” groove and the INR was made for use in a 4.0 mm round groove, neither requiring additional hardware for mounting. Both of these designs allow the sensor to be dropped in from above anywhere along the span of the cylinder.

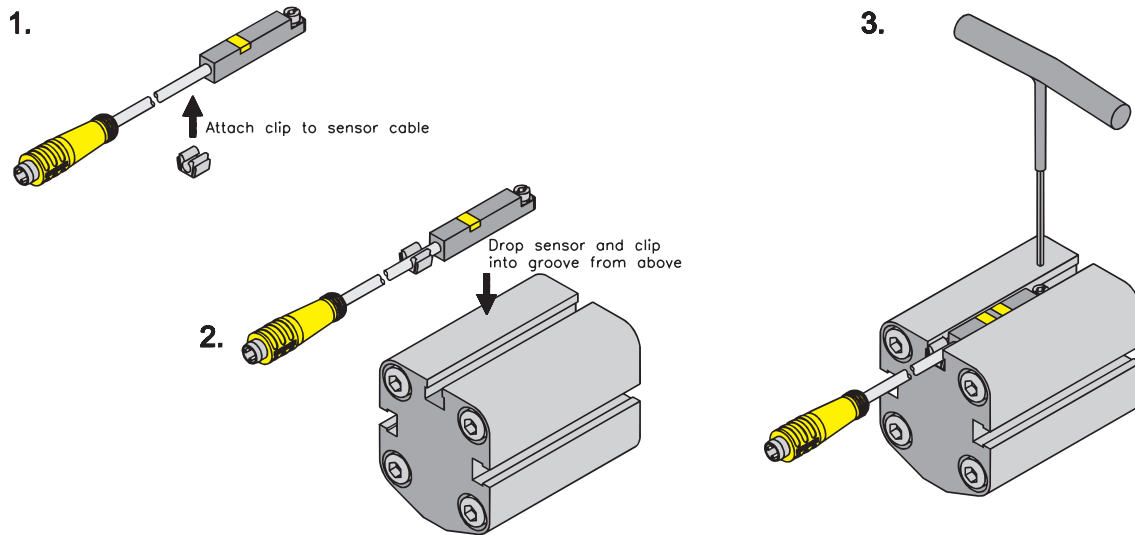
We translated this “drop in from the top” approach when designing the adapter brackets as well. By eliminating the need to slide the sensor in from the end of the cylinder it reduces installation time, alleviates the need for the cylinder to be disassembled, and allows for installation right on the floor without interrupting the operation of the cylinder.



These sensors are manufactured using a plastic overmolding technology, which allows us to completely seal sensors into smaller packages without compromising on durability. Smaller sensors that are compact with very low profiles also reduce the chance of damage when mounted to the outside of the cylinder.

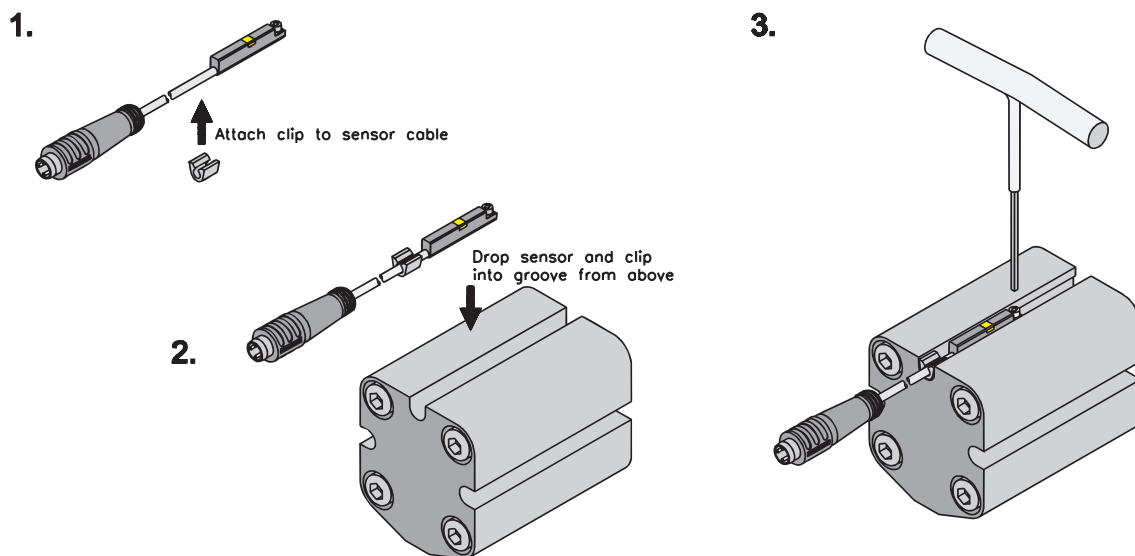
Installation Instructions

INT Sensor Mounting



Note: Use of mounting clip is optional.

INR Sensor Mounting



Note: Use of mounting clip is optional.

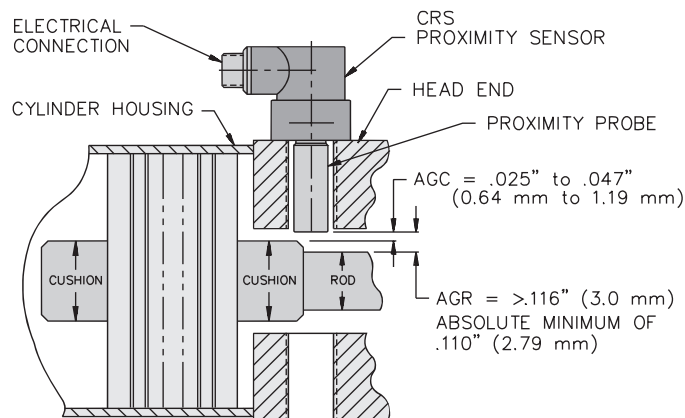


Cylinder

# Inductive Cylinder Position Sensors

## CRS Inductive Sensors

Figure 1



TURCK's **CRS** sensors are designed to be mounted into the head end or cap end of hydraulic and pneumatic cylinders. They operate at 1500 psi and mechanically withstand 3000 psi of continuous pressure.

### AGC - Air Gap Cushion

This dimension is recommended to allow for mechanical tolerances and wear.

### AGR - Air Gap Rod

The rod-to-cushion step must be large enough to allow the sensor to turn off when the piston leaves. If the step is too small, the sensor will lock-on due to the hysteresis of the sensor.

For more information on inductive sensors refer to the Operating Principles in Section B.

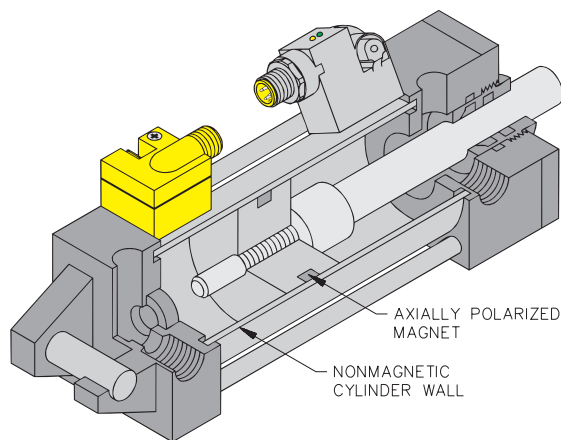
## permaprox<sup>®</sup> Inductive Magnet Operated Sensors

TURCK's **permaprox** cylinder sensors are used for detection of magnet equipped pistons on pneumatic cylinders through a nonmagnetic cylinder wall.

A patented electronic magnetic circuit involving new state-of-the-art materials forms the basis of operation for these sensors.

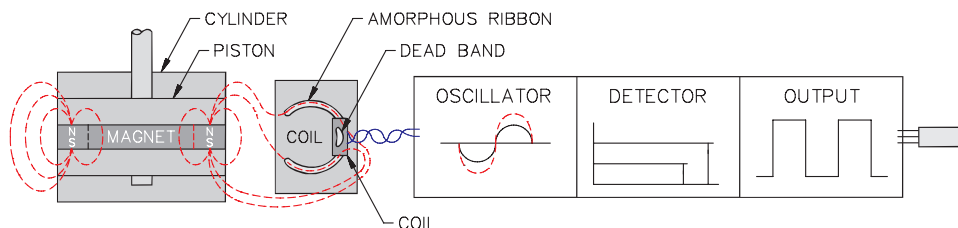
The characteristics of this innovative technology have decided advantages over Hall effect switches and reed devices. Specific sensors no longer have to be matched to specific magnet strengths. Other features are extremely high repeatability and the elimination of multiple actuation points.

Figure 2



## Operating Principle

Figure 3



As the axially polarized magnet-equipped piston approaches the sensor, its magnetic field saturates the highly permeable amorphous ribbon and causes a precise movement of the dead band (an area with no magnetic flux where the magnetic field leaves the ribbon). This results in a change in the oscillator current. The detector circuit monitors this change and sends a signal to the output when the current change reaches a specific level.

Actuation Area / Differential Travel

Figure 4

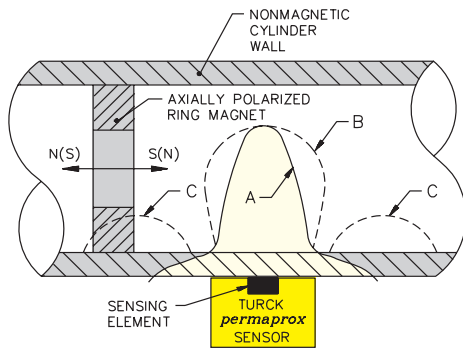
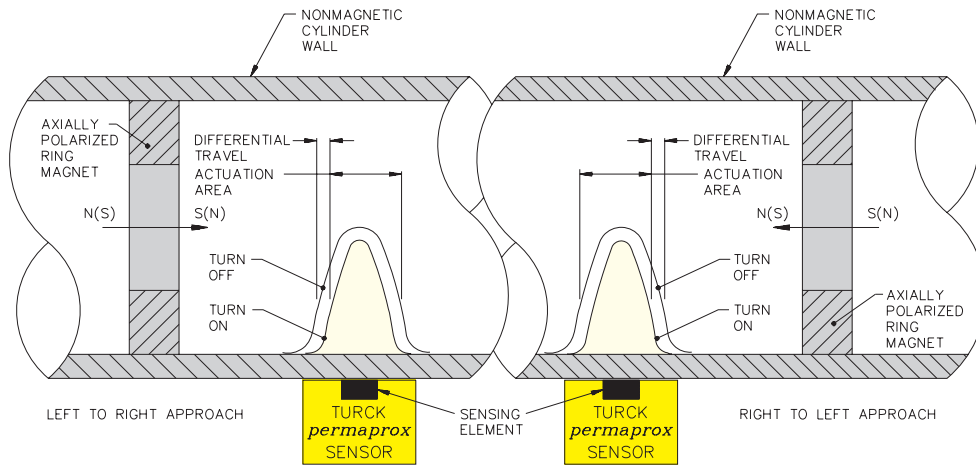


Figure 4 curve definitions:

- A) Typical actuation area of **permaprox**® sensors
- B) Typical primary actuation area for reed switches
- C) Typical secondary actuation area for reed switches

The **permaprox** sensors, unlike most magnet operated sensors, respond to only one component of magnetic induction, namely the component parallel to the cylinder. Figure 4 shows the typical actuation area of a **permaprox** sensor compared to that of reed switches. It is a common problem for reed switches to have more than one actuation area. Since these switches operate on a narrow range of magnetic field strengths, mismatching often causes multiple switching points. The **permaprox** sensors, however, reliably operate over a range of 20-350 gauss (2-35 mT).

Figure 5



The actuation area will depend on the width and field strength of the magnet. As shown in **Figure 5**, the actuation point will differ depending on the direction of piston travel. These points are not the same, but are very repeatable.

**permaprox**® Weld Field Immunity

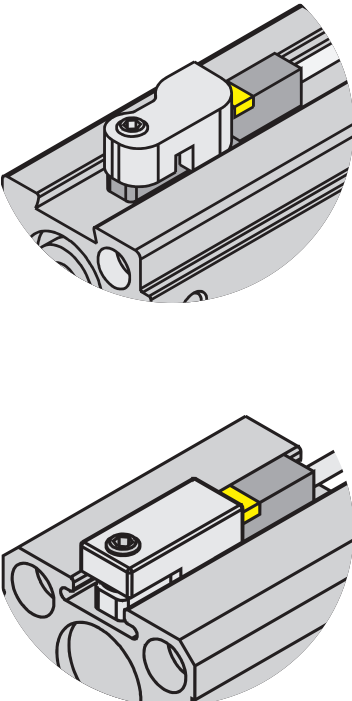
All **TURCK permaprox** sensors that have the "S34" suffix in the part number are resistant to AC weld fields. If the field is pulsing, as with AC resistance welders, the sensor locks the output in its last known stable state. When the pulsing field subsides, the sensor updates its output accordingly.

The sensors are not immune to constant magnetic fields, such as permanent magnets or DC resistance welders, and will change state.

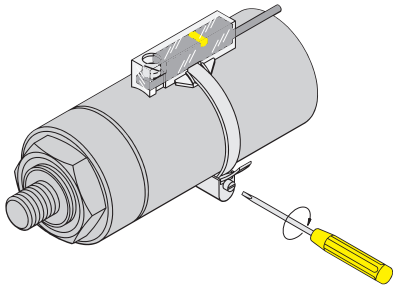
Cylinder



# Inductive Cylinder Position Sensors

Drawing	Manufacturer	Cylinder Series	TURCK Sensor	TURCK Bracket
	Numatics	B,F, Compact C), Short Stroke, Rotary Actuator, Pee Wee (O, P, Q), VDMA-V, Ring Series	INT Style	KLDT-1
	PHD	CRS, CTS, O, CVA, CVB, CVC	INT Style	KLDT-2
	Norgren	90000, 91000, 92000, 93000, Lite (A44000)	INT Style	KLDT-5
	Fabco-Air	Global (G, GT)	INT Style	KLDT-3
		Square 1 (SQ, SQF, SQL), Pancake (X,XK, O, OP, XDR, XDRK, ODR), Linear Slide <sup>1</sup> (GB, L, S, E, SE, EZ, TS) <sup>2</sup>	INR Style	KLFA-1 <sup>2</sup>
	Compact Air	Inch Series (AB, AS, AR, AT), Inch Series (B, R, S, T) <sup>3</sup> , Ball Slide (BSC), GC, CD, ACLA, ACLAD, (CLA, CLAD) <sup>3</sup> , Metric Series (AWS, AWB, AWT), Metric Series (WS, WB, WT) <sup>3</sup> , B/Base Mount, S/End Mount, R/ End Mount, (CSC, PSC, TCL) <sup>4</sup>	INT Style	KLDT-8
Turn-Act	Guided-Rod Series	INT	KLDT-9	

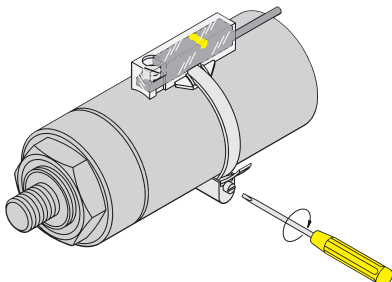
1. Some of these may also be equipped to handle 5, 8 or 12 mm inductive proximity sensors.
2. This Mounting is to be used only when "Dovetail Style Mounting Rail" is present on the cylinder.
3. These styles are usually not available with magnets
4. This mounting is to be used only when "Sensor Mounting Rail" is present on the collet.

Drawing	Manufacturer	Cylinder Series	TURCK Sensor	TURCK Bracket
	Numatics	M	INT Style	KLR-1 or KLR-1M with ASB Clamp <sup>2</sup>
			INR Style	KLR-2 with ASB Clamp <sup>2</sup>
	Parker	P, SRM, SRDM, XLT, XLR, XLB, (S, SRD) <sup>3</sup>	INT Style	KLR-1 or KLR-1M with ASB Clamp <sup>2</sup>
			INR Style	KLR-2 with ASB Clamp <sup>2</sup>
	Festo	CRDG, CRDSNU, CRDSW, DSNU, DSNUL, DSEU, ESEU, ESNU, ESW, (DSN, DSW, EG, EGZ, ESN) <sup>3</sup>	INT Style	KLR-1 or KLR-1M with ASB Clamp <sup>2</sup>
			INR Style	KLR-2 with ASB Clamp <sup>2</sup>
	Bimba	Original Line II (OL2), Original Line (M, MH, MNR, MC, MRS), Double Wall (DW, DWD, DWN, DWM), PC, Z Series (MO4, MO9, M17, M31), Linear Thrusters (T, TE)	INT Style	KLR-1 or KLR-1M with ASB Clamp <sup>2</sup>
			INR Style	KLR-2 with ASB Clamp <sup>2</sup>
	SMC	NCM, NCJ2, NCG, NCA1, CJ2, CM2, CG1, MGG	INT Style	KLR-1 or KLR-1M with ASB Clamp <sup>2</sup>
			INR Style	KLR-2 with ASB Clamp <sup>2</sup>
	Norgren	Round Line (RL)	INT Style	KLR-1 or KLR-1M with ASB Clamp <sup>2</sup>
			INR Style	KLR-2 with ASB Clamp <sup>2</sup>
	Fabco-Air	Pancake (X, XK, O, OP, XDR, XDRK, ODR), Linear Slide (L, S, E,)	INT Style	KLR-1 or KLR-1M with ASB Clamp <sup>2</sup>
			INR Style	KLR-2 with ASB Clamp <sup>2</sup>

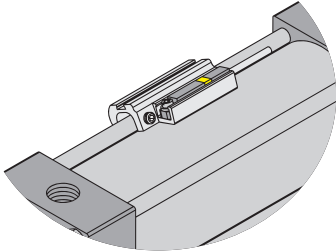
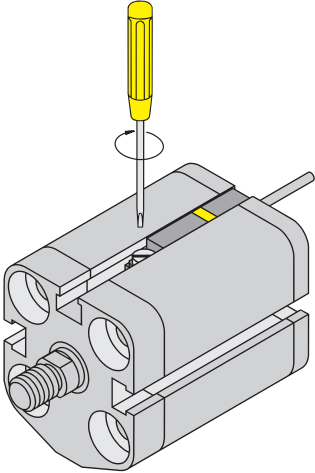
Cylinder

1. This mounting is to be used only when "Switch Rail" is present on the cylinder.
2. ASB size is determined by the cylinder diameter. See chart below.
3. These styles are usually not available with magnets.

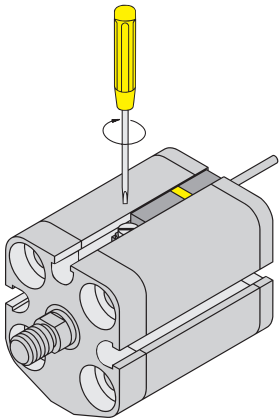
INT Housing with KLR-1 and ASB Style Strap		
Bore Size		Clamp (Stainless Steel)
Inches	mm	
.276-.433	7-11 mm	ASB-1
.433-.748	11-19 mm	ASB-2
.709-1.142	18-29 mm	ASB-3
1.102-1.535	28-39 mm	ASB-4
1.496-1.929	38-49 mm	ASB-5
1.890-2.323	48-59 mm	ASB-6
2.283-2.717	58-69 mm	ASB-7
2.677-3.110	68-79 mm	ASB-8
3.071-3.504	78-89 mm	ASB-9



# Inductive Cylinder Position Sensors

Drawing	Manufacturer	Cylinder Series	TURCK Sensor	TURCK Bracket
	Numatics	A, E, S, L, B Square, VDMA-Z	INT Style	KLZ Series Clamp <sup>1</sup>
	Parker	P5E, HBT, LPM, (S, C, LP) <sup>2</sup>	INT Style	KLZ Series Clamp <sup>1</sup>
	PHD	A2, A3, AS, AV, AV2, A3V, AVS, HV, HV2, H3V, HVS, DAV, DHV, EA, EL, EH, ES, NPG, NHG, NEAG, NEHG, TD, (A) <sup>2</sup>	INT Style	KLZ Series Clamp <sup>1</sup>
	Festo	DNGU, DNGUL, DNGUT, DNU, DNUL, CRDNG, CRDNGS, DNG, DNGL, DNGZK, DNGZL, DNGZS, DKE	INT Style	KLZ Series Clamp <sup>1</sup>
	Bimba	Flat-I (F0, FOD, FOP, FOR, FOS, FS, FSD, FSR, FSS, F02, F03, F04, Flat-II (FT, FST)	INT Style	KLZ Series Clamp <sup>1</sup>
	SMC	ECQ2, MB, C95	INT Style	KLZ Series Clamp <sup>1</sup>
	Norgren	A, EA, SS, N, J, EJ, 8000/M	INT Style	KLZ Series Clamp <sup>1</sup>
	Turn-Act	NFPA Series	INT Style	KLZ Series Clamp <sup>1</sup>
	Fabco-Air	Long Stroke (321, 521, 721, 1221, S321, S521, S721, S1221), Hi-Power (HP, THP, UHP), Multi-Power (MP, BA, BP), Linear Slide <sup>3</sup> (SE, EZ, TS)	INT Style	KLZ Series Clamp <sup>1</sup>
	Parker	P1M, P5T, SST	INT Style	No Additional Bracket Required
			INR Style	KLT-1 Clamp
	Festo	DNC, DNCT, DFM, DPZ, DPZJ, DZF, EZH, ADVU, ADVULQ, ADVUL	INT Style	No Additional Bracket Required
			INR Style	KLT-1 Clamp
	SMC	CUJ, CXS, MGQ, MY1B, MHC, MHL2	INT Style	No Additional Bracket Required
			INR Style	KLT-1 Clamp

1. When using KLZ Series Clamps, user must determine clamp size best suited for application.
2. These styles are usually not available with magnets.
3. Some of these may be equipped to handle 5, 8 or 12 mm inductive proximity sensors.

Drawing	Manufacturer	Cylinder Series	TURCK Sensor	TURCK Bracket
	Numatics	K	INR Style	No Additional Bracket Required
	Festo	ADVC	INR Style	No Additional Bracket Required
	Bimba	Twin Bore (TB, TBA, TBD), EF1 Series (EF, EFD, EFS, EFR), EF2 Series (EFT), PneuMoment Series (PM)	INR Style	No Additional Bracket Required
	SMC	(CQ2, CQS, NCDQ2, NCQ2) <sup>1</sup> , (CDQ2) <sup>1</sup> , CU, CUK, CUW, MU, MHF2, Air slides (MXQ)	INR Style	No Additional Bracket Required
	Compact Air	B, C	INR Style	No Additional Bracket Required

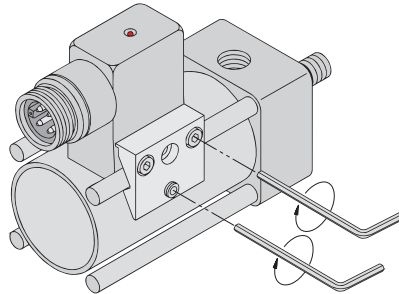
1. CQ2, NC(D)Q2, CQS, NCQ2 cylinders may have multiple grooves and may not all be suited for the INR.



# Inductive Cylinder Position Sensors

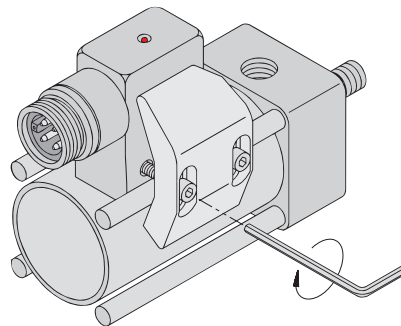
## A23 Housing with KLU-1 Clamp

<b>Cylinder Diameter</b>	1.26 - 3.15 inches 32 - 80 mm
<b>Rod Diameter</b>	0.16 - 0.35 inches 4 - 9 mm
<b>Clamp</b>	KLU-1 (Aluminum)



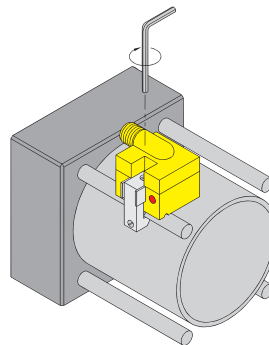
## A23 Housing with KLU-2 Clamp

<b>Cylinder Diameter</b>	1.57 - 7.87 inches 40 - 200 mm
<b>Rod Diameter</b>	0.24 - 0.63 inches 6 - 16 mm
<b>Clamp</b>	KLU-2 (Die-cast Zinc)



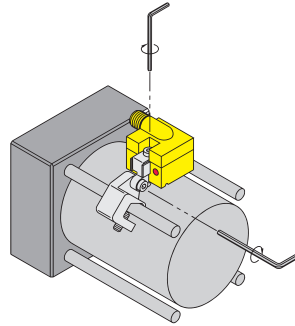
## AKT Housing with KLA-1 or KLA-3M Clamp

<b>Cylinder Diameter</b>	1.26 - 1.97 inches 32 - 50 mm
<b>Rod Diameter</b>	0.16 - 0.31 inches 4 - 8 mm
<b>Clamp</b>	KLA-1 (Aluminum) KLA-3 (Stainless Steel)



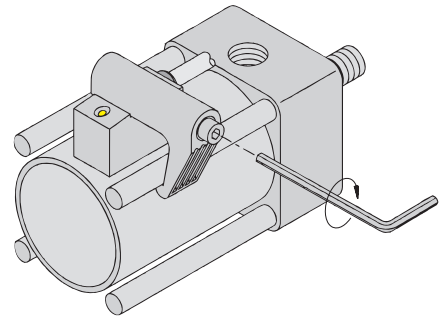
### AKT Housing with KLA-2 Clamp

<b>Cylinder Diameter</b>	1.57 - 4.92 inches 40 - 125 mm
<b>Rod Diameter</b>	0.28 - 0.51 inches 7 - 13 mm
<b>Clamp</b>	KLA-2 (Die-cast Zinc)



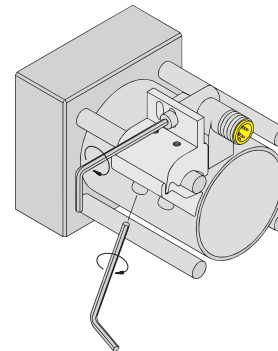
### IKE, IKT and IKM Housing with KLI-1 or KLI-3 Clamp

<b>Cylinder Diameter</b>	1.26 - 3.94 inches 32 - 100 mm	2.48 - 6.30 inches 63 - 160 mm
<b>Rod Diameter</b>	0.16 - 0.51 inches 4 - 13 mm	0.24 - 0.63 inches 6 - 16 mm
<b>Clamp</b>	KLI-1 (Die-cast Zinc)	KLI-3 (Die-cast Zinc)



### IKE, IKT and IKM Housing with KLI-5Z or KLI-6Z Clamp

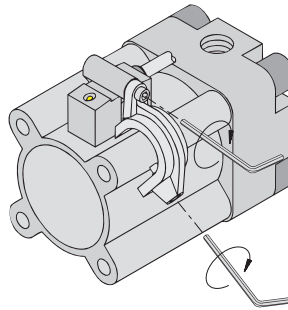
<b>Cylinder Diameter</b>	1.26 - 2.48 inches 32 - 63 mm	1.97 - 4.92 inches 50 - 125 mm
<b>Rod Diameter</b>	0.16 - 0.31 inches 4 - 8 mm	0.24 - 0.51 inches 6 - 13 mm
<b>Clamp</b>	KLI-5Z (Aluminum)	KLI-6Z (Aluminum)



# Inductive Cylinder Position Sensors

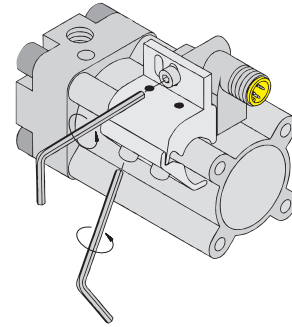
## IKE, IKT and IKM Housing with KLI-2 Clamp

<b>Cylinder Diameter</b>	1.26 - 3.94 inches 32 - 100 mm
<b>Rod Diameter</b>	0.35 - 0.79 inches 9 - 20 mm
<b>Clamp</b>	KLI-2 (Die-cast Zinc)



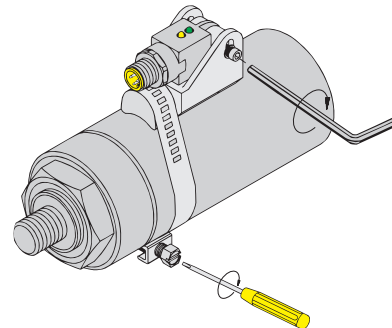
## IKE, IKT and IKM Housing with KLI-5 or KLI-6 Clamp

<b>Cylinder Diameter</b>	1.26 - 1.97 inches 32 - 50 mm	1.97 - 3.94 inches 50 - 100 mm
<b>Rod Diameter</b>	0.31 - 0.55 inches 8 - 14 mm	0.43 - 0.75 inches 11 - 19 mm
<b>Clamp</b>	KLI-5 (Aluminum)	KLI-6 (Aluminum)



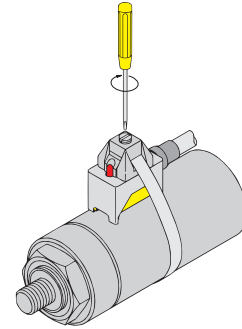
## IKE, IKT and IKM Housing with KLI-CB64 or KLI-CB124 Clamp

<b>Cylinder Diameter</b>	0.79 - 2.52 inches 20 - 64 mm	0.79 - 4.88 inches 20 - 124 mm
<b>Clamp</b>	KLI-CB64 (Stainless Steel/Steel)	KLI-CB124 (Stainless Steel/Steel)



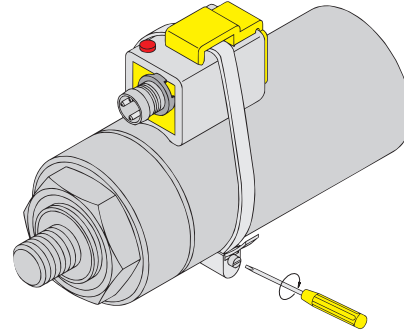
### KST Housing with KST-SB170 and KST-SB335 Clamps

<b>Cylinder Diameter</b>	0.31 - 0.99 inches 8 - 25 mm	0.31 - 3.15 inches 8 - 80 mm
<b>Clamp</b>	KST-SB170 (Stainless Steel)	KST-SB335 (Stainless Steel)



### PSM Housing with ASB Style Strap

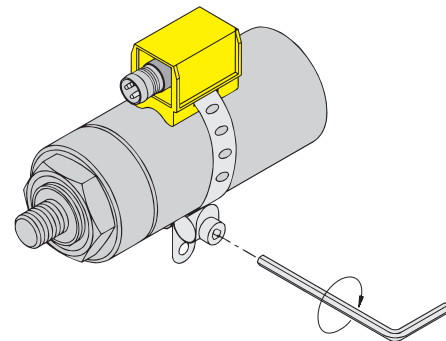
Bore		Clamp (Stainless Steel)	Cylinder Diameter
Inches	mm		
5/16	8	ASB-3	0-20 mm
3/8	10		
7/16	12		
5/8	16	ASB-4	15-30 mm
3/4	20		
1	25	ASB-5	25-40 mm
1-1/4	32		
1-1/2	40	ASB-6	35-50 mm
2	50	ASB-7	45-60 mm
2-1/2	63	ASB-9	55-80 mm



### PST Housing with KLP80-VA and KLP200-VA Clamps

<b>Cylinder Diameter</b>	0.31 - 3.15 inches 8 - 80 mm	3.15 - 7.87 inches 80 - 200 mm
<b>Clamp</b>	KLP80-VA* (Stainless steel band, brass nuts)	KLP200-VA (Stainless steel band, brass nuts)

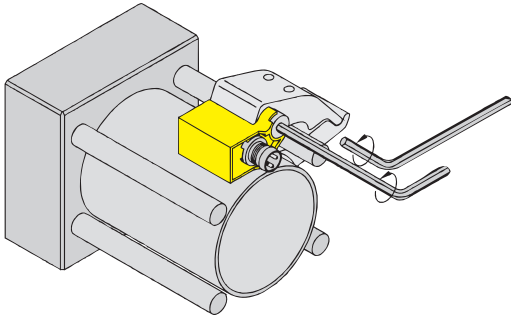
\* Clamp included with sensor.

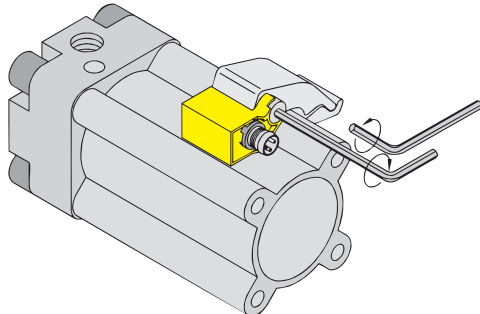


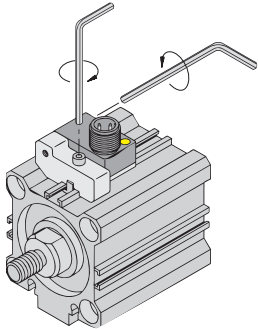
Cylinder



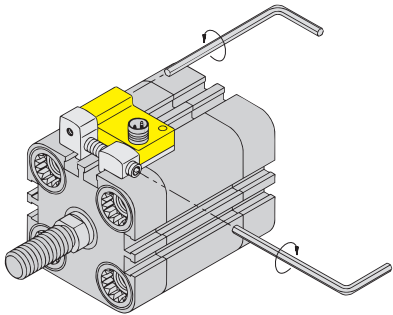
# Inductive Cylinder Position Sensors

QST Housing with KLQ-1Z or KLQ-2Z Clamps			
<b>Cylinder Diameter</b>	1.26 - 2.48 inches 32 - 63 mm	1.97 - 4.92 inches 50 - 125 mm	
<b>Rod Diameter</b>	0.16 - 0.31 inches 4 - 8 mm	0.24 - 0.51 inches 6 - 13 mm	
<b>Clamp</b>	KLQ-1Z (Anodized Aluminum)	KLQ-2Z (Anodized Aluminum)	

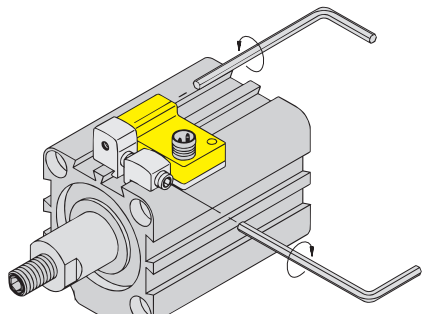
QST Housing with KLQ-1 or KLQ-2 Clamps			
<b>Cylinder Diameter</b>	1.26 - 1.97 inches 32 - 50 mm	1.97 - 3.94 inches 50 - 100 mm	
<b>Rod Diameter</b>	0.31 - 0.55 inches 8 - 14 mm	0.43 - 0.75 inches 11 - 19 mm	
<b>Clamp</b>	KLQ-1 (Anodized Aluminum)	KLQ-2 (Anodized Aluminum)	

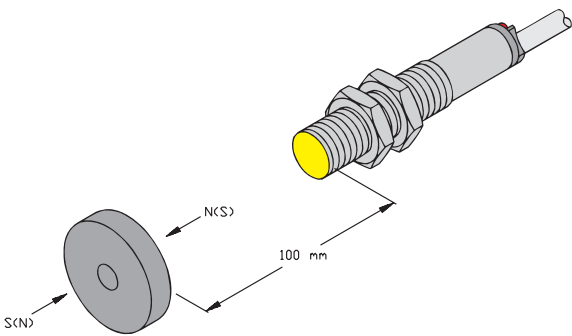
NST Housing with SMC-325 Clamp		
<b>Cylinder Diameter</b>	0.47 - 3.94 inches 12 - 100 mm	
<b>Cylinder Manufacturer</b>	SMC	
<b>Cylinder Family</b>	NCDQ2	
<b>Clamp</b>	SMC-325 (Anodized Aluminum)	

NST Housing with KLN-3 Clamp	
<b>Cylinder Diameter</b>	0.47 - 3.94 inches 12 - 100 mm
<b>Groove Diameter</b>	0.20 - 0.53 (0.83) inches 5.2 - 13.5 (21)* mm
<b>Clamp</b>	KLN-3 (Anodized Aluminum)
<b>*Accessory</b>	Longer M5 x 35 set screw (A0050)



NST Housing with KLN-3 Clamp	
<b>Cylinder Diameter</b>	0.47 - 3.94 inches 12 - 100 mm
<b>Groove Diameter</b>	0.20 - 0.53 (0.83) inches 5.2 - 13.5 (21)* mm
<b>Clamp</b>	KLN-3 (Anodized Aluminum)
<b>*Accessory</b>	Longer M5 x 35 set screw (A0050)



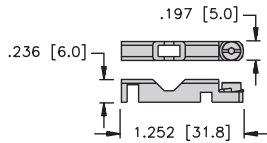
M12 and EG08 Barrel Housing	
<p>When using magnet part number DMR31-15-5, sensing ranges up to 90 mm with BIM-M12 and 78 mm with BIM-EG08 can be achieved. See Accessories section for magnet part numbers.</p>	

Cylinder

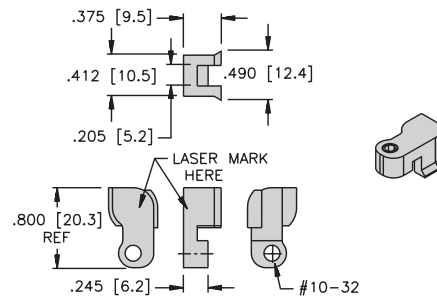
# Inductive Cylinder Position Sensors

## Mounting Clamps

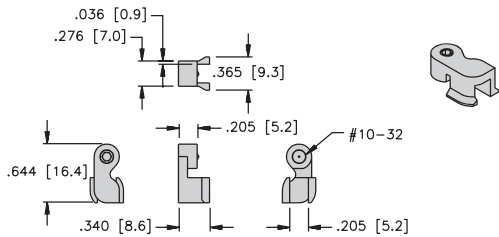
**KLT-1 (AL)**



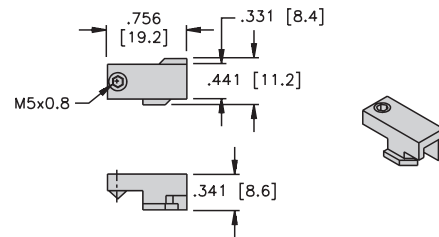
**KLDT-1 (AL)**



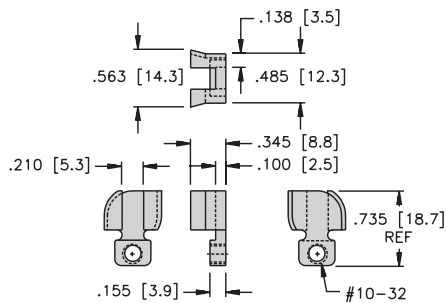
**KLDT-3 (AL)**



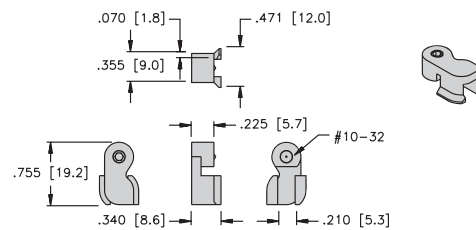
**KLDT-2 (AL)**



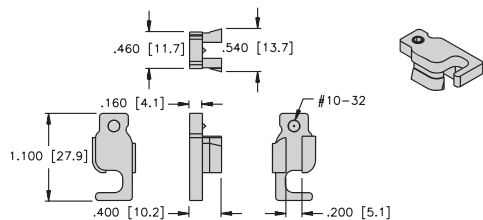
**KLDT-4 (AL)**



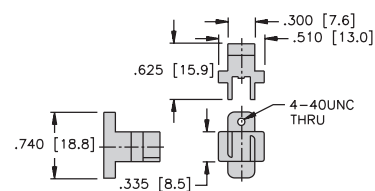
**KLDT-5 (AL)**



**KLDT-8 (AL)**

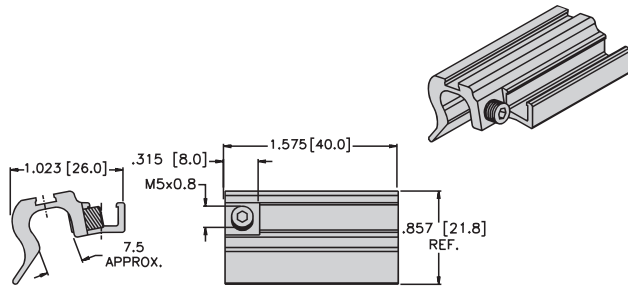


**KLDT-9 (AL)**

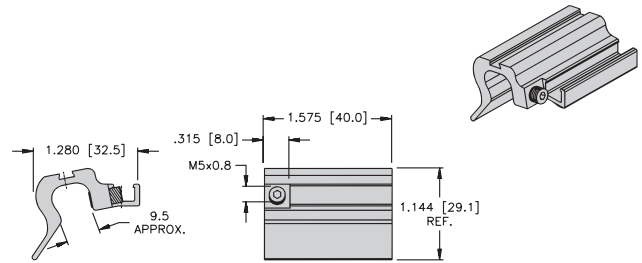


Mounting Clamps

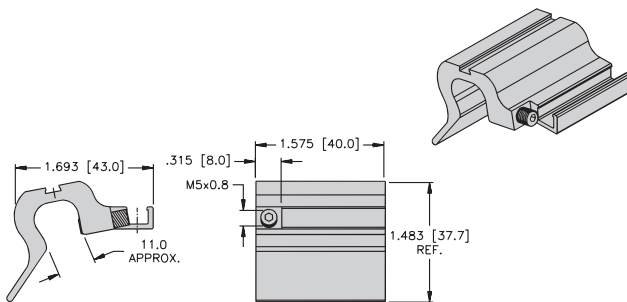
KLZ1-INT (AL)



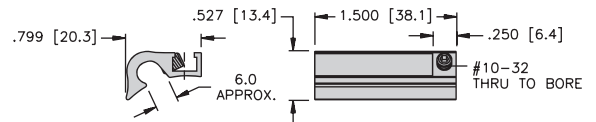
KLZ2-INT (AL)



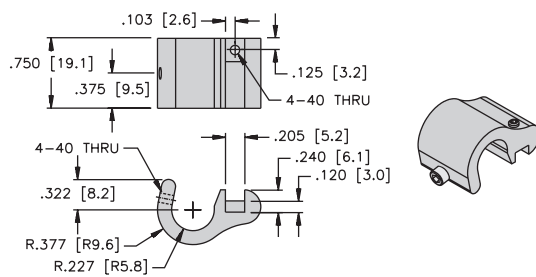
KLZ3-INT (AL)



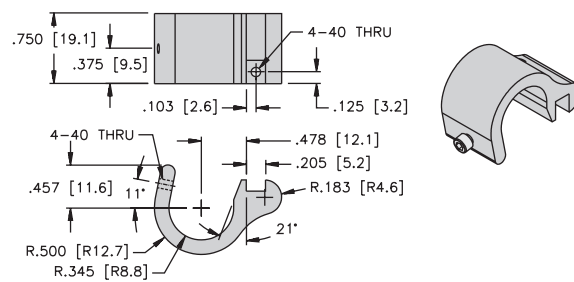
KLZ1A-INT (AL)



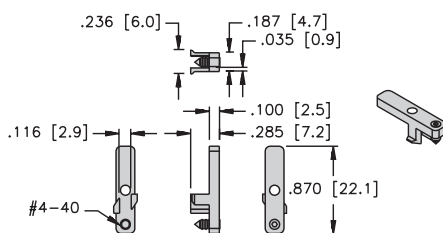
KL2MA2-INT (AL)



KL2MA1-INT (AL)



KLFA-1



BIM-INT-SET SCREW

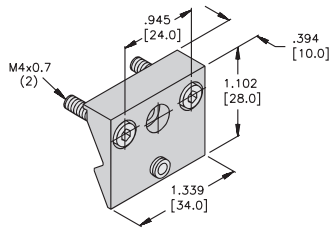


Cylinder

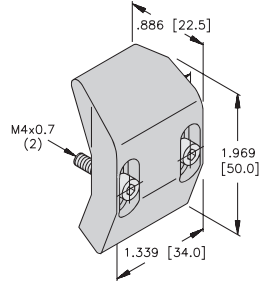
# Inductive Cylinder Position Sensors

## Mounting Clamps

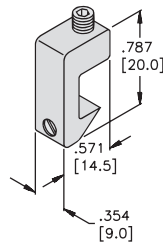
**KLU-1**



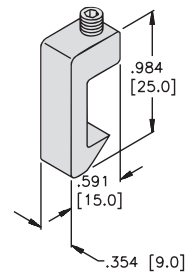
**KLU-2**



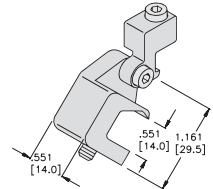
**KLA-1**



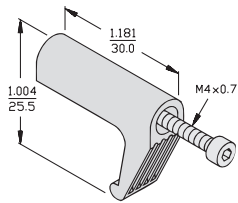
**KLA-3M**



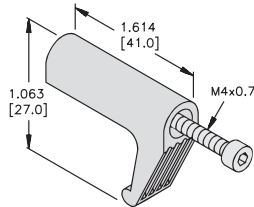
**KLA-2**



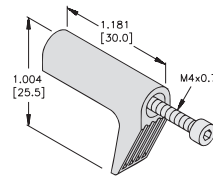
**KLI-1**



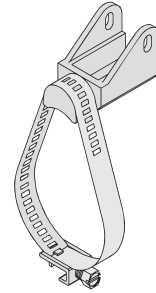
**KLI-3**



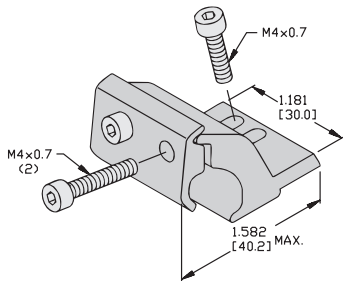
**KLI-2**



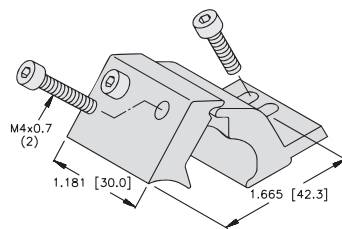
**KLI-CB**



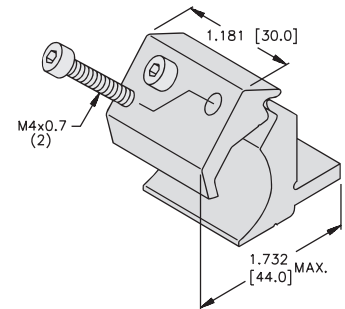
**KLI-5**



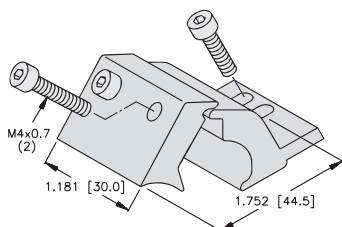
**KLI-5Z**



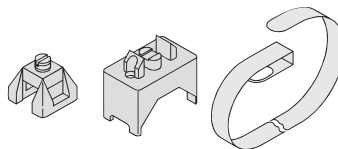
**KLI-6**



**KLI-6Z**



**KST-SB170 and KST-SB335**

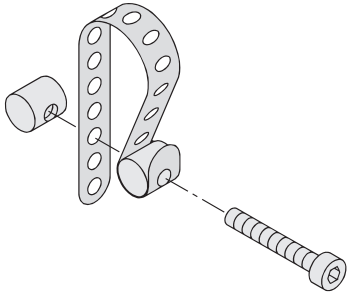


**ASB C1amp**

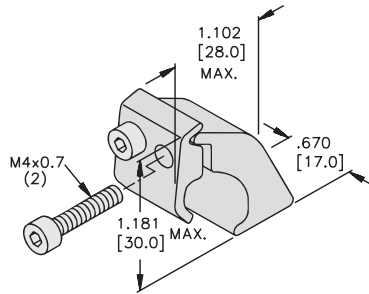


Mounting Clamps

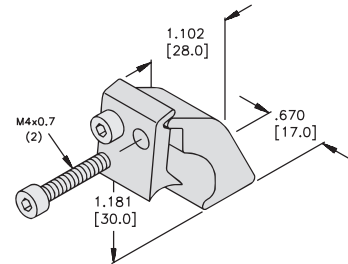
KLP80-VA and KLP200-VA



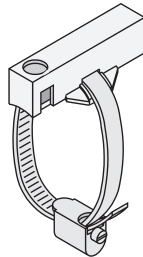
KLQ-1



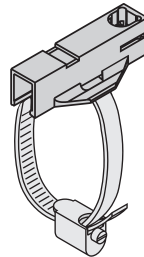
KLQ-1Z



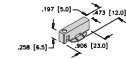
KLR-1 w/ASB-\* Strap



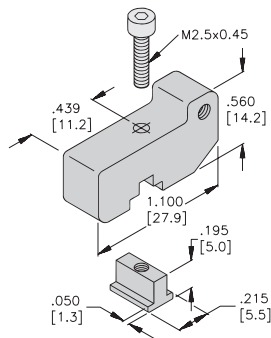
KLR-1M w/ASB-\* Strap



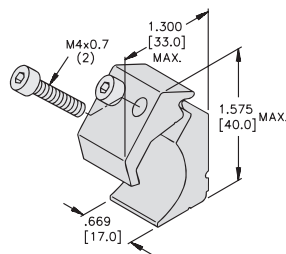
KLR-2 w/ASB-\* Strap



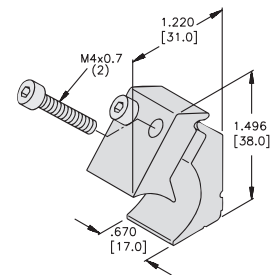
SMC-325



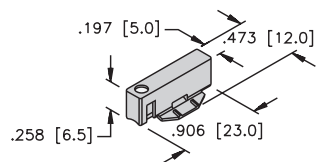
KLQ-2



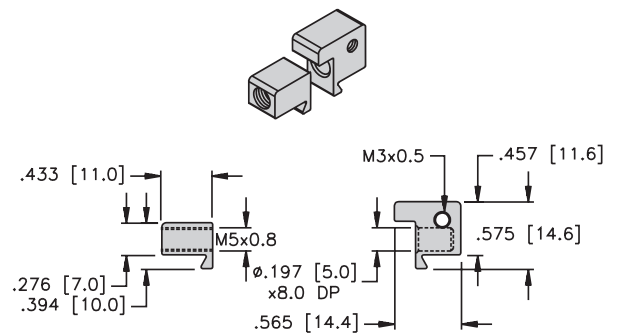
KLQ-2Z



KLR-2M



KLN-3



Cylinder

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>INR - picofast® Quick Disconnect</b> 	BR-INR-AR7X-V1131	S4623302	REED Contact	20-34	3-Wire DC REED Contact
	BIM-INR-AN6X-0.3M-PSG 3S	S4623802		20-350	3-Wire DC NPN
	BIM-INR-AP6X-0.3M-PSG 3S	S4623702		20-350	3-Wire DC PNP
<b>INR - Potted-In Cable</b> 	BR-INR-AR7X	S4623300	REED Contact	20-34	3-Wire DC REED Contact
	BIM-INR-AN6X	S4623800		20-350	3-Wire DC NPN
	BIM-INR-AP6X	S4623700		20-350	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤400	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	500	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	2	<p><b>Diagram 2</b></p>
10-30 VDC	500	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	3	<p><b>Diagram 3</b></p>
10-30 VDC	500	≤400	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	4	<p><b>Diagram 4</b></p>
10-30 VDC	500	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	5	<p><b>Diagram 5</b></p>
10-30 VDC	500	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	6	<p><b>Diagram 6</b></p>

\* Length in meters.

For material descriptions see page M22.



# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>INT - <i>picofast</i>® Quick Disconnect</b>  	BIM-INT-AN6X-V1131	S4623602		20-350	3-Wire DC NPN
	BIM-INT-AP6X-V1131	S4623502		20-350	3-Wire DC PNP
	BR-INT-AR7X-V1131	S4623202	REED Contact	20-34	3-Wire DC REED Contact

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	2	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	3	<p><b>Diagram 2</b></p>
10-30 VDC	500	≤500	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	1	<p><b>Diagram 3</b></p>

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
	BIM-INT-AG41X	S4550000		20-350	2-Wire DC
	BIM-INT-AN6X	S4623600		20-350	3-Wire DC NPN
	BIM-INT-AP6X	S4623500		20-350	3-Wire DC PNP
	BR-INT-AR7X	S4623200	REED Contact	20-34	3-Wire DC REED Contact
	BR-INT-ADZ71X	S4700510	REED Contact	20-34	2-Wire AC/DC
	BIM-INT-Y1X	S1056800		20-350	2-Wire NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



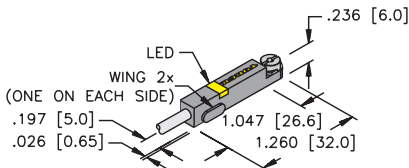
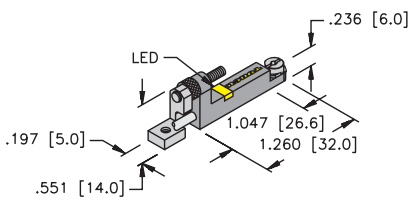
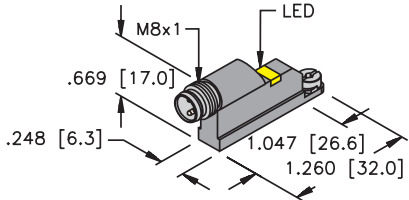
Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-55 VDC	300	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	4	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	2	<p><b>Diagram 2</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	3	<p><b>Diagram 3</b></p>
10-30 VDC	500	≤500	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	1	<p><b>Diagram 4</b></p>
3-140 VAC 4-200 VDC	500	≤500	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	5	<p><b>Diagram 5</b></p>
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	6	<p><b>Diagram 6</b></p>

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>INT.../S924 - Potted-In Cable</b> 	BIM-INT-AG41X/S924	S4550003		20-350	2-Wire DC
	BIM-INT-AN6X/S924	S4623608		20-350	3-Wire DC NPN
	BIM-INT-AP6X/S924	S4623526		20-350	3-Wire DC PNP
<b>INTF - Potted-In Cable</b> 	BIM-INTF-AN6X	S4623613		20-350	3-Wire DC NPN
	BIM-INTF-AP6X	S4623551		20-350	3-Wire DC PNP
<b>INTS - picofast® Quick Disconnect</b> 	BIM-INTS-AN6X-V1131	S4623607		20-350	3-Wire DC NPN
	BIM-INTS-AP6X-V1131	S4623606		20-350	3-Wire DC PNP
	BR-INTS-AR7X-V1131	S4623208	REED Contact	20-34	3-Wire DC REED Contact

"/S924" Designates "INT" with wings. Sensor can be inserted from the side only.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	300	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	6	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	1	<p><b>Diagram 2</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	2	<p><b>Diagram 3</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	1	<p><b>Diagram 4</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PUR	2	<p><b>Diagram 5</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	3	<p><b>Diagram 6</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	4	<p><b>Diagram 7</b></p>
10-30 VDC	500	≤500	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	5	<p><b>Diagram 8</b></p>

\* Length in meters

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>PST - picofast® Quick Disconnect</b> 	BIM-PST-AN6X-V1131	S4625190	KLP-80 Included	20-350	3-Wire DC NPN
	BIM-PST-AP6X-V1131	S4625090	KLP-80 Included	20-350	3-Wire DC PNP
<b>PST - Potted-In Cable</b> 	BIM-PST-AN6X	S4624191	KLP-80 Included	20-350	3-Wire DC NPN
	BIM-PST-AP6X	S4624090	KLP-80 Included	20-350	3-Wire DC PNP
	BIM-PST-Y1X	S1057090	KLP-80 Included	20-350	2-Wire NAMUR
<b>PSM - picofast® Quick Disconnect</b> 	BIM-PSM-AN6X-V1131	S4625700	w/o Bracket	20-350	3-Wire DC NPN
	BIM-PSM-AP6X-V1131	S4625600	w/o Bracket	20-350	3-Wire DC PNP
<b>PSM - Potted-In Cable</b> 	BIM-PSM-AN6X	S4625500	w/o Bracket	20-350	3-Wire DC NPN
	BIM-PSM-AP6X	S4625400	w/o Bracket	20-350	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	4	<b>Diagram 1</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	5	<b>Diagram 2</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	1	<b>Diagram 3</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	<b>Diagram 4</b> 
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12, AL	AL	N/A	YE	PKG 3Z-*	4	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12, AL	AL	N/A	YE	PKG 3Z-*	5	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12, AL	AL	N/A	YE	2M/PVC	1	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12, AL	AL	N/A	YE	2M/PVC	2	<b>Diagram 5</b> 

For material descriptions see page M22.



# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>KST - picofast® Quick Disconnect</b> 	BIM-KST-AN6X-V1131	M4674300	KST SB170 and KST SB335 Included	20-350	3-Wire DC NPN
	BIM-KST-AP6X-V1131	M4674200	KST SB170 and KST SB335 Included	20-350	3-Wire DC PNP
<b>KST - Potted-In Cable</b> 	BIM-KST-AN6X	M4674100	KST SB170 and KST SB335 Included	20-350	3-Wire DC NPN
	BIM-KST-AP6X	M4674000	KST SB170 and KST SB335 Included	20-350	3-Wire DC PNP
<b>QST - picofast® Connector</b> 	BIM-QST-AN6X-V1131	S4688300	w/o Bracket	20-350	3-Wire DC NPN
	BIM-QST-AP6X-V1131	S4688200	w/o Bracket	20-350	3-Wire DC PNP
<b>QST - Potted-In Cable</b> 	BIM-QST-AN6X	M4688100	w/o Bracket	20-350	3-Wire DC NPN
	BIM-QST-AP6X	S4688000	w/o Bracket	20-350	3-Wire DC PNP
	BIM-QST-Y1X	M1058000	w/o Bracket	20-350	2-Wire NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3Z-*	4	<b>Diagram 1</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3Z-*	5	<b>Diagram 2</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	1	<b>Diagram 3</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	2	<b>Diagram 4</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	4	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	5	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>AKT - eurofast® Connector</b>  	BIM-AKT-AD4X-H1141	M4480290	KLA-1 Included	20-350	2-Wire DC
	BIM-AKT-AN6X-H1141	M4675390	KLA-1 Included	20-350	3-Wire DC NPN
	BIM-AKT-AP6X-H1141	M4675290	KLA-1 Included	20-350	3-Wire DC PNP
	BIM-AKT-AP6X-H1141/S34	M4682090	KLA-1 Included	20-350	
	BIM-AKT-Y1X-H1141	M1055290	KLA-1 Included	20-350	2-Wire NAMUR
<b>AKT - Potted-In Cable</b>  	BIM-AKT-AD4X	M4480090	KLA-1 Included	20-350	2-Wire DC
	BIM-AKT-AN6X	M4675190	KLA-1 Included	20-350	3-Wire DC NPN
	BIM-AKT-AP6X	M4675090	KLA-1 Included	20-350	3-Wire DC PNP
	BIM-AKT-Y1X	M1055090	KLA-1 Included	20-350	2-Wire NAMUR
	<b>IKE/IKT - Potted-In Cable</b>  	BIM-IKE-AD4X	S4421490	KLI-3 Included	20-350
BIM-IKT-AD4X		S4482090	KLI-3 Included	20-350	
BIM-IKE-AN6X		S4621590	KLI-3 Included	20-350	3-Wire DC NPN
BIM-IKT-AN6X		S4620190	KLI-3 Included	20-350	
BIM-IKE-AP6X		S4621490	KLI-3 Included	20-350	3-Wire DC PNP
BIM-IKT-AP6X		S4620090	KLI-3 Included	20-350	
BIM-IKE-Y1X		S1056490	KLI-3 Included	20-350	2-Wire NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	300	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4.2T-*	1	<b>Diagram 1</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4T-*	2	<b>Diagram 2</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4T-*	3	<b>Diagram 3</b> 
	20	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4T-*	3	
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4.21T-*	4	<b>Diagram 3</b> 
10-65 VDC	300	≤100	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	5	<b>Diagram 4</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	6	<b>Diagram 5</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	7	<b>Diagram 5</b> 
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	8	<b>Diagram 6</b> 
10-65 VDC	300	≤100	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	5	<b>Diagram 6</b> 
	300	≤100	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	5	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	6	<b>Diagram 7</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	6	<b>Diagram 7</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	7	<b>Diagram 7</b> 
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	7	<b>Diagram 7</b> 
5-30 VDC	1000	Remote	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	2M/PVC	8	<b>Diagram 8</b> 

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output	
<b>IKE/IKT - picrofast® Quick Disconnect</b> 	BIM-IKE-AN6X-V1131	S4621795	KLI-3 Included	20-350	3-Wire DC NPN	
	BIM-IKT-AN6X-V1131	S4622195	KLI-3 Included	20-350		
	BIM-IKE-AP6X-V1131	S4621695	KLI-3 Included	20-350	3-Wire DC PNP	
	BIM-IKT-AP6X-V1131	S4622095	KLI-3 Included	20-350		
	<b>IKE/IKT - eurofast® Quick Disconnect</b> 	BIM-IKE-AD4X-H1141	S4421690	KLI-3 Included	20-350	2-Wire DC
		BIM-IKT-AD4X-H1141	S4482290	KLI-3 Included	20-350	
BIM-IKE-AN6X-H1141		S4621790	KLI-3 Included	20-350	3-Wire DC NPN	
BIM-IKT-AN6X-H1141		S4621190	KLI-3 Included	20-350		
BIM-IKE-AP6X-H1141		S4621690	KLI-3 Included	20-350	3-Wire DC PNP	
BIM-IKT-AP6X-H1141		S4621090	KLI-3 Included	20-350		
BIM-IKE-Y1X-H1141		S1056690	KLI-3 Included	20-350	2-Wire NAMUR	
BIM-IKT-Y1X-H1141		M1056290	KLI-3 Included	20-350		

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3Z-*	1	<b>Diagram 1</b> 
	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3Z-*	1	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3Z-*	2	<b>Diagram 2</b> 
	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	PKG 3Z-*	2	
10-65 VDC	300	≤100	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4.2T-*	3	<b>Diagram 3</b> 
	300	≤100	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4.2T-*	3	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4T-*	4	<b>Diagram 4</b> 
	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4T-*	4	
10-30 VDC	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4T-*	5	<b>Diagram 5</b> 
	1000	≤200	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4T-*	5	
5-30 VDC	1000	Remote	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4.21T-*	6	<b>Diagram 6</b> 
	1000	Remote	-25 to +70	IP 67	Zinc	PA 12	N/A	YE	RK 4.21T-*	6	

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>IKM - eurofast® Connector</b> 	BIM-IKM-AN6X2-H1141/S34	M4627390	KLI-3 Included, WFI	20-350	3-Wire DC NPN
	BIM-IKM-AP6X2-H1141/S34	M4627290	KLI-3 Included, WFI	20-350	3-Wire DC PNP
<b>IKM - microfast® Connector</b> 	BIM-IKM-AZ3X2-B3131	M1347190	KLI-3 Included	20-350	2-Wire AC
<b>IKM - Potted-In Cable</b> 	BIM-IKM-AZ3X2	M1347290	KLI-3 Included	20-350	2-Wire AC
	BIM-IKM-AN6X2/S100	M4627391	High Temp. 100° C	20-350	3-Wire DC NPN
<b>A23 - eurofast Connector</b> 	BIM-A23-AN6X-H1141/S34	M4689191	KLU-2 Included, WFI	20-350	3-Wire DC NPN
	BIM-A23-AP6X2-H1141/S34	M4689291	KLU-2 Included, WFI	20-350	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	20	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	20	≤200	-25 to +70	IP 67	Zinc	PA 12	GN	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	Zinc	PA 12	GN	YE	KB 3T-*	3	<p><b>Diagram 3</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	Zinc	PA 12	GN	YE	2M/PVC	4	<p><b>Diagram 4</b></p>
10-30 VDC	20	≤200	-25 to +100	IP 67	Zinc	PA 12	GN	YE	2M/PVC	1	
10-30 VDC	20	≤200	-25 to +70	IP 67	AL	PBT	N/A	YE	RK 4T-*	1	
10-30 VDC	20	≤200	-25 to +70	IP 67	AL	PBT	GN	YE	RK 4T-*	2	

\* Length in meters.

For material descriptions see page M22.



# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>A23 - microfast® Connector</b> 	BIM-A23-AZ3X-B3131/S34	M1346291	KLU-2 Included, WFI	20-350	2-Wire AC
<b>A23 - minifast® Connector</b> 	BIM-A23-AN6X-B1141/S34	M4688991	KLU-2 Included, WFI	20-350	3-Wire DC NPN
	BIM-A23-AP6X-B1141/S34	M4688891	KLU-2 Included, WFI	20-350	3-Wire DC PNP
<b>A23 - minifast® Connector</b> 	BIM-A23-ADZ30X2-B1131/S34	M4230091	KLU-2 Included, WFI	20-350	2-Wire AC/DC
	BIM-A23-AZ3X-B1131/S34	M1346191	KLU-2 Included, WFI	20-350	2-Wire AC
<b>A23 - Potted-In Cable</b> 	BIM-A23-AZ3X/S34	M1346091	KLU-2 Included, WFI	20-350	2-Wire AC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



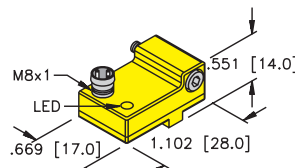
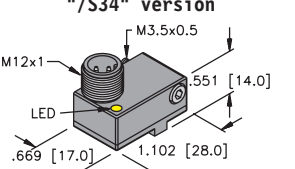
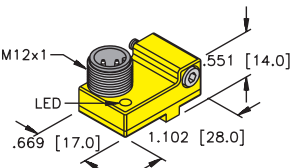
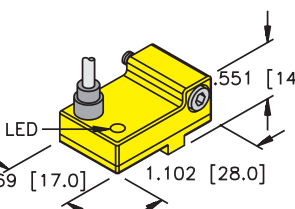
Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
20-250 VAC	20	≤500	-25 to +70	IP 67	AL	PBT	N/A	YE	KB 3T-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	20	≤200	-25 to +70	IP 67	AL	PBT	N/A	YE	RKM 40-*M	4	<p><b>Diagram 2</b></p>
10-30 VDC	20	≤200	-25 to +70	IP 67	AL	PBT	N/A	YE	RKM 40-*M	5	<p><b>Diagram 3</b></p>
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	AL	PBT	GN	YE	RKM 311-*M	2	<p><b>Diagram 4</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	AL	PBT	N/A	YE	RKM 311-*M	2	<p><b>Diagram 5</b></p>
20-250 VAC	20	≤500	-25 to +70	IP 67	AL	PBT	N/A	YE	2M/PVC	3	

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>NST - picrofast® Connector</b>  	BIM-NST-AN6X-V1131	M4685900	w/o Bracket	20-350	3-Wire DC NPN
	BIM-NST-AP6X-V1131	M4685800	w/o Bracket	20-350	3-Wire DC PNP
<b>NST - eurofast® Connector</b>  <b>"/S34" version</b>   	BIM-NST-AN6X-H1141/S34	M4685501	w/o Bracket	20-350	3-Wire DC NPN
	BIM-NST-AN6X-H1141	M4685500	w/o Bracket	20-350	
	BIM-NST-AP6X-H1141/S34	M4685401	w/o Bracket	20-350	3-Wire DC PNP
	BIM-NST-AP6X-H1141	M4685400	w/o Bracket	20-350	
<b>NST - Potted-In Cable</b>  	BIM-NST-AN6X	M4685700	w/o Bracket	20-350	3-Wire DC NPN
	BIM-NST-AP6X	M4685600	w/o Bracket	20-350	3-Wire DC PNP
	BIM-NST-Y1X	M1058400	w/o Bracket	20-350	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	4	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	PKG 3Z-*	5	<p><b>Diagram 2</b></p>
10-30 VDC	20	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4T-*	6	<p><b>Diagram 3</b></p>
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4T-*	6	
10-30 VDC	20	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4T-*	7	<p><b>Diagram 4</b></p>
	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	RK 4T-*	7	
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	1	<p><b>Diagram 5</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	<p><b>Diagram 6</b></p>
10-30 VDC	1000	≤200	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	2	<p><b>Diagram 7</b></p>
5-30 VDC	1000	Remote	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3	

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>8 mm - Barrel, <i>picofast</i>® Connector</b> 	BIM-EG08-AN6X-V1131	S4621303	Up to 78 mm Range	7.5 Typical	3-Wire DC NPN
	BIM-EG08-AP6X-V1131	S4621314	Up to 78 mm Range	7.5 Typical	3-Wire DC PNP
<b>8 mm - Barrel, <i>euofast</i>® Connector</b> 	BIM-EG08-AN6X-H1341	S4621301	Up to 78 mm Range	7.5 Typical	3-Wire DC NPN
	BIM-EG08-AP6X-H1341	S4621311	Up to 78 mm Range	7.5 Typical	3-Wire DC PNP
	BIM-EG08-Y1X-H1341	S1074001	Up to 78 mm Range	7.5 Typical	2-Wire DC NAMUR
<b>8 mm - Barrel, Potted-In Cable</b> 	BIM-EG08-AN6X	S4621300	Up to 78 mm Range	7.5 Typical	3-Wire DC NPN
	BIM-EG08-AP6X	S4621310	Up to 78 mm Range	7.5 Typical	3-Wire DC PNP
	BIM-EG08-Y1X	S1074000	Up to 78 mm Range	7.5 Typical	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



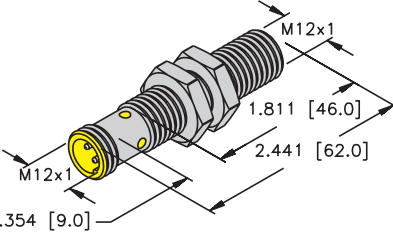
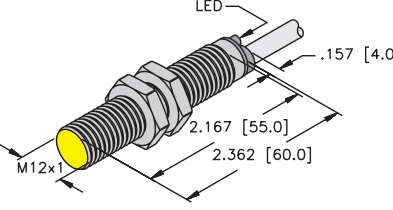
Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	4	<p><b>Diagram 1</b></p>
10-30 VDC	1000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	PKG 3Z-*	5	<p><b>Diagram 2</b></p>
10-30 VDC	1000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	6	<p><b>Diagram 3</b></p>
10-30 VDC	1000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4T-*	7	<p><b>Diagram 4</b></p>
5-30 VDC	1000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	YE	RK 4.21T-*	8	<p><b>Diagram 5</b></p>
10-30 VDC	1000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	2M/PUR	1	<p><b>Diagram 6</b></p>
10-30 VDC	1000	≤150	-25 to +70	IP 67	SS	PA 12	N/A	YE	2M/PUR	2	<p><b>Diagram 7</b></p>
5-30 VDC	1000	Remote	-25 to +70	IP 67	SS	PA 12	N/A	YE	2M/PUR	3	<p><b>Diagram 8</b></p>

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Magnetic Actuation Strength (Gauss)	Output
<b>12 mm - eurofast® Connector</b> 	BIM-M12E-AG4X-H1141/S235	M1579910	Up to 90 mm Range	5 Typical	2-Wire DC
	BIM-M12E-AN4X-H1141	M1579914	Up to 90 mm Range	5 Typical	3-Wire DC NPN
	BIM-EM12E-AP4X-H1141	M1579915	Up to 90 mm Range	5 Typical	3-Wire DC PNP
	BIM-M12E-AP4X-H1141	M1579913	Up to 90 mm Range	5 Typical	
	BIM-M12E-Y1X-H1141	M1074003	Up to 90 mm Range	5 Typical	2-Wire DC NAMUR
<b>12 mm - Potted-In Cable</b> 	BIM-M12E-AG4X	M4430200	Up to 90 mm Range	5 Typical	2-Wire DC
	BIM-EM12E-AN4X	M1579922	Up to 90 mm Range	5 Typical	3-Wire DC NPN
	BIM-M12E-AN4X	M1579912	Up to 90 mm Range		
	BIM-EM12E-AP4X	M1579918	Up to 90 mm Range	5 Typical	3-Wire DC PNP
	BIM-M12E-AP4X/S90	M1579911	Up to 90 mm Range		
	BIM-EM12E-Y1X	M1070036	Up to 90 mm Range	5 Typical	2-Wire DC NAMUR
	BIM-M12E-Y1X	M1074002	Up to 90 mm Range	5 Typical	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	300	≤200	-25 to +70	IP 67	CPB	POM	N/A	YE	RK 4.2T-*	4	<p><b>Diagram 1</b></p>
	1000	≤200	-25 to +70	IP 67	CPB	POM	N/A	YE	RK 4T-*	1	<p><b>Diagram 2</b></p>
10-65 VDC	1000	≤200	-25 to +70	IP 67	SS	POM	N/A	YE	RK 4T-*	2	<p><b>Diagram 3</b></p>
	1000	≤200	-25 to +70	IP 67	CPB	POM	N/A	YE	RK 4T-*	2	
5-30 VDC	1000	Remote	-25 to +70	IP 67	CPB	POM	N/A	YE	RK 4.21T-*	3	<p><b>Diagram 4</b></p>
10-65 VDC	1000	≤100	-25 to +70	IP 67	CPB	POM	N/A	YE	2M/PUR	4	
10-65 VDC	1000	≤200	-25 to +70	IP 67	SS	POM	N/A	YE	2M/PUR	5	<p><b>Diagram 5</b></p>
	1000	≤200	-25 to +70	IP 67	CPB	POM	N/A	YE	2M/PUR	5	
10-65 VDC	1000	≤200	-25 to +70	IP 67	SS	POM	N/A	YE	2M/PUR	6	<p><b>Diagram 6</b></p>
	1000	≤200	-25 to +70	IP 67	CPB	POM	N/A	YE	2M/PUR	6	
5-30 VDC	1000	Remote	-25 to +70	IP 67	SS	POM	N/A	YE	2M/PUR	7	<p><b>Diagram 7</b></p>
	1000	Remote	-25 to +70	IP 67	CPB	POM	N/A	YE	2M/PUR	7	

\* Length in meters.

For material descriptions see page M22.



# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>CRS - eurofast® Connector</b> 	Bi 2-CRS232-AN4X2-H1141/S34	T4570493	WFI	2	3-Wire DC NPN
	Bi 2-CRS260-AN4X2-H1141/S34	T4580004	WFI	2	
	Bi 2-CRS287-AN4X2-H1141/S34		WFI	2	
	Bi 2-CRS317-AN4X2-H1141/S34	T4580093	WFI	2	
	Bi 2-CRS343-AN4X2-H1141/S34	T4571890	WFI	2	
	Bi 2-CRS476-AN4X2-H1141/S34	T4568092	WFI	2	
	Bi 2-CRS524-AN4X2-H1141/S34	T4568096	WFI	2	
	Bi 2-CRS603-AN4X2-H1141/S34	T4580097	WFI	2	
	Bi 2-CRS705-AN4X2-H1141/S34		WFI	2	
	Bi 2-CRS730-AN4X2-H1141/S34	T4580088	WFI	2	
	Bi 2-CRS959-AN4X2-H1141/S34	T4571892	WFI	2	
	Bi 2-CRS1159-AN4X2-H1141/S34		WFI	2	
	Bi 2-CRS232-AP4X2-H1141/S34	T4570492	WFI	2	3-Wire DC PNP
	Bi 2-CRS260-AP4X2-H1141/S34	T4570890	WFI	2	
	Bi 2-CRS287-AP4X2-H1141/S34	T4571290	WFI	2	
	Bi 2-CRS317-AP4X2-H1141/S34	T4571690	WFI	2	
	Bi 2-CRS343-AP4X2-H1141/S34	T4571800	WFI	2	
	Bi 2-CRS476-AP4X2-H1141/S34	T4580091	WFI	2	
	Bi 2-CRS524-AP4X2-H1141/S34	T4580090	WFI	2	
	Bi 2-CRS603-AP4X2-H1141/S34	T4580096	WFI	2	
	Bi 2-CRS705-AP4X2-H1141/S34	T4580089	WFI	2	
	Bi 2-CRS730-AP4X2-H1141/S34	T4580003	WFI	2	
	Bi 2-CRS959-AP4X2-H1141/S34	T4571891	WFI	2	
	Bi 2-CRS1159-AP4X2-H1141/S34	T4570899	WFI	2	

Bi 2-CRS-XXXX-... = Length of probe in mm.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.

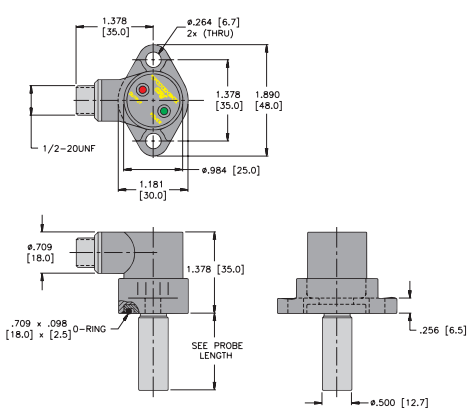
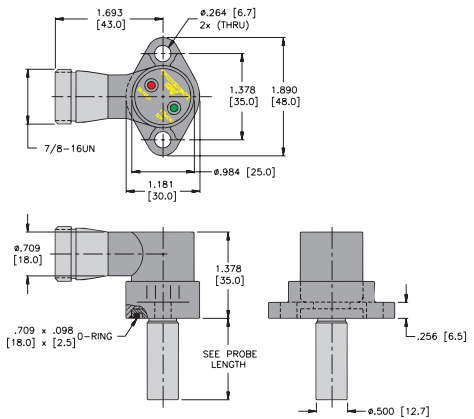


Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Probe	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	30	≤200	-25 to +70	IP 67	Zinc	CPB	Gn	YE	RK 4T-*	1	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; background-color: #e0f0e0;">Diagram 1</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center; background-color: #e0f0e0;">Diagram 2</p> </div>
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	1	
10-65 VDC	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	
	30	≤200	-25 to +70	IP 67	Zinc	CPB	GN	YE	RK 4T-*	2	

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors

Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>CRS - microfast® Connector</b> 	Bi 2-CRS232-ADZ30X2-B3131/S34	T4275093	WFI	2	2-Wire AC/DC
	Bi 2-CRS260-ADZ30X2-B3131/S34	T4275493	WFI	2	
	Bi 2-CRS287-ADZ30X2-B3131/S34	T4275893	WFI	2	
	Bi 2-CRS317-ADZ30X2-B3131/S34	T4276293	WFI	2	
	Bi 2-CRS343-ADZ30X2-B3131/S34	T4276493	WFI	2	
	Bi 2-CRS476-ADZ30X2-B3131/S34	T4276693	WFI	2	
	Bi 2-CRS524-ADZ30X2-B3131/S34	T4277093	WFI	2	
	Bi 2-CRS603-ADZ30X2-B3131/S34	T4277493	WFI	2	
	Bi 2-CRS705-ADZ30X2-B3131/S34	T4277893	WFI	2	
	Bi 2-CRS730-ADZ30X2-B3131/S34	T4278293	WFI	2	
	Bi 2-CRS959-ADZ30X2-B3131/S34	T4279093	WFI	2	
	Bi 2-CRS1159-ADZ30X2-B3131/S34	T4279493	WFI	2	
	<b>CRS - minifast® Connector</b> 	Bi 2-CRS232-ADZ30X2-B1131/S34	T4270093	WFI	
Bi 2-CRS260-ADZ30X2-B1131/S34		T4270493	WFI	2	
Bi 2-CRS287-ADZ30X2-B1131/S34		T4270893	WFI	2	
Bi 2-CRS317-ADZ30X2-B1131/S34		T4271293	WFI	2	
Bi 2-CRS343-ADZ30X2-B1131/S34		T4271493	WFI	2	
Bi 2-CRS476-ADZ30X2-B1131/S34		T4271693	WFI	2	
Bi 2-CRS524-ADZ30X2-B1131/S34		T4272093	WFI	2	
Bi 2-CRS603-ADZ30X2-B1131/S34		T4272493	WFI	2	
Bi 2-CRS705-ADZ30X2-B1131/S34		T4272893	WFI	2	
Bi 2-CRS730-ADZ30X2-B1131/S34		T4273293	WFI	2	
Bi 2-CRS959-ADZ30X2-B1131/S34		T4274093	WFI	2	
Bi 2-CRS1159-ADZ30X2-B1131/S34		T4274493	WFI	2	

Bi 2-CRS-XXXX-.. = Length of probe in mm.

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/DC	Operating Temp. (°C)	Protection	Housing	Probe	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
20-250 VAC/DC	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	KB 3T-*	1	
20-250 VAC/DC	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	
	30	≤400/300	-25 to +70	IP 67	Zinc	CPB	GN	Rd	RKM 311-*M	2	

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>Q6.5 - eurofast® Connector</b> 	Ni 2-Q6.5-AN6-0.1M-FS 4.4X3/S304	M1650079		2	4-Wire DC NPN
	Ni 2-Q6.5-AN6-0.16M-FS 4.4X3/S304	M1650085		2	
	Ni 2-Q6.5-AN6-0.2M-FS 4.4X3/S304	M1650134		2	
	Ni 2-Q6.5-AN6-0.5M-FS 4.4X3/S304	M1650155		2	
	Ni 2-Q6.5-AP6-0.1M-FS 4.4X3/S304	M1650048		2	4-Wire DC PNP
	Ni 2-Q6.5-AP6-0.16M-FS 4.4X3/S304	M1650086		2	
Ni 2-Q6.5-AP6-0.2M-FS 4.4X3/S304	M1650047		2		
<b>Q6.5 - eurofast Connector</b> 	Ni 2-Q6.5-0.1M-BDS-2AP6X3-H1141/S34	M1650098	WFI	2	4-Wire DC PNP
	Ni 2-Q6.5-0.16-BDS-2AP6X3-H1141/S34	M1650110	WFI	2	
	Ni 2-Q6.5-0.20-BDS-2AP6X3-H1141/S34	M1650111	WFI	2	
<b>Q6.5 - microfast® Connector</b> 	Ni 2-Q6.5-ADZ32-0.1M-FSB 5.4X4/S304	M4200204		2	4-Wire VAC/DC
	Ni 2-Q6.5-ADZ32-0.16-FSB 5.4X4/S304	M4200203		2	
	Ni 2-Q6.5-ADZ32-0.2M-FSB 5.4X4/S304	M4200202		2	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Sensor Heads	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	30	≤500	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	1	
	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	1	
	30	≤500	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	1	
10-30 VDC	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	2	
	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	2	
	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	2	
10-30 VDC	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	2	
	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	2	
	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	2	
20-250 VAC 10-300 VDC	30	≤100/100	-25 to +70	IP 67	PBT	PA 12	GN/GN	YE/RD	KB 5T-*	3	
	30	≤100/100	-25 to +70	IP 67	PBT	PA 12	GN/GN	YE/RD	KB 5T-*	3	
	30	≤100/100	-25 to +70	IP 67	PBT	PA 12	GN/GN	YE/RD	KB 5T-*	3	

\* Length in meters.

For material descriptions see page M22.

# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Feature	Sensing Range (mm)	Output
<b>Q9.5 - picofast® Connector</b> 	Ni 2-Q9.5-AP6-0.1M-FS 4.4X3/S304	M1650060		2	4-Wire DC PNP
<b>Q9.5 - picofast Connector</b> 	Ni 2-Q9.5-0.1M-BDS-2AP6X3-H1141/S34	M1650099	WFI	2	4-Wire DC PNP
<b>Q9.5 - microfast® Connector</b> 	Ni 2-Q9.5-ADZ32-0.1M-FSB 5.4X4/S304	M4200210		2	4-Wire VAC/DC
<b>ISI - eurofast® Connector</b> 	Ni 2-ISI-0.1-BDS-2AP6X3-H1141/S34	M1650133	WFI	2	4-Wire DC PNP
	Ni 2-ISI-0.3/0.225-BDS-2AP6X3-H1141/S34	M1650151	WFI	2	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Sensor Heads	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	1	<p><b>Diagram 2</b></p>
20-250 VAC 20-300 VDC	20	≤100/100	-25 to +70	IP 67	PBT	PA 12	GN/GN	YE/RD	KB 5T-*	2	<p><b>Diagram 3</b></p>
10-30 VDC	30	≤150	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	3	
	30	≤200	-25 to +70	IP 67	PBT	PA 12	GN	YE/RD	RK 4.4T-*	3	

For material descriptions see page M22.

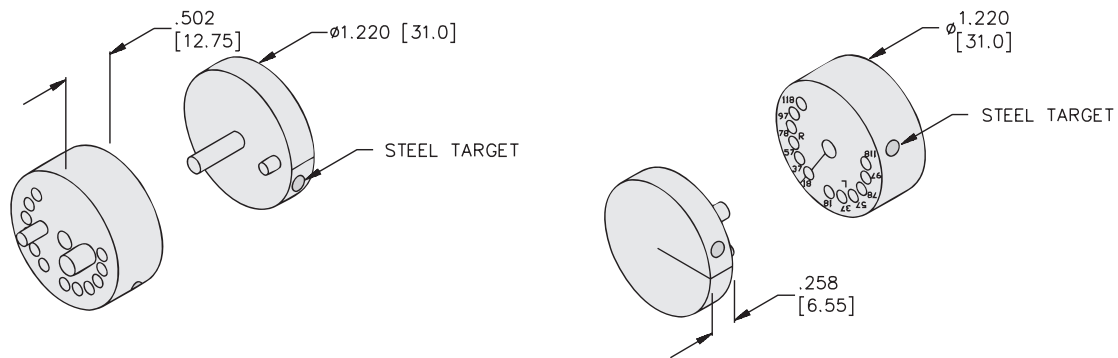


# Inductive Cylinder Position Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>PCS - eurofast® Connector</b> 	Bi 1.5-PCS-2AP4X3-.33M-RS 4.43T/S34	T1650042	WFI	1.5	3-Wire DC PNP
	Bi 1.5-PCS-2AP4X3-.33-RS 4.43T/S576	T1650089		1.5	
<b>PCS - microfast® Connector</b> 	Bi 1.5-PCS-2ADZ32X2-.33M-SB 5T/S34	T4200101	WFI	1.5	4-Wire AC/DC
<b>PCS - minifast® Connector</b> 	Bi 1.5-PCS-2ADZ32X2-.33M-RSM 50/S34	T4200102	WFI	1.5	4-Wire AC/DC
	Bi 1.5-PCS-2ADZ32X2-.33-RSM 50/S576	T4200103		1.5	

## Programming Wheel - Part #A4330

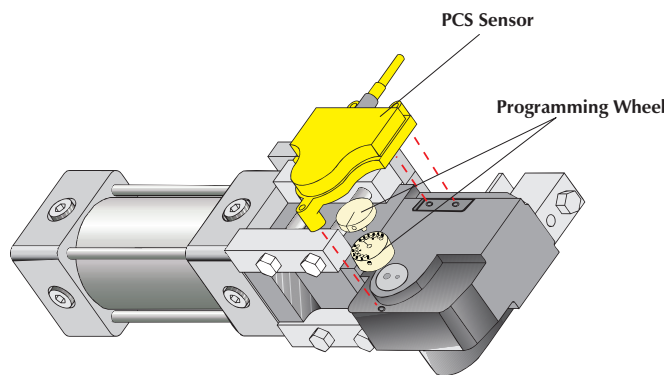


For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	1000	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE/YE	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
	1000	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE/YE	RK 4.4T-*	1	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PBT	PBT	N/A	RD/RD	KB 5T-*	2	
	20	≤100	-25 to +70	IP 67	PBT	PBT	N/A	RD/RD	RKM 511-*M	3	
20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	PBT	PBT	N/A	RD/RD	RKM 511-*M	3	
	20	≤100	-25 to +70	IP 67	PBT	PBT	N/A	RD/RD	RKM 511-*M	3	

\* Length in meters.



For material descriptions see page M22.

# Ultrasonic Sensors

## Ultrasonic Sensor Selection Guide



Ultrasonic Sensors Barrels			
Housing	18 mm	30 mm	47 mm
Sensing Range	20 - 100 mm	30 - 100 mm	300 mm
Pages	H9 - H11	H11	H13

**Ultrasonic Sensor Selection Guide**



Ultrasonic Sensors Barrels and Rectangular			
Housing	65 mm	30 mm	40 mm
Sensing Range	600 MM	30 - 100 mm	100 mm
Pages	H13	H15	H15

**Ultrasonic**

# Ultrasonic Sensors

## Ultrasonic Sensor Part Number Key

**RUC 130 - M 30 - 2 A P 8 X** *Wiring Options*

### Mounting

RU(C) = Ultrasonic Sensor  
 RUN = Ultrasonic Sensor  
 RUR = Ultrasonic Sensor

### Rated Operating Distance (cm)

### Housing Style

#### Barrel - Metal

M = Partial Threading, Chrome Plated Brass

#### Rectangular

Q = Metal or Plastic, Various Rectangular Styles

#### Limit Switch

CP = *combiprox*<sup>®</sup>, Plastic Housing, Terminal Chamber Base with Removable Sensor

### Number of LEDs

Examples:  
 Blank = No LEDs  
 X2 = 2 LEDs

### Voltage Range

#### DC:

6 = 10-30 VDC, Polarity Protected, Pulsed SCP  
 8 = 20-30 VDC, Polarity Protected, Pulsed SCP  
 LI = 20-30 VDC  
 LIU = 15-30 VDC  
 LU = 18-30 VDC

### Output

N = NPN Transistor (Current Sinking)  
 P = PNP Transistor (Current Sourcing)

### Output Function

A = Normally Open (N.O.)  
 LI(LU) = Linear Analog Output Current (LI) or Voltage (LU)  
 LIU = Linear Analog Output (Current and Voltage)  
 LFX = Analog Frequency Output

### Number of Switch Points

### Secondary Barrel Modifier

K = Short Barrel Length  
 S = Side Sensing

### Housing Diameter/Height (mm)

Wiring Options

A) Connectorized Sensor

RUC 130-M30-2AP8X-**H1 1 5 1**

Connector Family

H1 = *eurofast*®, Metal or Plastic, Male

Number of LEDs

Example:  
1 = Standard

Number of Pins

Connector / Sensor Transition

1 = Straight

# Ultrasonic Sensors

## Principle of Operation

The sensor emits an ultrasonic pulse that reflects back from any object entering the sonic cone. Because sound has a constant velocity at a given temperature and humidity, the time taken for this echo to return to the sensor is directly proportional to the distance of the object. The sensor's output status is dependent on the comparison of this time with the setting of the detection zone.

## Medium

TURCK ultrasonic transducers are calibrated for use in air. The sensors can also be used in other gaseous media with a corresponding change in sensing range.

## Targets

Solid, fluid, granular and powdery targets can be detected by TURCK ultrasonic sensors.

The **variations** of an "ideal" target should not exceed 0.15 mm (.006 in). Larger surface variations allow for larger alignment variations but may reduce sensing range.

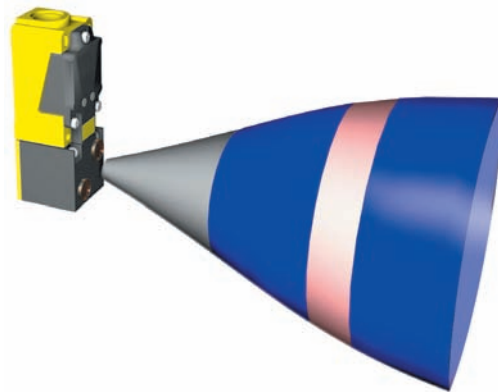
Target **temperature** affects the sensing range in that hot surfaces reflect sonic waves less than cold ones.

The ultrasonic reflectivity of **liquid surfaces** is the same as that of solid, flat objects. Correct alignment should be observed.

Textiles, foams, wool, etc. absorb sonic waves, thereby reducing the sensing range.

## Air pressure

Normal atmospheric pressure changes of  $\pm 5\%$  (at a fixed reference point) can cause a  $\pm 6\%$  deviation in sensing range.



## Air temperature and humidity

Both air temperature and humidity influence the sonic pulse duration. An air temperature increase of 20°C (68°F) results in a +3.5% change in sensing distance for M18, M30 or Q30 styles and +8% for CP40s.

An increase in humidity results in an increased sound speed (max. 2%) compared with dry air.

## Air streams

Air streams affect the echo propagation time, but the effects of air flow speeds of up to 10 m/s are negligible. The use of ultrasonic sensors is not recommended in turbulent areas such as above glowing metal because the sonic waves become distorted, making the echos difficult to evaluate.

## Dewing

Normal concentrations of rain or snow falling in front of the sensor do not affect sensor operation.

CP40 transducers are not protected against wetting. All other ultrasonic sensors are not damaged by water, but correct functionality may be impaired when wet. Therefore, the transducers should not be subjected to direct wetting during use.

## Sensor styles

**M18, M30 & Q30:** these sensor styles have one transducer that functions both as emitter and receiver, which results in a larger blind zone. They have a narrow sonic cone (6°) and are especially suited for detection of small objects in a small area at a long distance.

**CP40** - these sensor styles have two transducers - one emitter and one receiver, which results in a smaller blind zone. They have a wide sonic cone (60°). The wide cone angle allows for a greater angle of inclination for the target. CP40 style sensors are especially suited for detecting objects in a large area.



## Simultaneous operation of several sensors

When several ultrasonic sensors are used, mutual interference of the sonic cones may arise. To eliminate this problem, some of the sensors have synchronization and multiplexing features. For those sensors without these features, maintaining a minimum distance between sensors will also solve this problem.

## Synchronization

Synchronization of ultrasonic sensors causes the sensors to emit their sonic pulses simultaneously. Using RUC...M30, RU...Q30 or RU...M18 sensors, up to six sensors may be synchronized by tying their X1 lines.

## Multiplexing

Multiplexing the sensors causes them to emit their pulses at pre-defined intervals, independent of one another. This eliminates the possibility of mutual interference and of sensors seeing targets that are actually in front of other sensors. The more sensors that are operated alternately, the lower the switching frequency.

The X1 line of sensors RUC...M30, RU...Q30 and RU...M18 can be used as an enable input for multiplexing purposes. An X1 input of +24 V enables the sensor while an X1 input of 0 V disables it. Multiplexing via the X1 line instead of by powering down the sensors has the advantage that only the response time has to be considered and not the time delay before availability.



# Ultrasonic Sensors

## Range adjustments

M30 and CP40 style sensors have two potentiometers to enable both foreground and background suppression. Q30 and discrete M18 style sensors have one potentiometer to enable background suppression only.

Analog M18 sensors have a fixed range.

Sensing ranges given are at nominal conditions, i.e.  $T_u = +20^{\circ}\text{C}$  ( $68^{\circ}\text{F}$ ) using a standard target, vertically aligned, with reflective surface (metal, 1 mm thick).

## Sensors with two switch points

**RUC...2AP8X** - the potentiometers on these sensors set the far limits of each detection zone. Potentiometer S1 sets the far limit of Zone 1, which begins at the end of the blind zone.

Potentiometer S2 sets the far limit of Zone 2, which begins at the far limit of Zone 1 (Figure 1).

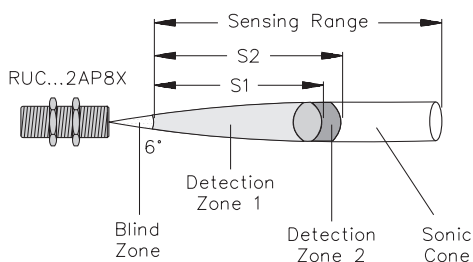


Figure 1

## Sensors with one switch point

**CP40** - potentiometer S1 sets the near limit while potentiometer S2 sets the depth of the detection zone. This allows both foreground and background suppression. Changes to S1 will cause the far limit to follow (Figure 2).

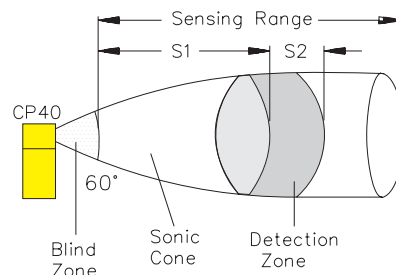


Figure 2

**Q30 and discrete M18** - one potentiometer sets the far limit of the detection zone. The near limit is not adjustable, and is determined by the blind zone. This allows for background suppression only (Figure 3).

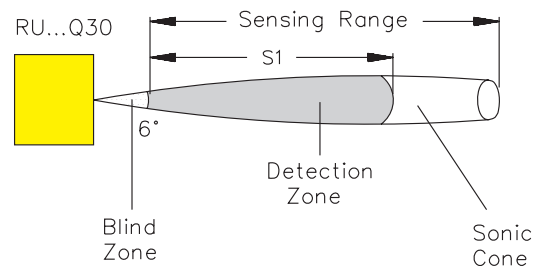


Figure 3

**M30** - potentiometers S1 and S2 set the near and far limits of the detection zone. This allows for foreground and background suppression. The pots are independent of each other (Figure 4).

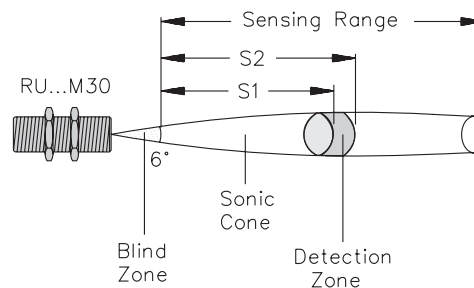
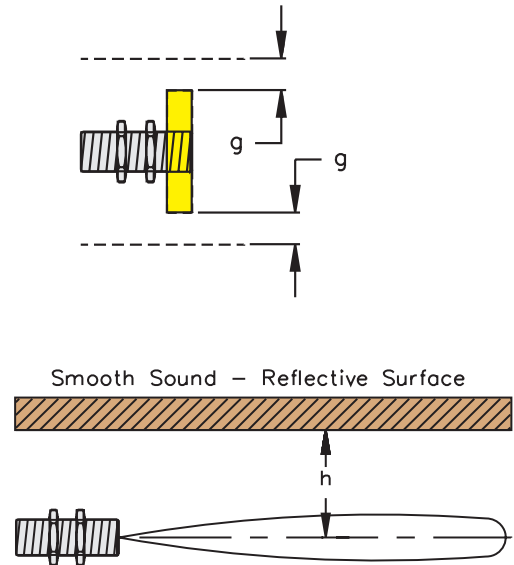
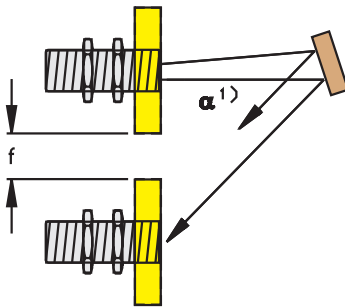
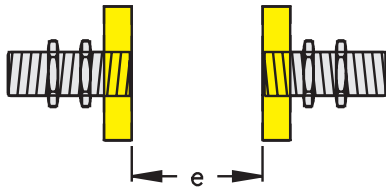


Figure 4

**Mounting Considerations**



Sensor Type	$e$ (cm)	$f$ (cm)	$g$ (cm)	$h$ (cm)
RU20-M18K-	80	6	3	1.5
RU70-M18K-	280	18	10	5.0
RUN20-M18K	80	6	3	1.5
RUN70-M18K-	280	18	10	5.0
RUR20-M18K-	80	6	3	1.5
RUR70-M18K-	280	18	10	5.0
RU20-M18KS-	80	6	3	1.5
RU70-M18KS-	280	18	10	5.0
RUN20-M18KS-	80	6	3	1.5
RUN70-M18KS-	280	18	10	5.0
RUR20-M18KS-	80	6	3	1.5
RUR70-M18KS-	280	18	10	5.0
RU 30-M18-	$\geq 120$	$\geq 15$	$\geq 6$	$\geq 3$
RU100-M18-	$\geq 400$	$\geq 60$	$\geq 30$	$\geq 15$
RU 30-M30-	$\geq 120$	$\geq 15$	$\geq 6$	$\geq 3$
RU100-M30-	$\geq 400$	$\geq 60$	$\geq 30$	$\geq 15$
RU600-M3065-	$\geq 2500$	$\geq 250$	$\geq 80$	$\geq 40$
RUC 30-M30-	$\geq 120$	$\geq 15$	$\geq 6$	$\geq 3$
RUC130-M30-	$\geq 400$	$\geq 60$	$\geq 30$	$\geq 15$
RUC300-M3047-	$\geq 1200$	$\geq 150$	$\geq 60$	$\geq 30$
RUC600-M3065-	$\geq 2500$	$\geq 250$	$\geq 80$	$\geq 40$
RU 30-Q30	$\geq 120$	$\geq 15$	$\geq 6$	$\geq 3$
RU100-Q30	$\geq 400$	$\geq 60$	$\geq 30$	$\geq 15$
RU100-CP40-AP6X2	$\geq 600$	$\geq 100$	$\geq 120$	$\geq 60$
RU100-CP40-LIUX	$\geq 600$	$\geq 100$	$\geq 120$	$\geq 60$

Ultrasonic

<sup>1)</sup> The greater the angle  $\alpha$ , the larger the distance  $f$ . The minimum  $f$  values in the table refer to  $\alpha = 0^\circ$ .

# Ultrasonic Sensors



Housing Style	Part Number	ID Number	Sensor Operating Mode	Rated Oper. Distance(cm)	Adjustment Method	Sonic Cone Angle	Output
<b>18 mm - Embeddable, Barrel Style eurofast® Connection</b> 	RUN20-M18K-AP8X-H1141	M1830034	D	5-20	Teach Input	6°	4-Wire DC PNP
	RUN70-M18K-AP8X-H1141	M1830035	D	15-70	Teach Input	6°	
	RUR20-M18K-AP8X-H1141	M1830036	R	7-20	Teach Input	6°	
	RUR70-M18K-AP8X-H1141	M1830037	R	20-70	Teach Input	6°	
	RU20-M18K-LFX-H1141	M1830030	D	5-20	Teach Input	6°	4-Wire DC 200-800 Hz 400-1600 Hz Frequency Output
	RU70-M18K-LFX-H1141	M1830031	D	15-70	Teach Input	6°	4-Wire DC 150-700 Hz 300-1400 Hz Frequency Output
<b>18 mm - Embeddable, Side Sensing, Barrel Style eurofast connection</b> 	RUN20-M18KS-AP8X-H1141	M1830038	D	5-20	Teach Input	6°	4-Wire DC PNP
	RUN70-M18KS-AP8X-H1141	M1830039	D	15-70	Teach Input	6°	
	RUR20-M18KS-AP8X-H1141	M1830040	R	7-20	Teach Input	6°	
	RUR70-M18KS-AP8X-H1141	M1830041	R	20-70	Teach Input	6°	
	RU20-M18KS-LFX-H1141	M1830032	D	5-20	Teach Input	6°	4-Wire DC 200-800 Hz 400-1600 Hz Frequency Output
	RU70-M18KS-LFX-H1141	M1830033	D	15-70	Teach Input	6°	4-Wire DC 150-700 Hz 300-1400 Hz Frequency Output

### Sensor operating mode:

D = Diffused

R = Retro-reflective

### Adjustment method:

Pot. = Potentiometer

\* 4-wire DC sensors can be programmed with a VB2-SP2 programming kit.

For detailed Sensor Specifications see Section M.

Normally Closed Versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Continuous Load Current (mA)	Operating Temp. (°C)	Protection	Housing	Transducer	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-30 VDC	10	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	5	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
	10	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
	5	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
20-30 VDC	N/A	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	2	
20-30 VDC	N/A	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	2	
20-30 VDC	10	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
	5	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
	10	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
	5	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
20-30 VDC	N/A	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	2	
20-30 VDC	N/A	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	2	

\* Length in meters.

For material descriptions see page M22.

# Ultrasonic Sensors



Housing Style	Part Number	ID Number	Sensor Operating Mode	Rated Oper. Distance(cm)	Adjustment Method	Sonic Cone Angle	Output	
<b>18 mm - Embeddable, eurofast® Connection</b> 	RU30-M18-AP8X-H1141	M1810000	D	5-30	Pot.	6°	4-Wire DC PNP	
	RU100-M18-AP8X-H1141	M1810200	D	15-100	Pot.	6°		
	RU30-M18-LIX-H1141	M1810005	D	5-30	Pot.	6°	4-Wire DC Analog 4-20 mA Current	
	RU100-M18-LIX-H1141	M1810205	D	15-100	Pot.	6°		
	<b>30 mm - Embeddable, eurofast Connection</b> 	RU30-M30-AP8X-H1141	M1830000	D	6-30	Pot.	6°	3-Wire DC PNP
		RU100-M30-AP8X-H1141	M1830200	D	20-130	Pot.	6°	
RUC130-M30-LIAP8X-H1151		M1840230	D	20-130	Pot.	6°	5-Wire DC PNP Analog 4-20 mA	
RUC30-M30-AN8X-H1141		M1840001	D	6-30	Pot.	6°	4-Wire DC NPN	
RUC30-M30-2AP8X-H1151		M1840020	D	6-30	Pot.	6°	5-Wire DC PNP	
RUC130-M30-2AP8X-H1151		M1840220	D	20-130	Pot.	6°		

**Sensor operating mode:**

D = Diffused

R = Retro-reflective

**Adjustment method:**

Pot. = Potentiometer

4-wire DC sensors can be programmed with a RU-DPI programming kit.

For detailed Sensor Specifications see Section M.

Normally Closed Versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Continuous Load Current (mA)	Operating Temp. (°C)	Protection	Housing	Transducer	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-30 VDC	5	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	<b>Diagram 1</b> 
	4	≤150	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	1	
20-30 VDC	N/A	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	2	<b>Diagram 2</b> 
	N/A	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RK 4.4T-*	2	
20-30 VDC	8	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.4T-*	1	<b>Diagram 3</b> 
	4	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.4T-*	1	
20-30 VDC	4	≤300	-25 to +70	IP 65	CPB	E/PU/PBT	GN	YE	RKK 4.5T-*	5	<b>Diagram 4</b> 
20-30 VDC	8	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.4T-*	3	<b>Diagram 5</b> 
	4	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.4T-*	3	
20-30 VDC	8	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.5T-*	4	<b>Diagram 5</b> 
	4	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.5T-*	4	

\* Length in meters.

For material descriptions see page M22.

# Ultrasonic Sensors



Housing Style	Part Number	ID Number	Sensor Operating Mode	Rated Oper. Distance(cm)	Adjustment Method	Sonic Cone Angle	Output
<b>47 mm - Embeddable, eurofast® Connection</b> 	RUC300-M3047-AP8X-H1141	M1840400	D	40-300	Pot.	6°	4-Wire DC PNP
	RUC300-M3047-2AP8X-H1151	M1840420	D	40-300	Pot.	6°	5-Wire DC PNP
<b>65 mm - Embeddable, eurofast Connection</b> 	RU600-M3065-AP8X-H1141	M1830400	D	60-600	Pot.	6°	3-Wire DC PNP
	RUC600-M3065-AP8X-H1141	M1840600	D	60-600	Pot.	6°	4-Wire DC PNP
	RUC600-M3065-2AP8X-H1151	M1840620	D	60-600	Pot.	6°	5-Wire DC PNP

### Sensor operating mode:

D = Diffused

R = Retro-reflective

### Adjustment method:

Pot. = Potentiometer

4-wire DC sensors can be programmed with a RU-PDI programming kit.

For detailed Sensor Specifications see Section M.

Normally Closed Versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Continuous Load Current (mA)	Operating Temp. (°C)	Protection	Housing	Transducer	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
20-30 VDC	2	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.4T-*	2	<p><b>Diagram 1</b></p> <p>Synchronize/Multiplex Input</p>
20-30 VDC	2	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.5T-*	3	<p><b>Diagram 2</b></p> <p>Synchronize/Multiplex Input</p>
20-30 VDC	1	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4T-*	4	<p><b>Diagram 3</b></p> <p>Frequency Input</p>
20-30 VDC	1	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.4T-*	2	<p><b>Diagram 4</b></p> <p>Current Output</p> <p>Synchronize/Multiplex Input</p>
20-30 VDC	1	≤300	-25 to +70	IP 67	CPB	E/PU/PBT	N/A	YE	RKK 4.5T-*	5	<p><b>Diagram 5</b></p> <p>Synchronize/Multiplex Input</p>

\* Length in meters.

For material descriptions see page M22.



# Ultrasonic Sensors



Housing Style	Part Number	ID Number	Sensor Operating Mode	Rated Oper. Distance(cm)	Adjustment Method	Sonic Cone Angle	Output
<b>30 mm - Embeddable, Rectangular</b> <b>euromast® Quick Disconnect</b> 	RU30-Q30-AP8X-H1141	M1820000	D	6-30	Pot.	6°	4-Wire DC PNP
	RU100-Q30-AP8X-H1141	M1820200	D	20-100	Pot.	6°	
<b>40 mm - Embeddable, Rectangular, Terminal Chamber</b> 	RU100-CP40-AP6X2 W/ESD	M1610200	D	5-180	Pot.	60°	3-Wire DC PNP
	RU100-CP40-LIUX W/ESD	M1534800	D	5-180	Pot.	60°	4-Wire Analog 0-10 V 0-20 mA Current and Voltage

**Sensor operating mode:**

D = Diffused  
R = Retro-reflective

For detailed Sensor Specifications see Section M.  
Normally Closed Versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Continuous Load Current (mA)	Operating Temp. (°C)	Protection	Housing	Transducer	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
18-35 VDC	8	≤100	-25 to +70	IP 67	Crastin	EPR	N/A	YE	RKK 4.4T-*	1	<b>Diagram 1</b> 
	5	≤100	-25 to +70	IP 67	Crastin	EPR	N/A	YE	RKK 4.4T-*	1	
18-35 VDC	N/A	≤100	-25 to +70	IP 67	Crastin	EPR	N/A	YE	RKK 4.4T-*	2	<b>Diagram 2</b> 
	N/A	≤100	-25 to +70	IP 67	Crastin	EPR	N/A	YE	RKK 4.4T-*	2	
10-30 VDC	3	≤200	-25 to +70	IP 67	PBT	EPR	GN	YE	- - - -	3	<b>Diagram 3</b> 
15-30 VDC	N/A	≤100	-25 to +70	IP 67	PBT	EPR	N/A	YE	- - - -	4	<b>Diagram 4</b> 

\* Length in meters.

For material descriptions see page M22.

## Specialty Sensor Selection Guide



Valve Sensors

Housing	20 mm	26 mm	35 mm
Sensing Range	4 mm	4 mm	4 mm
Pages	J13 - J15	J9 - J11	J5 - J7



Barrels Sensors

Housing	32 mm	16 mm	18 mm
Sensing Range	12 mm	2.5 mm	5 mm
Pages	J23	J23	J25

**Specialty Sensor Selection Guide**



Barrels, Ring and Slot Sensors			
Housing	30 mm	Ring	Slot
Sensing Range	10 mm	6 - 100 mm	2 - 30 mm
Pages	J25	J27 - J31	J33 - J35



Embeddable/Nonembeddable Sensors		
Housing	35 mm	CQ40
Sensing Range	20 mm	25 mm
Pages	J21	J21

**Specialty**

# Inductive Sensors

**B i 10 U - G T 30 - A DZ 30 X2** **Wiring Options** **Special Option Codes**

## Mounting

- B = Embeddable
- N = Nonembeddable
- S = Slot Sensor
- RUC = Ultrasonic Sensor
- W = Position Measuring System

## Principle of Operation

- C = Capacitive
- CF = Capacitive (Noise immune)
- I = Inductive
- IM = Inductive Magnet Operated
- R = Reed

Rated Operating Distance (mm)

## Sensing Characteristics

- F = Front Sensing on Q26 and Q34 Sensor
- NF = Nonferrous Only
- R = Ring Sensor
- S = Side Sensing on Q26 Sensor
- T = Side Sensing on Q34 Sensor
- U = *Uprox*<sup>®</sup> Sensor

## Housing Material Modifier

- E = Stainless Steel

## Housing Style

### Barrel - Metal

- G = Full Threading, Generally Chrome Plated Brass
- H = Smooth, Chrome Plated Brass or Stainless Steel
- M = Partial Threading, Chrome Plated Brass

### Barrel - Plastic

- K = Smooth
- KT = PVDF, Smooth
- P = Full Threading
- PT = PVDF, Full Threading
- S = Partial Threading
- T = Right Angle

### Rectangular

- Q = Metal or Plastic, Various Rectangular Styles

### Limit Switch

- CA = *stubby*<sup>®</sup>, Short Aluminum Housing, Connector
- CK = *stubby*<sup>®</sup>, Short Plastic Housing, Connector
- CP = *combiprox*<sup>®</sup>, Plastic Housing, Terminal Chamber Base with Removable Sensor

### Slot

- K = Slot Sensor, Plastic Housing

### Ring

- 32SR = Large Plastic Housing, Static or Dynamic Output
- Q = Small Rectangular Plastic Housing, Static Output
- W = Small Plastic Housing, Dynamic Output

## Number of LEDs

Examples:

- Blank = No LEDs
- X2 = 2 LEDs

## Voltage Range

### AC/DC: (No SCP\*\*)

- 3 = 20-250 VAC, 10-300 VDC
- 31 = 20-250 VAC, 10-300 VDC, Plastic Barrel
- 33 = 35-250 VAC, Grounded Metal Barrel

### AC/DC: (Latched SCP)

- 30 = 20-250 VAC, 10-300 VDC
- 32 = 20-250 VAC, 10-300 VDC
- 40 = 20-140 VAC/DC, High Off-State Current

### DC:

- 4 = 10-65 VDC, Polarity Protected, Pulsed SCP\*\*
- 6 = 10-30 VDC, Polarity Protected, Pulsed SCP
- 7 = 10-30 VDC, TTL Compatible
- 8 = 20-30 VDC, Polarity Protected, Pulsed SCP
- 41 = 10-65 VDC, Polarity Protected, Pulsed SCP
- 61 = 10-30 VDC, Polarity Protected, Pulsed SCP
- LI = 20-30 VDC
- LIU = 15-30 VDC
- LU = 18-30 VDC

\*\*SCP = Short-Circuit and Overload Protection

## Output

- D = 2-Wire DC (Transistor Output)
- DZ = 2-Wire AC/DC, (Power MOSFET Output)
- LF = Frequency Output
- G = 2-Wire DC, Low Voltage Drop
- LI(LU) = Linear Analog Output Current (LI) or Voltage (LU)
- LIU = Linear Analog Output (Current and Voltage)
- N = NPN Transistor (Current Sinking)
- P = PNP Transistor (Current Sourcing)
- R = Relay Output
- SIU = Analog Output (non-linear)
- Z = 2-Wire AC or 2-Wire AC/DC

## Output Function

- A = Normally Open (N.O.)
- DA = Dynamic Output (Ring Sensor), Normally Open
- F = Connection Programmable (N.O. or N.C.)
- R = Normally Closed (N.C.)
- U = Jumper Programmable (N.O. or N.C.)
- V = Complementary Outputs: One N.O., One N.C.
- Y0 = NAMUR Output, Requires Switching Amplifier
- Y1 = NAMUR Output, Requires Switching Amplifier

## Secondary Barrel Modifier

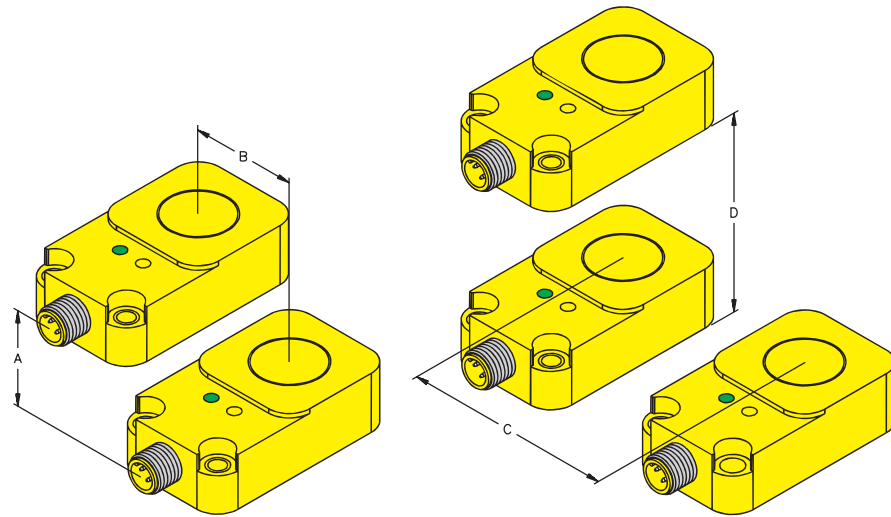
- E = Extended Barrel Length
- H = weldguard<sup>®</sup>/Stoneface
- K = Short Barrel Length
- LD = Load Dump
- M = Medium Barrel Length
- SK = Right-Angle Terminal Chamber
- SR = Straight Terminal Chamber
- T = Barb Fitting at Cable Entry
- WD = Washdown IP 67/IP 68/IP 69K
- S = Side Sensing

Housing Diameter/Height (mm) or CRS Probe Length (mm = Number/10)

## Primary Barrel Modifier

- T = Teflon<sup>®</sup> Coated

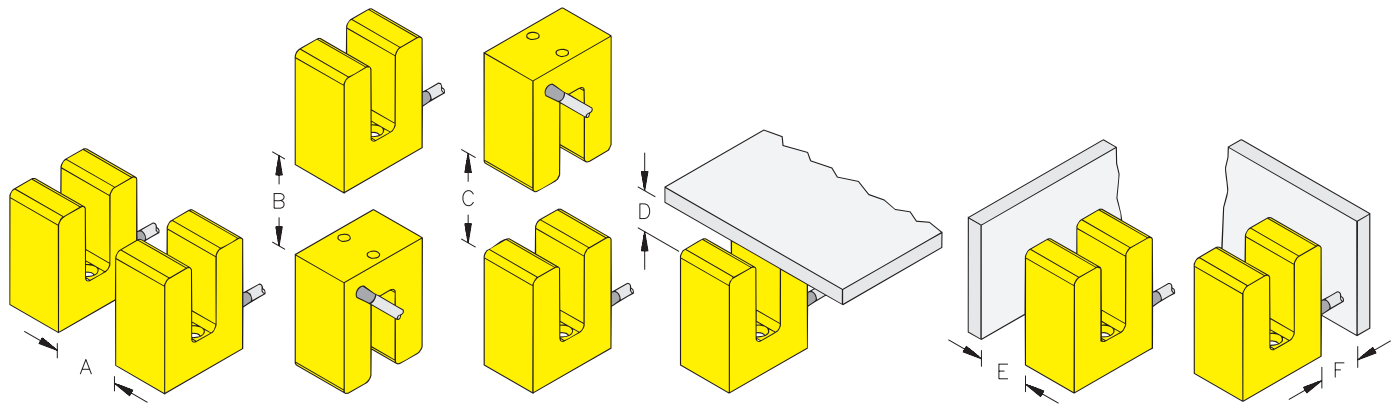
**Embeddable Mounting Characteristics**



**Ring Sensors Minimum Distances**

Sensor Type	A	B	C	D
Q14...	30.00	14.00	45.00	30.00
Q20	40.00	20.00	55.00	40.00
W30...	N/A	N/A	120.00	120.00

Dimensions are in mm.



**Slot Sensors Minimum Distances**

Sensor Type	A	B	C	D	E	F
Si 2	15.00	5.00	15.00	0	0	0
Si 3.5	15.00	5.00	15.00	0	0	0
Si 5	10.00	0	5.00	0	0	0
Si15	30.00	10.00	30.00	5.00	5.00	5.00
Si30	30.00	0	30.00	10.00	10.00	10.00

Dimensions are in mm.

Specialty

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>35 mm - Nonembeddable, Dual Valve Sensor, Potted-In Cable</b> 	Ni 4-DSU35-2AN4X2	M1569921		4	Dual 2-Wire DC NPN
	Ni 4-DSU35-2AP4X2	M1569900		4	Dual 2-Wire DC PNP
	Ni 4-DSU35-2Y0X2	M1051002		4	Dual 2-Wire DC
	Ni 4-DSU35-2ADZ30X2	M4290000		4	Dual 2-Wire AC/DC
<b>35 mm - Nonembeddable, Dual Valve Sensor, Potted-In Cable</b> 	Ni 4-DSU35TC-2AP4X2	M1569902		4	Dual 2-Wire DC PNP
	Ni 4-DSU35TC-2Y0X2	M1051004		4	Dual 2-Wire DC NAMUR
	Ni 4-DSU35TC-2ADZ30X2	M4290002		4	Dual 2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	50	≤200	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	1	<b>Diagram 1</b> 
10-65 VDC	50	≤200	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	2	<b>Diagram 2</b> 
5-30 VDC	50	Remote	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	6	<b>Diagram 3</b> 
20-250 VAC 10-300 VDC	30	≤400/300	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	4	<b>Diagram 4</b> 
10-65 VDC	50	≤200	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	2	<b>Diagram 5</b> 
5-30 VDC	50	Remote	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	3	<b>Diagram 6</b> 
20-250 VAC 10-300 VDC	30	≤400/300	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	5	<b>Diagram 7</b> 

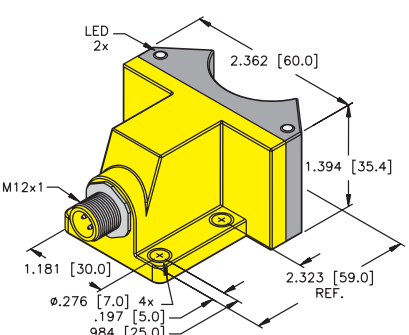
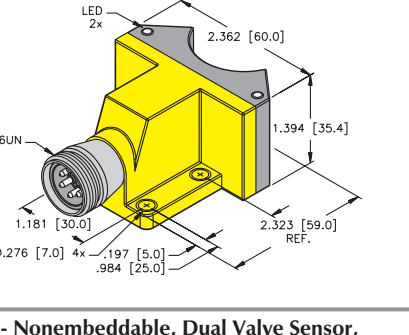
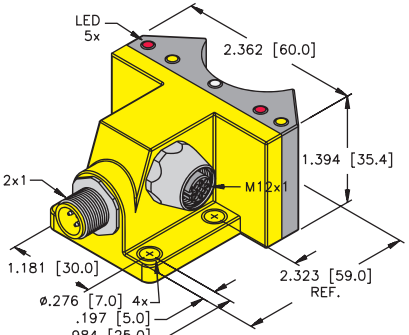
Specialty

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>35 mm - Nonembeddable, Dual Valve Sensor, eurofast® Connector</b>  	Ni 4-DSU35-2AN4X2-H1141	M1569920		4	Dual 2-Wire DC NPN
	Ni 4-DSU35-2AP4X2-H1141	M1569901		4	Dual 2-Wire DC PNP
	Ni 4-DSU35-2Y0X2-H1140	M1051003		4	Dual 2-Wire DC NAMUR
<b>35 mm - Nonembeddable, Dual Valve Sensor, minifast® Connector</b>  	Ni 4-DSU35-2ADZ30X2-B1151	M4290001		4	Dual 2-Wire AC/DC
<b>35 mm - Nonembeddable, Dual Valve Sensor, eurofast Connector</b>  	Ni 4-DSU35-2ASIX4-H1140	M1902000		4	Dual 2-Wire ASI-BUS
	Ni 4-DSU35-2DNETX5-H1150	M1569908		4	5-Wire DeviceNet®

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	50	≤200	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.4T-*	1	<p><b>Diagram 1</b></p>
10-65 VDC	50	≤200	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.4T-*	2	<p><b>Diagram 2</b></p>
5-30 VDC	50	Remote	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.41T-*	6	<p><b>Diagram 3</b></p>
20-250 VAC 10-300 VDC	30	≤400/300	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RKM 50-*M	4	<p><b>Diagram 4</b></p>
18-33 VDC	30	N/A	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.4T-* RKC 254-*M	5	<p><b>Diagram 5</b></p>
11-25 VDC	50	N/A	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.5T-* RKC 572-*M	6	<p><b>Diagram 6</b></p>

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>26 mm - Nonembeddable, Dual Valve Sensor, eurofast® Connector</b> 	Ni 4-DSC26-2AP6X2-H1141	S1650087		4	Dual 2-Wire DC PNP
<b>26 mm - Nonembeddable, Dual Valve Sensor, eurofast Connector</b> 	Ni 4-DSU26-2AP4X2-H1141	M1569904		4	Dual 2-Wire DC PNP
	Ni 4-DSU26-2Y0X2-H1140	M1051007		4	Dual 2-Wire DC NAMUR
<b>26 mm - Nonembeddable, Dual Valve Sensor, eurofast Connector</b> 	Ni 4-DSU26-2ASIX4-H1140	M1902001		4	Dual 2-Wire DC ASI-BUS

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.

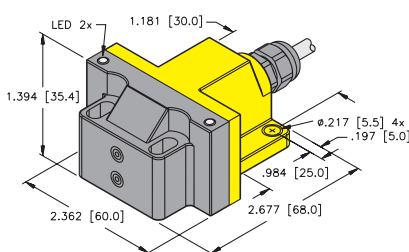
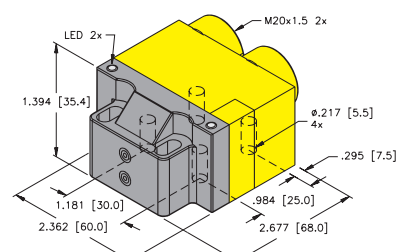


Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	50	≤200	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.4T-*	1	<p><b>Diagram 1</b></p>
10-65 VDC	50	≤200	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.4T-*	1	<p><b>Diagram 2</b></p>
5-30 VDC	50	Remote	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.41T-*	2	<p><b>Diagram 3</b></p>
18-33 VDC	30		-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	RK 4.4T-* RKC 254-*M	3	

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>26 mm - Nonembeddable, Dual Valve Sensor, Potted-In Cable</b> 	Ni 4-DSU26-2ADZ30X2	M4290005		4	Dual 2-Wire AC/DC
<b>26 mm - Nonembeddable, Dual Valve Sensor, Potted-In Cable</b> 	Ni 4-DSU26TC-2ADZ30X2	M4290004		4	Dual 2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	30	≤400/300	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	30	≤400/300	-25 to +70	IP 67	PP	PP	N/A	N/A	YE/RD	- - - -	2	

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>20 mm - Nonembeddable, Dual Valve Sensor, eurofast® Connection</b> 	Ni 4-DS20-2AP6X2-H1141	M1650020		4	Dual 2-Wire DC PNP
	Ni 4-DS20-2Y1X2-H1140	M1050001		4	Dual 2-Wire DC NAMUR
<b>20 mm - Nonembeddable, Dual Valve Sensor, microfast® Connection</b> 	Ni 4-DS20-2AZ31X2-B3151	M1305000		4	Dual 2-Wire AC/DC
<b>20 mm - Nonembeddable, Dual Valve Sensor, Potted-In Cable</b> 	Ni 4-DS20-2AP6X2	M1650022		4	Dual 2-Wire DC PNP
	Ni 4-DS20-2Y1X2	M1050002		4	Dual 2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.

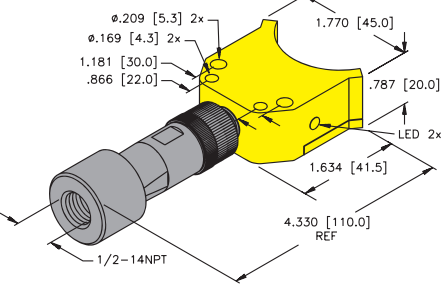
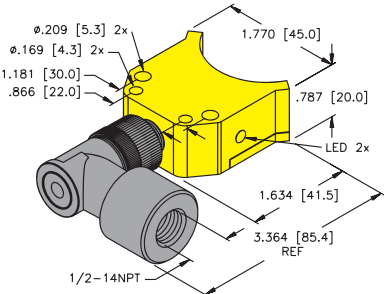


Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	50	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE/YE	RK 4.4T-*	1	<p><b>Diagram 1</b></p>
5-30 VDC	50	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	RD/RD	RK 4.41T-*	2	<p><b>Diagram 2</b></p>
20-250 VAC 10-300 VDC	300	≤400/300	-25 to +70	IP 67	PBT	PBT	N/A	N/A	RD/RD	KB 5T-*	3	<p><b>Diagram 3</b></p>
10-30 VDC	50	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE/YE	2M/PVC	4	<p><b>Diagram 4</b></p>
5-30 VDC	50	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	RD/RD	2M/PVC	5	<p><b>Diagram 5</b></p>

For material descriptions see page M22.



# Inductive Sensors

Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>20 mm - Nonembeddable, Dual Valve Sensor, Straight Field Wireable Connection</b> 	Ni 4-DS20-2AP6X2-H1141/S578	M1650020-3		4	Dual 2-Wire DC PNP
<b>20 mm - Nonembeddable, Dual Valve Sensor, Right Angle Field Wireable Connection</b> 	Ni 4-DS20-2AP6X2-H1141/S579	M1650020-2		4	Dual 2-Wire DC PNP

"/S578" designates H1141 sensor assembled w/TMF 9-14 & straight **euromast** field wireable (B 8141-0).

"/S579" designates H1141 sensor assembled w/TMF 9-14 & right angle **euromast** field wireable (B 8241-0).

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA) VAC/VDC	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	50	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE/RD	- - - -	1	<p><b>Diagram 1</b></p>
10-30 VDC	50	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE/RD	- - - -	1	

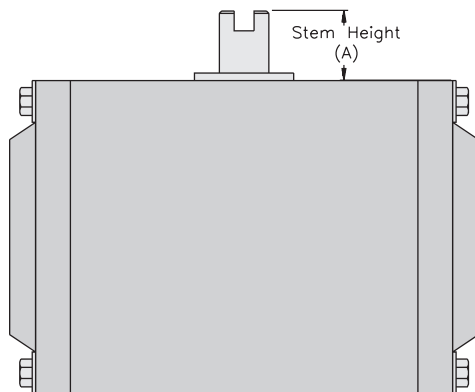
For material descriptions see page M22.

## Valve Sensor Puck Selection Guide

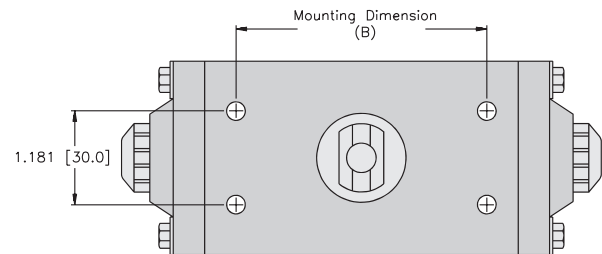
Stem Height (A)		20mm		30mm		50mm	
Mounting Dimension (B)		80mm	130mm	80mm	130mm	80mm	130mm
Part Number	Output Function						
DS20	End Position Indication- On	BTS-DS20-TP1	Consult Factory	BTS-DS20-TK1	BTS-DS20-TK1	N/A	N/A
	Adjustable/End Position- On	BTS-DS20-KEY	BTS-DS20-KEY	Consult Factory	Consult Factory	N/A	N/A
DSC26	End Position Indication- On	BTS-DSC26-EB1	Consult Factory	BTS-DSC26-EB2	BTS-DSC26-EB3	Consult Factory	Consult Factory
DSU35	End Position Indication- On	BTS-DSU35-EB1	BTS-DSU35-EB1	BTS-DSU35-EB1	BTS-DSU35-EB1	BTS-DSU35-EB1 and BTS-DSU35-Z07	BTS-DSU35-EB1 and BTS-DSU35-Z07
	Adjustable/End Position- On	BTS-DSU35-EBE1	BTS-DSU35-EBE1	BTS-DSU35-EBE2	BTS-DSU35-EBE2	BTS-DSU35-EBE1 and BTS-DSU35-Z07	BTS-DSU35-EBE1 and BTS-DSU35-Z07
	End Position Indication- Off	BTS-DSU35-EU1	BTS-DSU35-EU1	BTS-DSU35-EU1	BTS-DSU35-EU1	BTS-DSU35-EU1 and BTS-DSU35-Z07	BTS-DSU35-EU1 and BTS-DSU35-Z07

For stems that exceed 40mm in diameter, consult drawings for appropriate shim package

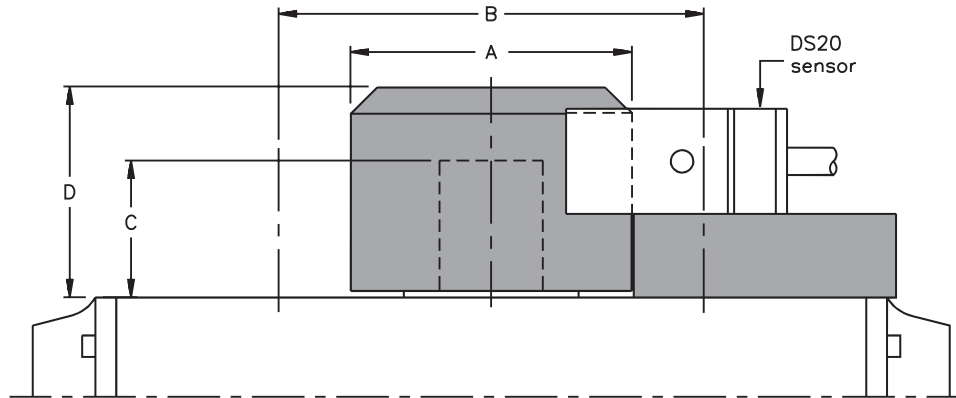
*Actuator Side View*



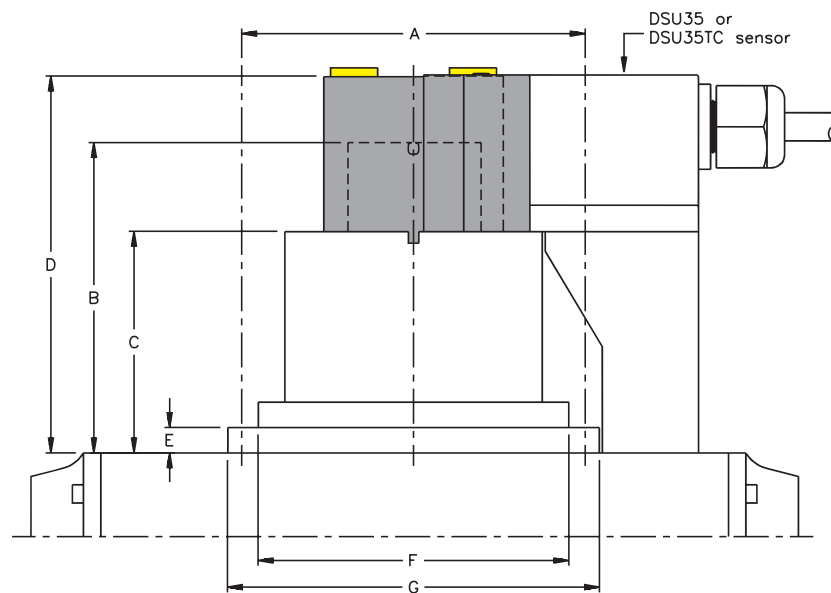
*Actuator Top View*



Valve Sensor Puck Information



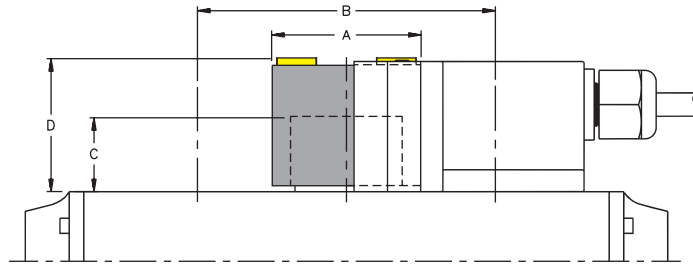
Part Number	Dimensions			
	A	B	C	D
BTS-DS20-KEY	40	80/130	20	37



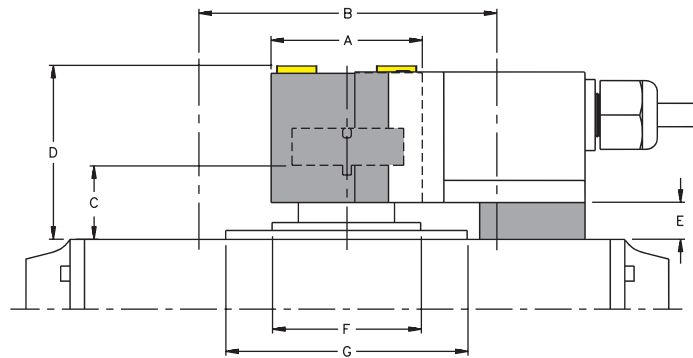
Part Number	Dimensions						
	A	B	C	D	E	F	G
BTS-DSU35-Z03	130	50	30	65	19 (max)	70	110
BTS-DSU35-Z07	130	70	50	85	19 (max)	10	110

Specialty

## Valve Sensor Puck Information



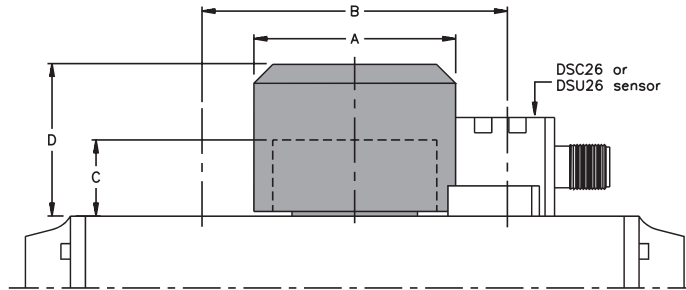
Part Number	Dimensions			
	A	B	C	D
BTS-DSU35-EB1	40	80/130	20/30	36
BTS-DSU35-EU1	40	80/130	20/30	36
BTS-DSU35-EBE1	40	80/130	20	36
BTS-DS20-TP1	40	80	20	36



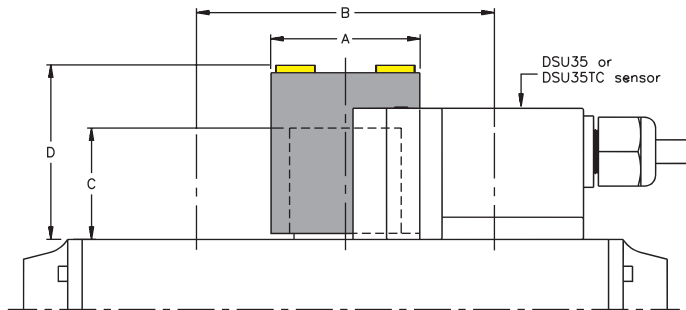
Part Number	Dimensions						
	A	B	C	D	E	F	G
BTS-DSU35-Z01	40	80/130	20	45.00	10	40	65
BTS-DSU35-Z02	40	80/130	20	55.00	20	40	65
BTS-DSU35-Z04	40	80/130	30	45.00	10	40	65
BTS-DSU35-Z05	40	80/130	30	55.00	20	30	65
BTS-DSU35-Z06	40	80/130	30	65.00	30	40	65
BTS-DS20-TK1	40	80/130	30	46	10	50	50

"Z" mounting packages include shims to increase height of sensor and may include similar shim for target puck (depending on package).

**Valve Sensor Puck Information**



Part Number	Dimensions			
	A	B	C	D
BTS-DSC26-EB1	53	80	20	40
BTS-DSC26-EB2	65	80	30	50
BTS-DSC26-EB3	102	130	30	50



Part Number	Dimensions			
	A	B	C	D
BTS-DSU35-EBE2	40	80/130	30	47

All Dimensions are in mm

Specialty

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>35 mm -Embeddable</b> 	Bi20-K35/S200 10M	M4614518	<b>High Temp. +200°C</b> Functions only with Signal processor listed below	20	Remote
<b>Rectangular-Signal Processor</b> 	MK96-11VP/24VDC	M7525015	Functions only with Sensor listed above	N/A	4-Wire DC PNP
<b>CQ40 - Nonembeddable</b> 	Ni25-CQ40/S1102 5M	M1602410	<b>High Temp. +250°C</b> Functions only with Signal processor listed below	25	Remote
<b>30 mm - Signal Processor</b> 	EM30-AP6X2-H1141/S1102	M1602411	Functions only with Sensor listed above	N/A	3-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
Remote	1000	Remote	-25 to +200	IP 40	PTFE	PTFE	N/A	N/A	N/A	10M/PTFE	2	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
19.2-28.8 VDC	Sensor	≤100	-20 to +60	IP 20	ABS		N/A	GN	YE	N/A	2	
Remote	40	Remote	0 to +250	IP 60	AL	PEEK	PEEK	N/A	N/A	30M/AL	1	
10-30 VDC	40	≤200	-20 to +70	IP 67	SS	SS	N/A	GN	YE	N/A	1	

Specialty

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>16 mm - Embeddable, Vprox, Potted-In Cable</b> 	Bi 2.5-EG16CA-FDZ32X2	T4205100-1	Prog. Outputs Low Temp. -40	2.5	2-Wire AC/DC
<b>16 mm - Embeddable, minifast® Connector</b> 	Bi 2.5-EG16CA-FDZ32X2-B1151	T4205190	Prog. Outputs Low Temp. -40	2.5	2-Wire AC/DC
<b>32 mm - Embeddable</b> 	Bi 12U-EH32H-AP6	M1634900	<i>Uprox</i>	12	3-Wire DC PNP
	Bi 12U-EH32H-ADZ32	M4281120	<i>Uprox</i>	12	2-Wire AC/DC

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
20-250 VAC 10-300 VDC	50	≤100	-40 to +70	IP 67	CPB	PA 12	N/A	GN	RD	2M/PVC	1	<p><b>Diagram 1</b></p>
20-250 VAC 10-300 VDC	50	≤100	-40 to +70	IP 67	CPB	PA 12	N/A	GN	RD	RK 50-*M	2	<p><b>Diagram 2</b></p>
10-65 VDC	2000	≤500	-25 to +70	IP 67	SS	SF	N/A	N/A	N/A	2M/XOR	3	<p><b>Diagram 3</b></p>
20-250 VAC 10-300 VDC	1000	≤100	-25 to +70	IP 67	SS	SF	N/A	N/A	N/A	2M/XOR	4	<p><b>Diagram 4</b></p>

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>18 mm - Embeddable Rotational Speed Monitor, Potted-In Cable</b> 	DBi 5U-M18E-AP4X3	M1582236	<i>Uprox</i>	5	3-Wire DC PNP
<b>30 mm - Embeddable Rotational Speed Monitor, Potted-In Cable</b> 	DBi10U-M30-AP4X2	M1582231	<i>Uprox</i>	10	3-Wire DC PNP

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	0.05-50	≤200	-30 to +85	IP 67	CPB	PBT	PUR	GN	YE/RD	2M/PVC	1	<p><b>Diagram 1</b></p>
10-65 VDC	0.05-50	≤200	-30 to +85	IP 67	CPB	PBT	PA 66	N/A	Ye/RD	2M/PVC	1	

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Minimum Target Diameter	Ring Dia. (mm)	Output
<b>14 mm - Rectangular, Ring Sensor, eurofast® Quick Disconnect</b> 	Bi 6R-Q14-AN6X2-H1141	M1407020	≥ 2 mm	6	3-Wire DC NPN
	Bi10R-Q14-AN6X2-H1141	M1407120	≥ 2 mm	10	
	Bi15R-Q14-AN6X2-H1141	M1407220	≥ 3 mm	15	
	Bi20R-Q14-AN6X2-H1141	M1407320	≥ 4 mm	20	
	Bi 6R-Q14-AP6X2-H1141	M1407000	≥ 2 mm	6	3-Wire DC PNP
	Bi10R-Q14-AP6X2-H1141	M1407100	≥ 2 mm	10	
	Bi15R-Q14-AP6X2-H1141	M1407200	≥ 3 mm	15	
	Bi20R-Q14-AP6X2-H1141	M1407300	≥ 4 mm	20	
<b>14 mm - Rectangular, Ring Sensor, Potted-In Cable</b> 	Bi 6R-Q14-AN6X2	M1406020	≥ 2 mm	6	3-Wire DC NPN
	Bi10R-Q14-AN6X2	M1406120	≥ 2 mm	10	
	Bi15R-Q14-AN6X2	M1406220	≥ 3 mm	15	
	Bi20R-Q14-AN6X2	M1406320	≥ 4 mm	20	
	Bi 6R-Q14-AP6X2	M1406000	≥ 2 mm	6	3-Wire DC PNP
	Bi10R-Q14-AP6X2	M1406100	≥ 2 mm	10	
	Bi15R-Q14-AP6X2	M1406200	≥ 3 mm	15	
	Bi20R-Q14-AP6X2	M1406300	≥ 4 mm	20	
<b>20 mm - Rectangular, Ring Sensor, eurofast Quick Disconnect</b> 	Bi30R-Q20-AN6X2-H1141	M1407520	≥ 6 mm	30	3-Wire DC NPN
	Bi30R-Q20-AP6X2-H1141	M1407500	≥ 6 mm	30	3-Wire DC PNP
<b>30 mm - Rectangular, Ring Sensor, eurofast Quick Disconnect</b> 	Bi 6R-W30-DAN6X-H1141	M1403700	≥ 0.6 mm	6	3-Wire DC NPN
	Bi10R-W30-DAN6X-H1141	M1403900	≥ 1 mm	10	
	Bi15R-W30-DAN6X-H1141	M1404100	≥ 1.5 mm	15	
	Bi20R-W30-DAN6X-H1141	M1404300	≥ 2 mm	20	
	Bi30R-W30-DAN6X-H1141	M1404501	≥ 3 mm	30	
	Bi 6R-W30-DAP6X-H1141	M1403600	≥ 0.6 mm	6	3-Wire DC PNP
	Bi10R-W30-DAP6X-H1141	M1403800	≥ 1 mm	10	
	Bi15R-W30-DAP6X-H1141	M1404000	≥ 1.5 mm	15	
	Bi20R-W30-DAP6X-H1141	M1404200	≥ 2 mm	20	
	Bi30R-W30-DAP6X-H1141	M1404500	≥ 3 mm	30	

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	1	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	1	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	1	
10-30 VDC	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	2	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	2	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	2	
10-30 VDC	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	3	<p><b>Diagram 3</b></p>
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	3	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	3	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	3	
10-30 VDC	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	4	<p><b>Diagram 4</b></p>
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	4	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	4	
	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	2M/PVC	4	
10-30 VDC	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	1	
10-30 VDC	8	200	-25 to +70	IP 67	PBT	POM	N/A	GN	YE	RK 4T-*	2	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	1	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	1	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	1	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	1	
10-30 VDC	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	2	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	2	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	2	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	2	
	8	200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	2	

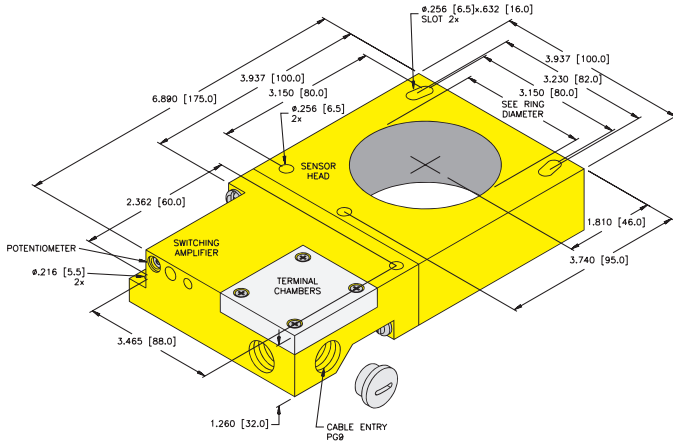
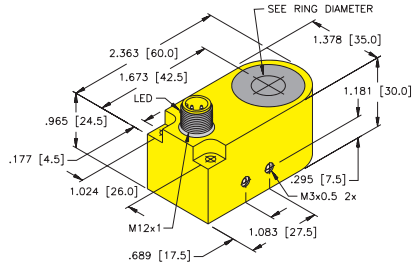
\* Length in meters.

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Minimum Target Diameter	Ring Dia. (mm)	Output
30 mm - Rectangular, Ring Sensor, <i>euromast</i> ® Connector on Side	Bi15R-W30S-AP6X-H1141	M1404031	3 65 mm	15	3-Wire DC PNP
	Bi20R-W30S-AP6X-H1141	M1403231	3 2 mm	20	
30 mm - Rectangular, Ring Sensor	Ni20R-S32SR-VP44X	M1440001	3 0.4 mm	20	4-Wire DC PNP
	Ni40R-S32SR-VP44X	M1440005	3 1 mm	40	
	Ni65R-S32SR-VP44X	M1440008	3 12 mm	65	



For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.

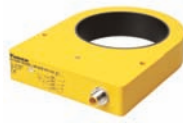


Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	8	≤200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	8	≤200	-25 to +70	IP 67	PA 12	POM	N/A	N/A	YE	RK 4T-*	1	
10-55 VDC	8	≤200	-25 to +70	IP 67	ABS	ABS	N/A	N/A	YE	N/A	2	
	8	≤200	-25 to +70	IP 67	ABS	ABS	N/A	N/A	YE	N/A	2	
	8	≤200	-25 to +70	IP 67	ABS	ABS	N/A	N/A	YE	N/A	2	

For material descriptions see page M22.



# Inductive Sensors



Housing Style	Part Number	ID Number	Minimum Target Diameter	Ring Dia. (mm)	Output
<b>80 mm - Rectangular, Ring Sensor</b>  	Bi50R-Q80-AP6X2-H1141	M1407530	<sup>3</sup> 8 mm	50	3-Wire DC PNP
	Bi65R-Q80-AP6X2-H1141	M1407531	<sup>3</sup> 10 mm	65	
<b>100 mm - Rectangular, Ring Sensor</b>  	Ni100R-S32XL-VP44X-H1141	M1510301	<sup>3</sup> 10mm	100	4-Wire DC PNP

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	8	≤200	-25 to +70	IP 67	PBT	PA 66	N/A	GN	YE	RK 4T-*	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p>
	8	≤200	-25 to +70	IP 67	PBT	PA 66	N/A	GN	YE	RK 4T-*	1	
10-55 VDC	8	≤200	-25 to +70	IP 67	POM	POM	N/A	N/A	YE	RK 4.4T-*	2	

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>8 mm - Slot Sensor, Potted-In Cable</b> 	Si 2-K08-Y1	S1007700		2	2-Wire DC NAMUR
<b>9 mm - Slot Sensor, Potted-In Cable</b> 	Si 5-K09-Y1 0.5M	S1024000		5	2-Wire DC NAMUR
<b>10 mm - Slot Sensor, Potted-In Cable</b> 	Si 3.5-K10-AN7	S1719000		3.5	3-Wire DC NPN
	Si 3.5-K10-AP6X	S1650001		3.5	3-Wire DC PNP
	Si 3.5-K10-Y1	S1036500		3.5	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
5-30 VDC	2000	Remote	-25 to +70	IP 67	VES	VES	N/A	N/A	N/A	2M/PVC	1	<p><b>Diagram 1</b></p> <p><b>Diagram 2</b></p> <p><b>Diagram 3</b></p>
5-30 VDC	5000	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	1	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	2	
10-30 VDC	2000	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	2M/PVC	3	
5-30 VDC	3000	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	1	

For material descriptions see page M22.

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>30 mm - Slot Sensor, eurofast® Connector</b> 	Si 15-K30-AN6X-H1141	M1605107		15	3-Wire DC NPN
	Si 15-K30-AP6X-H1141	M1605007		15	3-Wire DC PNP
<b>30 mm - Slot Sensor, Potted-In Cable</b> 	Si 15-K30-AN6	M1605002		15	3-Wire DC NPN
	Si 15-K30-AN6X	M1605003		15	
	Si 15-K30-AP6	M1605000		15	3-Wire DC PNP
	Si 15-K30-AP6X	M1605001		15	
	Si 15-K30-VN6	M1605032	Comp. Outputs	15	4-Wire DC NPN
	Si 15-K30-VP6	M1605030	Comp. Outputs	15	4-Wire DC PNP
	Si 15-K30-AZ3	M1306900		15	2-Wire AC/DC
Si 15-K30-Y1	M1007600		15	2-Wire DC NAMUR	
<b>33 mm - Slot Sensor, Potted-In Cable</b> 	Si 30-K33-VN6X	M1605202	Comp. Outputs	30	4-Wire DC NPN
	Si 30-K33-VP6X	M1605201	Comp. Outputs	30	4-Wire DC PNP
	Si 30-K33-AZ3	M1307000		30	2-Wire AC/DC
	Si 30-K33-Y1X	M1007701		30	2-Wire DC NAMUR

For detailed sensor specifications see Section M.  
 Normally Closed versions available upon request, consult factory.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	RK 4T-*	1	<p><b>Diagram 1</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	RK 4T-*	2	<p><b>Diagram 2</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	3	<p><b>Diagram 3</b></p>
10-30 VDC	500	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	2M/PVC	4	
10-30 VDC	350	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	5	<p><b>Diagram 4</b></p>
10-30 VDC	350	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	6	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	8	<p><b>Diagram 5</b></p>
5-30 VDC	500	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	7	
10-30 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	2M/PVC	5	<p><b>Diagram 6</b></p>
10-30 VDC	100	≤200	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	2M/PVC	6	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	8	<p><b>Diagram 7</b></p>
5-30 VDC	500	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	2M/PVC	7	
20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	N/A	N/A	N/A	2M/PVC	8	<p><b>Diagram 8</b></p>
5-30 VDC	500	Remote	-25 to +70	IP 67	PBT	PBT	N/A	N/A	YE	2M/PVC	7	

For material descriptions see page M22.

# Sensors

## Mating Cordsets

### Cordset Selection Guide

*eurofast*® Cordsets



Pages K7 - K12

*eurofast*® Field Wireables



Page K13

*picofast*® Cordsets



Pages K14 - K15

*picofast*® Field Wireables



Pages K16 - K17

*minifast*® Cordsets



Pages K18 - K19

*minifast*® Field Wireables



Pages K20 - K21

*microfast*® Cordsets



Pages K22 - K24

*microfast*® Field Wireables



Page K25

## TURCK Cable Material Options

### Standard PVC Insulation

**TURCK** PVC cable has a standard temperature rating of +105°C (+221°F), a high dielectric strength and insulation resistance. It also has an outstanding resistance to ozone, acids, alkalis, alcohols, most solvents, oils, gasoline, greases and waxes. All **TURCK** PVC is weather and atmosphere rated to UL 62 for ultraviolet radiation resistance. It is inherently tough and flame, abrasion, and moisture resistant. Oil resistant varieties used on **TURCK** cordsets will not soften or swell in the presence of oil. The plasticizer used in PVC may, however, migrate. Continuous exposure to hot oil and cutting fluids may cause embrittlement and cracking.

Our standard cable construction is PVC insulated inner conductors of high-flex stranding with extruded outer jacket. A separator is utilized to ensure easy machine and hand stripping. Extruded construction is inherently non-wicking because of the absence or minimal use of fillers. Extrusion also minimizes convolutions and provides a near-perfect circular cross section. Standard PVC is used in **euofast**<sup>®</sup>, **minifast**<sup>®</sup>, **microfast**<sup>®</sup>, **picofast**<sup>®</sup>, and **V\*fast** valve connector cordsets and carries CSA and UL approvals. Some PVC cables also have MSHA approval - consult factory for specifics.

### /S90 - Polyurethane

Our PUR (Polyurethane) cable is over-jacketed and bonded to a PVC inner core. The extruded construction is inherently non-wicking. The PUR over-jacket provides superior resistance to oils and lubricants, including cutting oils, transmission fluids (ATF), and gasoline. The abrasion resistance is comparable to Neoprene or other rubber including thermo set rubbers. **TURCK** "/S90" cable is UL listed and flame resistant to UL 94 VO. PUR is not degraded by exposure to Ozone, making it excellent for outdoor use.

**TURCK** "/S90" cable carries CSA and UL approvals and is used in **euofast**, **minifast**, **microfast**, **picofast**, and **multifast**<sup>®</sup> and **V\*fast** valve connector cordsets. With an "/S90" indicator some PUR cables also have MSHA approval - consult factory for specifics.

### /S101 - Flexlife-10

This is a unique construction of high-flex, low stress cable using custom compounded TPE, and stranded conductors with PVC or PUR extruded jackets. It is designed for robotic and other continuous motion applications. Flexlife-10 guarantees increased performance to provide 10 million cycles of continuous flexing, bending, and twisting motion found in C-track, robotic and other motion systems.

### /XOR - Irradiated PVC

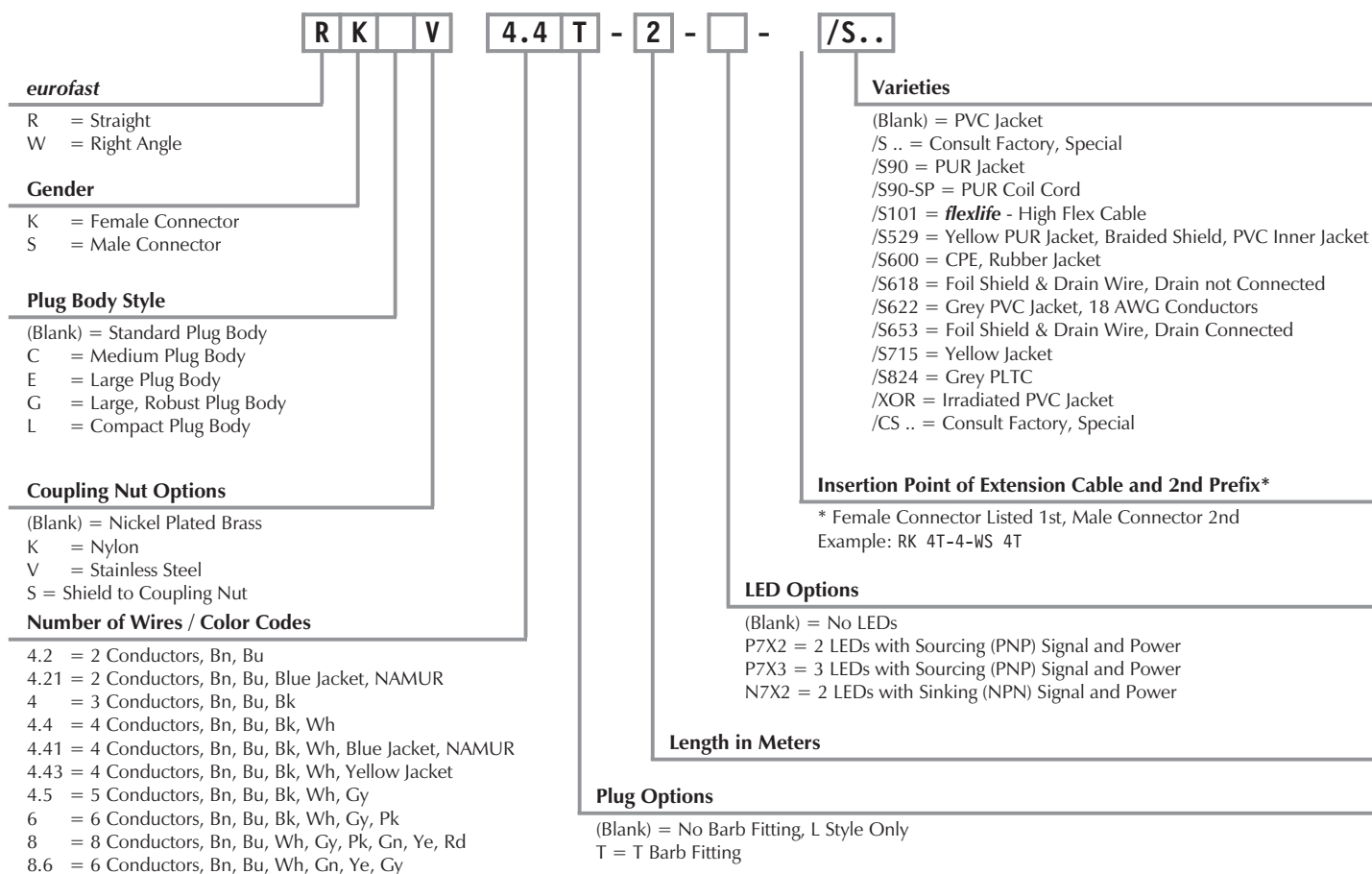
The Irradiated PVC cable has a steady state temperature rated at -25°C to +80°C (-13°F to +176°F) and a short-term rating of +250°C (+482°F). The conductors and jacket are resistant to melting under conditions such as weld-flash, contact with hot objects, (e.g. soldering iron), or under short circuit condition (to VDE 0298). It has superior performance in the presence of oils and organic solvents with no swelling. It has no reduction of physical properties when soaked 168 hours at +90°C (+194°F) in ASTM #2 oil (re: VDE 0472 part 802), nor does it exhibit signs of aging in presence of hot oil, as standard PVC exhibits. The fine litz-wire stranded construction, provides superior performance in flex applications.



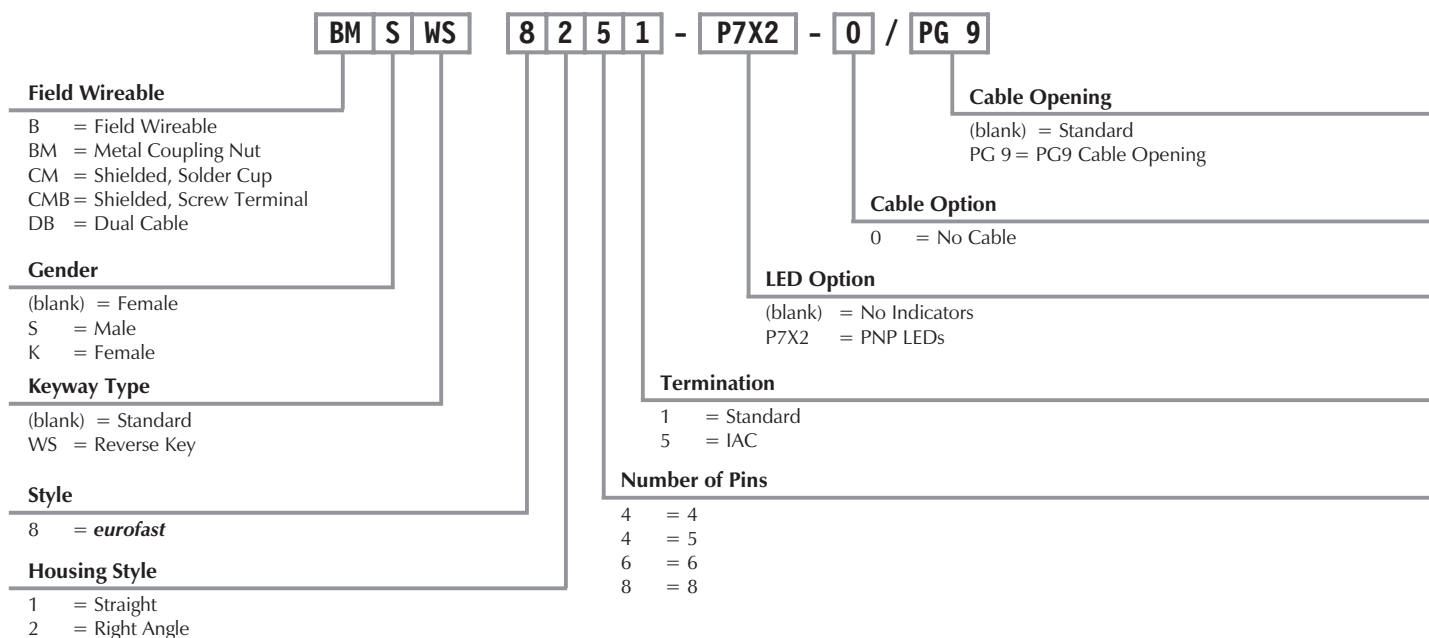
# Sensors

## Mating Cordsets

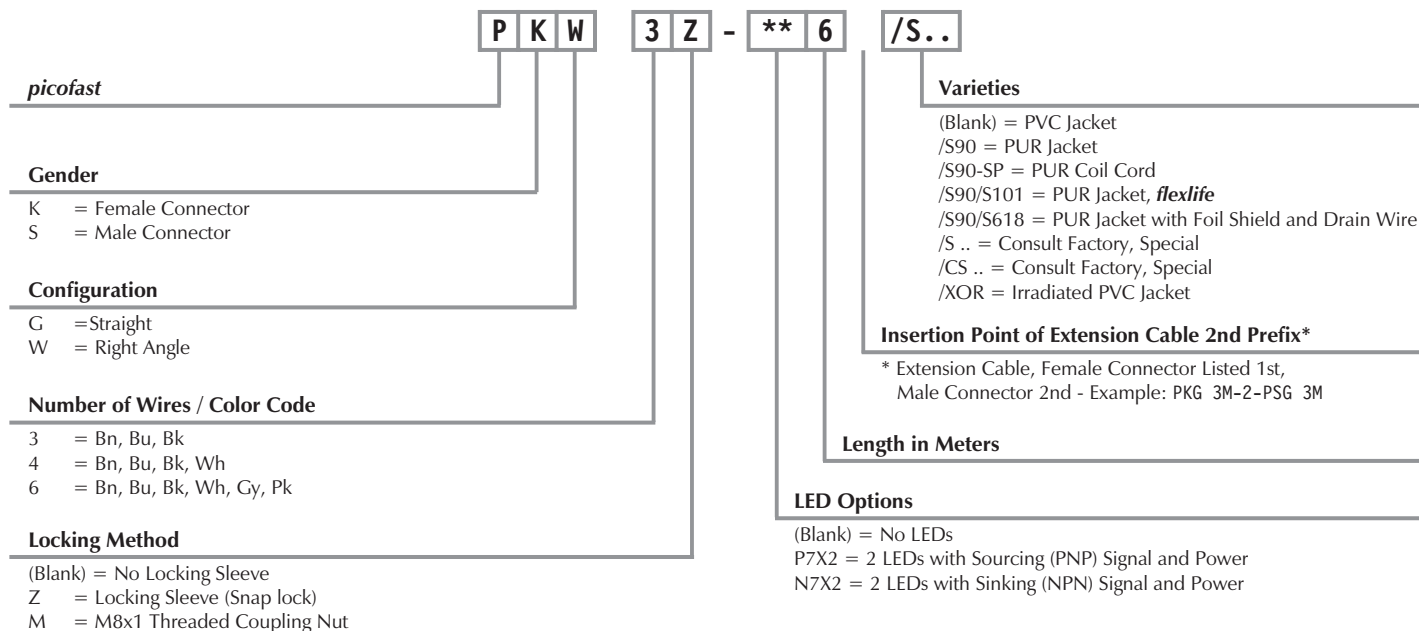
### euromast® Cordset Part Number Key



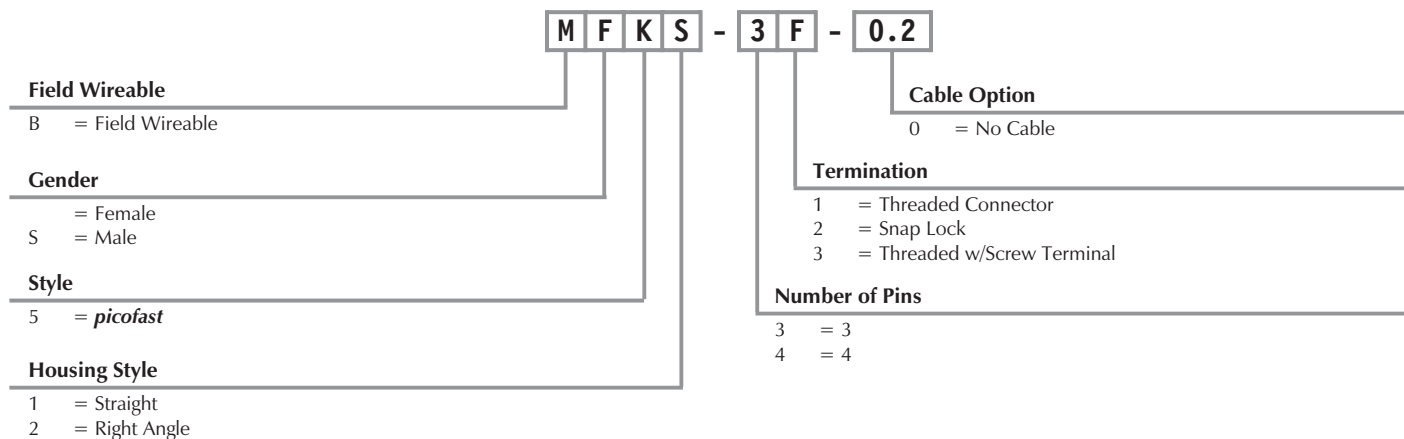
### euromast® Field Wireable Part Number Key



## picofast® Cordset Part Number Key



## picofast® Field Wireable Part Number Key

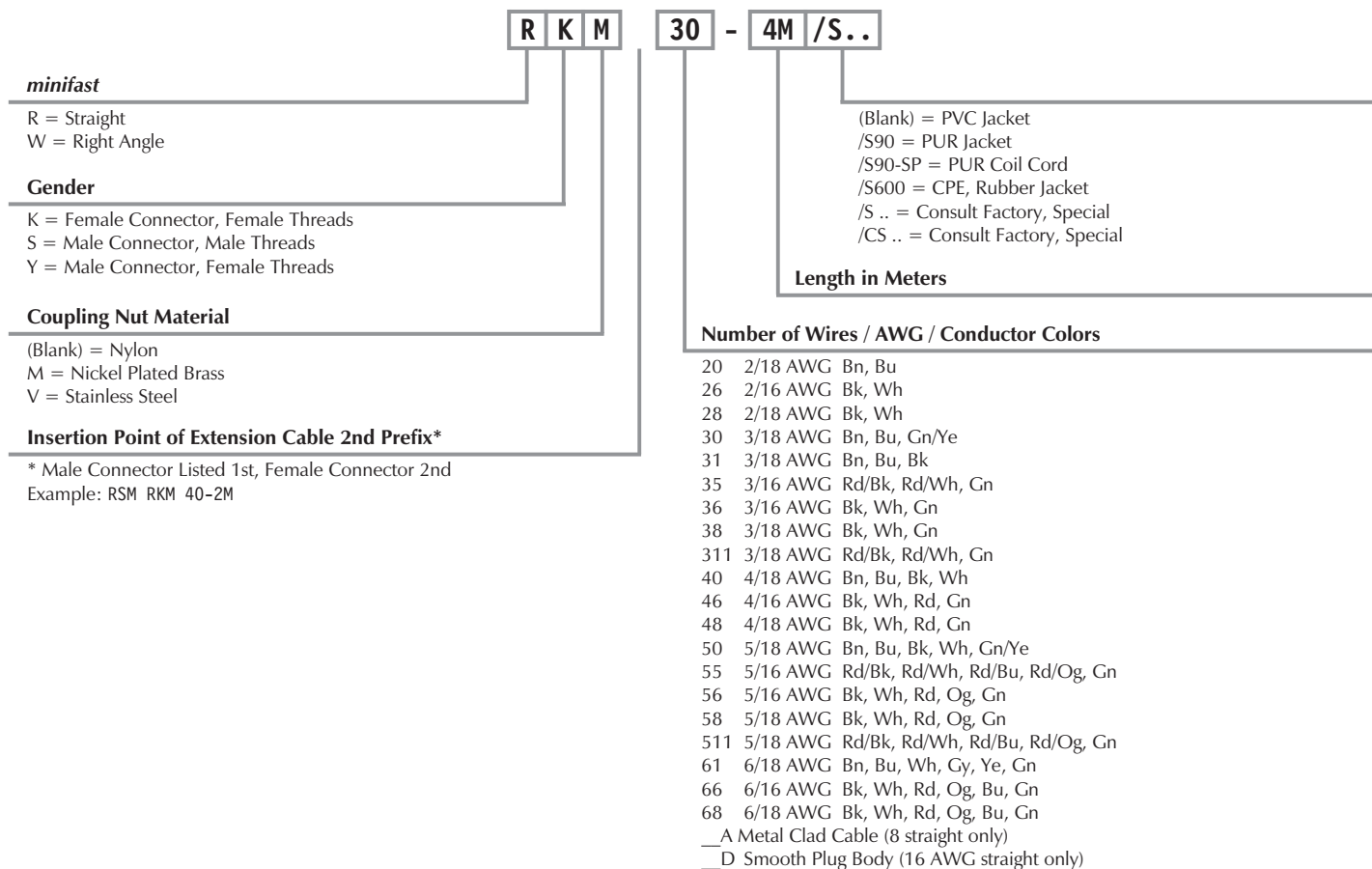


Cords - Acc

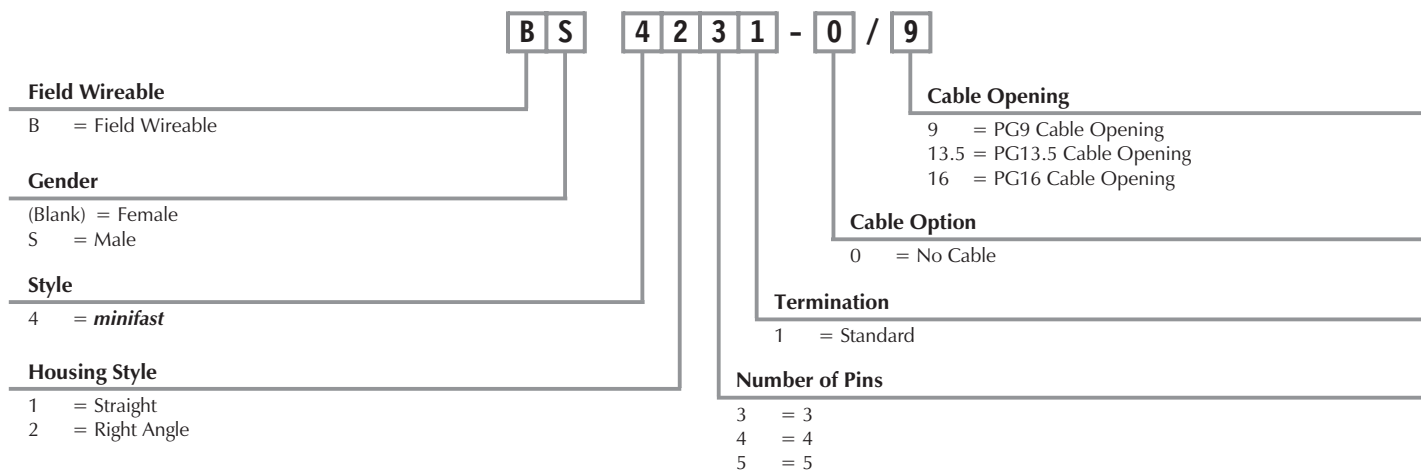
# Sensors

## Mating Cordsets

### minifast® Cordset Part Number Key



### minifast® Field Wireable Part Number Key



## microfast® Cordset Part Number Key



### microfast

KB = Straight Female Connector  
 WKB = Right Angle Female Connector  
 SB = Straight Male Connector  
 WSB = Right Angle Male Connector

### Body Style

(Blank) = Standard Plug Body  
 E = Large Plug Body

### Coupling Nut Material

(Blank) = Nickel Plated Brass  
 V = Stainless Steel

### Number of Wires / Color Code

3 = Rd/Bk, Rd/Wh, Gn  
 4 = Rd/Bk, Rd/Wh, Rd, Gn  
 5 = Rd/Bk, Rd/Wh, Rd/Ye, Rd, Gn

### Varieties

(Blank) = PVC Jacket  
 /S90 = PUR Jacket  
 /S90-SP = PUR Coil Cord  
 /S105 = PVC Jacket, Mechanical Shield (Braided)  
 /S600 = Rubber Jacket  
 /XOR = Irradiated PVC Jacket  
 /S.. = Consult Factory, Special  
 /CS.. = Consult Factory, Special

### Insertion Point of Extension Cable 2nd Prefix\*

\* Extension Cable, Female Connector Listed 1st, Male Connector 2nd; Example: KB 3T-2-SB 3T

### Length in Meters

### Plug Options

T = "T" Barb Fitting

## microfast® Field Wireable Part Number Key



### Field Wireable

MF = *microfast* Field Wireable

### Gender

(Blank) = Female  
 S = Male

### Style

3 = *microfast*

### Cable Option

0 = No Cable

### Termination

1 = Standard

### Number of Pins

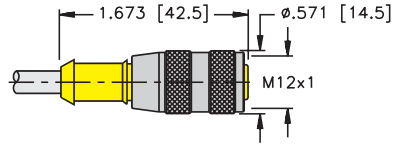
3 = 3 pins

### Housing Style

1 = Straight  
 2 = Right Angle

# Sensors

## Mating Cordsets



**2-Pin eurofast® Cordset**  
**Standard Plug Body**  
**250 VAC/300 VDC, 4 A**

Application	Part Number	Cable Specifications	Pinout
2-Wire DC Sensors UL Recognized CSA Certified	RK 4.2T-*	2/20 AWG Grey PVC 105°C 5.2 mm OD	1. N/C 2. N/C 3. BN 4. BU
	RK 4.2T-*/S90	2/20 AWG Grey PUR 80°C 5.2 mm OD	1. N/C 2. N/C 3. BN 4. BU
	RK 4.2T-*/S674	2/20 AWG Grey PVC 105°C 5.2 mm OD	1. BN 2. N/C 3. N/C 4. BU
2-Wire Namur Sensors Hazardous Areas UL Recognized CSA Certified	RK 4.21T-*	2/20 AWG Blue PVC 105°C 5.2 mm OD	1. BN 2. BU 3. N/C 4. N/C
	RK 4.21T-*/S90	2/20 AWG Blue PUR 80°C 5.2 mm OD	1. BN 2. BU 3. N/C 4. N/C

### Options:

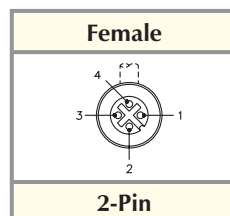
To specify nylon coupling nut, add a "K" to part number.

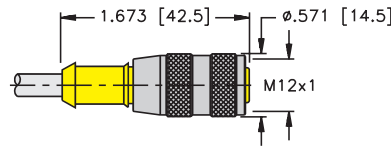
For example: RK .. to RKK ..

To specify stainless steel coupling nut, add a "V" to part number.

For example: RK .. to RKV ..

### Pinouts





## 3-Pin eurofast® Cordset Standard Plug Body 250 VAC/300 VDC, 4 A

Application	Part Number	Cable Specifications	Pinout
3-Wire DC Sensors UL Recognized CSA Certified	RK 4T-*	3/20 AWG Grey PVC 105°C 5.2 mm OD	1. BN 2. N/C 3. BU 4. BK
	RK 4T-*/S90	3/22 AWG Grey PUR 80°C 5.2 mm OD	1. BN 2. N/C 3. BU 4. BK
	RK 4T-*/S715	3/20 AWG Yellow PVC 105°C 5.2 mm OD	1. BN 2. N/C 3. BU 4. BK
3-Wire DC Sensors Flexlife-10 Continuous Flex UL Recognized CSA Certified	RK 4T-*/S101	3/20 AWG Grey TPE 105°C 5.7 mm OD Flexlife-10	1. BN 2. N/C 3. BU 4. BK
Noise Shielding 3-Wire DC Sensors Foil Shield and Drain (drain not connected) UL Recognized CSA Certified	RK 4T-*/S618	3/20 AWG w/22 AWG drain Grey PVC 105°C 5.7 mm OD	1. BN 2. N/C 3. BU 4. BK
High mechanical strength 3-Wire DC Sensors PUR/PVC cable with braided mechanical shield	RK 4T-*/S529	3/20 AWG 2/22AWG drain Yellow PUR/PVC 80°C 5.2 mm OD	1. BN 2. N/C 3. BU 4. BK

### Options:

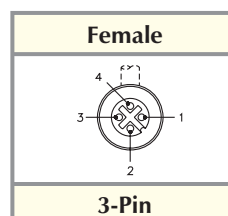
To specify nylon coupling nut, add a "K" to part number.

For example: RK .. to RKK ..

To specify stainless steel coupling nut, add a "V" to part number.

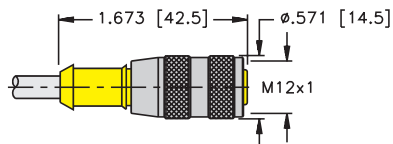
For example: RK .. to RKV ..

### Pinouts



# Sensors

## Mating Cordsets



### 4-Pin eurofast® Cordset Standard Plug Body 250 VAC/300 VDC, 4 A

Application	Part Number	Cable Specifications	Pinout
4-Wire DC Sensors UL Recognized CSA Certified	RK 4.4T-*	4/22 AWG Grey PVC 105°C 5.2 mm OD	1. BN 2. WH 3. BU 4. BK
	RK 4.4T-*/S90	4/22 AWG Grey PUR 80°C 5.2 mm OD	1. BN 2. WH 3. BU 4. BK
	RK 4.43T-*	4/22 AWG Yellow PVC 105°C 5.2 mm OD	1. BN 2. WH 3. BU 4. BK
	RK 4.43T-*/S90	4/22 AWG Yellow PUR 80°C 5.7 mm OD	1. BN 2. WH 3. BU 4. BK
4-Wire DC Sensors Flexlife-10 Continuous Flex UL Recognized CSA Certified	RK 4.4T-*/S101	4/22 AWG Grey PVC 105°C 5.7 mm OD Flexlife-10	1. BN 2. WH 3. BU 4. BK
4-Wire Namur Sensors Hazardous Areas UL Recognized CSA Certified	RK 4.41T-*	4/20 AWG Blue PVC 105°C 5.7 mm OD	1. BN 2. WH 3. BU 4. BK
High Mechanical Strength 4-Wire DC Sensors PUR/PVC cable with braided mechanical shield	RK 4.41T-*/S529	4/20 AWG Blue PUR/PVC 80°C 5.7 mm OD	1. BN 2. WH 3. BU 4. BK

#### Options:

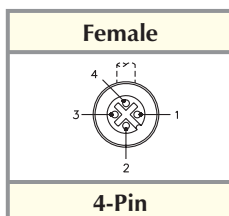
To specify nylon coupling nut, add a "K" to part number.

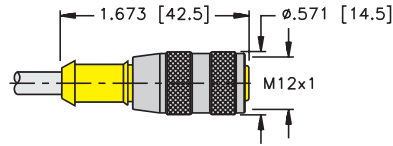
For example: RK .. to RKK ..

To specify stainless steel coupling nut, add a "V" to part number.

For example: RK .. to RKV ..

#### Pinouts





## 5-Pin eurofast® Cordset Standard Plug Body 250 VAC/300 VDC, 4 A

Application	Part Number	Cable Specifications	Pinout
5-Wire DC Sensors UL Recognized CSA Certified	RK 4.5T-*	5/22 AWG Grey PVC 105°C 5.7 mm OD	1. BN 2. WH 3. BU 4. BK 5. GY
	RK 4.5T-*/S90	5/22 AWG Grey PUR 80°C 5.7 mm OD	1. BN 2. WH 3. BU 4. BK 5. GY
	RK 4.5T-*/S715	5/22 AWG Yellow PVC 105°C 5.7 mm OD	1. BN 2. WH 3. BU 4. BK 5. GY
5-Wire DC Sensors Flexlife-10 Continuous Flex UL Recognized CSA Certified	RK 4.5T-*/S101	5/22 AWG Grey PVC 105°C 5.7 mm OD flexlife-10	1. BN 2. WH 3. BU 4. BK 5. GY
Noise Shielding 5-Wire DC Sensors Foil Shield and Drain (drain not connected) UL Recognized CSA Certified	RK 4.5T-*/S618	5/22 AWG w/24AWG Drain Grey PVC 105°C 5.7 mm OD	1. BN 2. WH 3. BU 4. BK 5. GY
5-Wire DC Sensors Foil shield and drain(drain connected) UL Recognized CSA Certified	RK 4.5T-*/S653	4/22 AWG w/22 AWG Drain Grey PVC 105°C 5.2 mm OD	1. BN 2. WH 3. BU 4. BK 5. Drain

### Options:

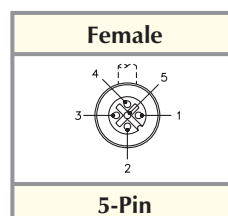
To specify nylon coupling nut, add a "K" to part number.

For example: RK .. to RKK ..

To specify stainless steel coupling nut, add a "V" to part number.

For example: RK .. to RKV ..

### Pinouts



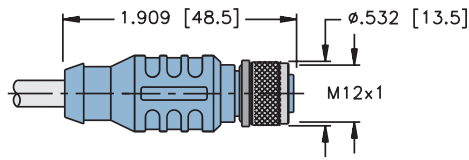


# Sensors

## Mating Cordsets



### 2 and 5-Wire eurofast® Network Cordset Medium Plug Body 250 VAC, 300 V, 4 A



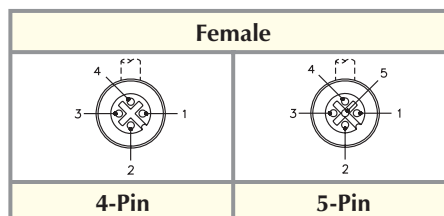
Application	Part Number	Cable Specifications	Pinout
2-Wire DC AS-I Sensors CSA Certified	RKC 254-*M	CMG PVC Yellow 2x16 AWG 105°C 7.2 mm OD	1. BN 2. N/C 3. BU 4. N/C
4-Wire DC DeviceNet® Sensors UL Recognized CSA Certified	RKC 572-*M	AWM PVC Grey 4x22 AWG, 22 AWG Shield 75°C 7.2 mm OD	1. Shield 2. RD 3. BK 4. WH 5. BU

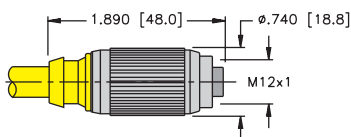
\* Length in meters.

Standard cable lengths are 2, 4, 6, 8 and 10 meters. Consult factory for other lengths.

Standard coupling nut material is nickel plated brass "RK .."; "RKK .." indicates nylon and "RKV .." indicates 316 stainless steel.

### Pinouts





## 3 and 4-Pin eurofast® Cordset Heavy Duty Plug Body 250 V, 4 A

Application	Part Number	Cable Specifications	Pinout
3-Wire DC Sensors Heavy Duty UL Recognized CSA Certified	RKG 4T-*/S600	3/18 AWG Yellow CPE, SJOOW 105°C 8.0 mm OD	1. BN 2. N/C 3. BU 4. BK
4-Wire DC Sensors Heavy Duty UL Recognized CSA Certified	RKG 4.4T-*	4/18 AWG Yellow PVC 105°C 8.5 mm OD	1. Bn 2. Wh 3. Bu 4. Bk
	RKG 4.4T-*/S90	4/18 AWG Yellow PUR 80°C 7.3 mm OD	1. Bn 2. Wh 3. Bu 4. Bk
	RKG 4.4T-*/S600	4/18 AWG Yellow CPE, SJOOW 105°C 8.5 mm OD	1. Bn 2. Wh 3. Bu 4. Bk

### Options:

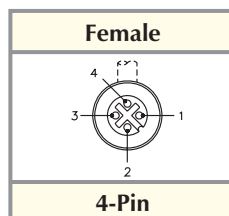
To specify nylon coupling nut, add a "K" to part number.

For example: RK .. to RKK ..

To specify stainless steel coupling nut, add a "V" to part number.

For example: RK .. to RKV ..

### Pinouts



# Sensors

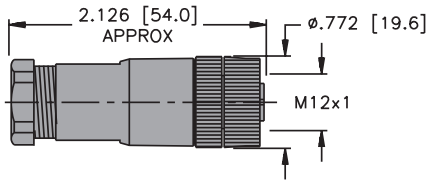
## Mating Cordsets

### 4 and 5-Pin *euromast*® Field Wireable



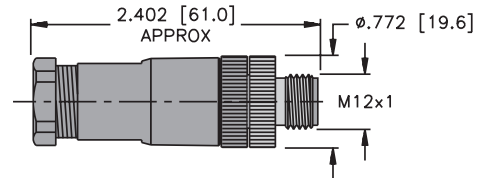
Application	Specifications	Straight/Female	Right Angle/ Female	Straight/Male	Right Angle/ Male
Mates with standard key 4-pin cordsets and receptacles	125 VAC / 150 VDC, 3.0 A PG 7 cable gland, accepts 4-6 mm cable Screw terminals	B 8141-0	B 8241-0	BS 8141-0	BS 8241-0
Mates with standard key 5-pin cordsets and receptacles	30 VAC / 36 VDC, 3.0 A PG 9 cable gland, accepts 4-8 mm cable Screw terminals	B 8151-0	B 8251-0	BS 8151-0	BS 8251-0

**B 814(5)1-0**



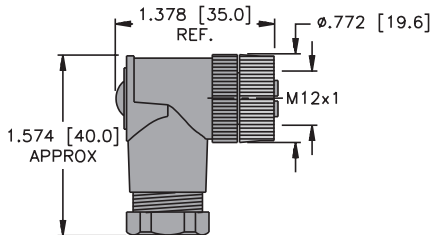
**Female Connector**

**BS 814(5)1-0**



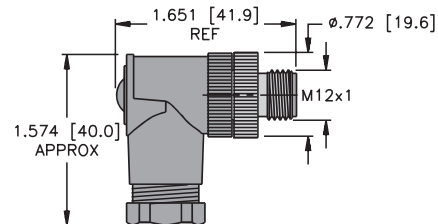
**Male Connector**

**B 824(5)1-0**



**Female Connector**

**BS 824(5)1-0**

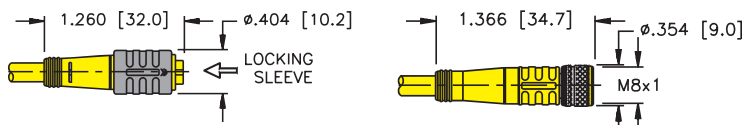


**Male Connector**

### Pinouts

Female		Male	
<b>4-Pin</b>	<b>5-Pin</b>	<b>4-Pin</b>	<b>5-Pin</b>

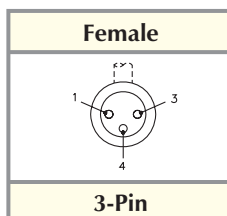
## 3-Pin *picofast*® Cordset Standard Plug Body 125 VAC/VDC, 4 A



### 3-Pin

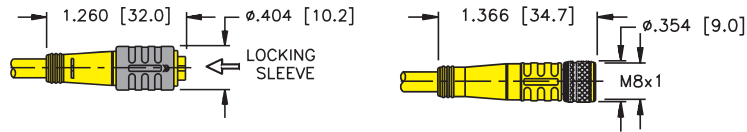
Application	Part Number	Cable Specifications	Pinout
3-Wire <i>picofast</i> Snap Lock Connection CSA Certified	PKG 3Z-*	3/24 AWG Yellow PVC 105°C 4.4 mm OD	1. BN 3. BU 4. BK
	PKG 3Z-*/S90	3/24 AWG Black PUR 80°C 4.4 mm OD	1. BN 3. BU 4. BK
3-Wire <i>picofast</i> Threaded Connection CSA Certified	PKG 3M-*	3/24 AWG Yellow PVC 105°C 4.4 mm OD	1. Bn 3. Bu 4. Bk
	PKG 3M-*/S90	3/24 AWG Black PUR 80°C 4.4 mm OD	1. Bn 3. Bu 4. Bk

### Pinouts



# Sensors

## Mating Cordsets

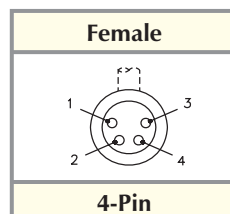


**4-Pin *picofast*®**  
**Cordset**  
**Standard Plug Body**  
**125 VAC/VDC, 4 A**

### 4-Pin

Application	Part Number	Cable Specifications	Pinout
4-Wire Picofast Snap Lock Connection, CSA Certified	PKG 4Z-*	4/26 AWG Yellow PVC 105°C 4.4 mm OD	1. BN 2. WH 3. BU 4. BK
	PKG 4Z-*/S90	4/26 AWG Black PUR 80°C 4.4 mm OD	1. BN 2. WH 3. BU 4. BK
4-Wire <i>picofast</i> Threaded Connection, CSA Certified	PKG 4M-*	4/26 AWG Yellow PVC 105°C 4.4 mm OD	1. Bn 2. Wh 3. Bu 4. Bk
	PKG 4M-*/S90	4/26 AWG Black PUR 80°C 4.4 mm OD	1. Bn 2. Wh 3. Bu 4. Bk

### Pinouts

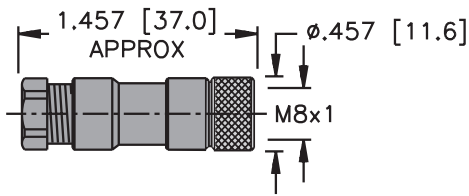




**3 and 4-Pin *picofast*® Field Wireable  
250 V, 4 A**

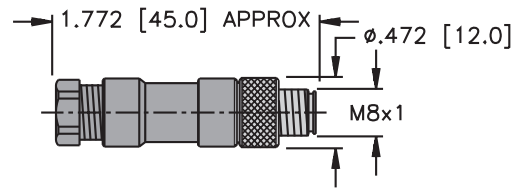
Application	Specifications	Straight/Female	Right Angle/ Female	Straight/Male	Right Angle/ Female
Mates with 3-pin threaded cordsets and receptacles	60 VAC / 75 VDC, 3.0 A Accepts 3-5 mm cable diameter Solder terminals	B 5131-0	B 5231-0	BS 5131-0	BS 5231-0
Mates with 4-pin threaded cordsets and receptacles	30 VAC / 36 VDC, 3.0 A Accepts 3-5 mm cable diameter Solder terminals	B 5141-0	B 5241-0	BS 5141-0	BS 5241-0

**B 513(4)1-0**



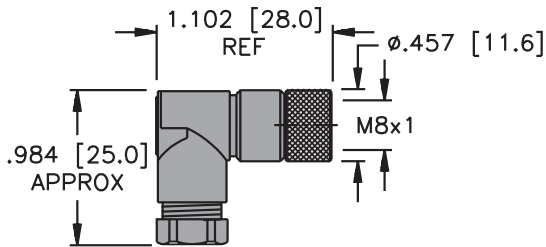
**Female Connector Threaded**

**BS 513(4)1-0**



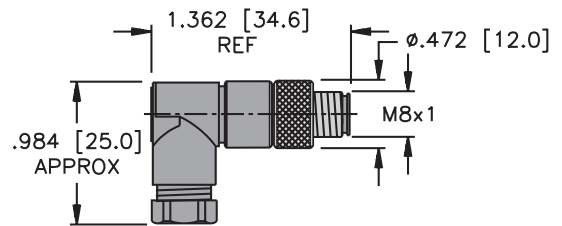
**Male Connector Threaded**

**B 523(4)1-0**



**Female Connector Threaded**

**BS 523(4)1-0**



**Male Connector Threaded**

**Pinouts**

Female		Male	
<b>3-Pin</b>	<b>4-Pin</b>	<b>3-Pin</b>	<b>4-Pin</b>

Cords - Acc

# Sensors

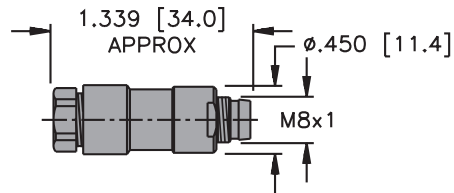
## Mating Cordsets



3-Pin *picofast*® Field Wireable

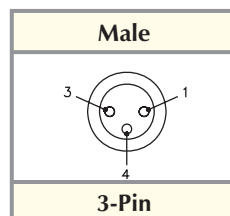
Application	Specifications	Straight	Right Angle	Straight	Right Angle
Mates with female snap-lock cordsets, receptacles and junction boxes	60 VAC / 75 VDC, 3.0 A Accepts 3-5 mm cable diameter Solder terminals	- - - -	- - - -	BS 5132-0	- - - -

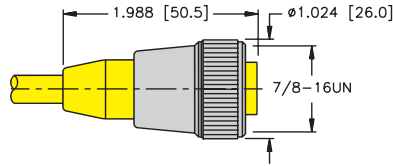
BS 5132-0



Male Connector Snap Lock

### Pinouts





## 2 and 3-Pin *minifast*® Cordset Standard Plug Body 300 V, 9 A

### 2-Pin

Application	Part Number	Cable Specifications	Pinout
2-Wire <i>minifast</i> UL Recognized CSA Certified	RKM 20-*	2/18 AWG Yellow PVC 105°C 7.3 mm OD	1. BN 2. BU

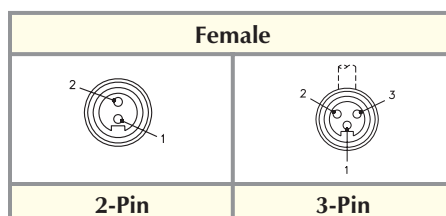
### 3-Pin

Application	Part Number	Cable Specifications	Pinout
3-Wire <i>minifast</i> UL Recognized CSA Certified	RKM 30-*M	3/18 AWG Yellow PVC 105°C 7.3 mm OD	1. GN/YE 2. BN 3. BU
	RKM 30-*M/S90	3/18 AWG Yellow PUR 80°C 7.3 mm OD	1. GN/YE 2. BN 3. BU
	RKM 31-*M	3/18 AWG Yellow PVC 105°C 7.3 mm OD	1. BK 2. BN 3. BU

#### Options:

To specify plastic coupling nut, remove the first "M" in the part number.  
For example: RKM .. to RK ..

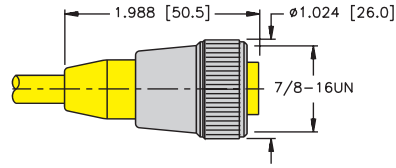
### Pinouts





# Sensors

## Mating Cordsets



**4 and 5-Pin *minifast*® Cordset**  
**Standard Plug Body**  
**300 V, 9 A**

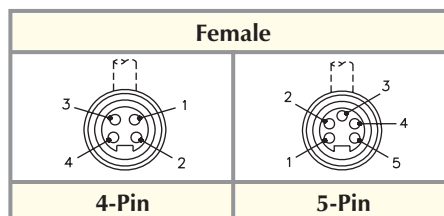
### 4-Pin

Application	Part Number	Cable Specifications	Pinout
4-Wire <i>minifast</i> UL Recognized CSA Certified	RKM 40-*M	4/18 AWG Yellow PVC 105°C 7.3 mm OD	1. BN 2. WH 3. BU 4. BK
	RKM 40-*M/S90	4/18 AWG Yellow PUR 80°C 7.3 mm OD	1. BN 2. WH 3. BU 4. BK

### 5-Pin

Application	Part Number	Cable Specifications	Pinout
5-Wire <i>minifast</i> UL Recognized CSA Certified	RKM 50-*M	5/18 AWG Yellow PVC 105°C 7.3 mm OD	1. BK 2. BU 3. GN/YE 4. BN 5. WH
	RKM 50-*M/S90	5/18 AWG Yellow PUR 80°C 7.3 mm OD	1. BK 2. BU 3. GN/YE 4. BN 5. WH

### Pinouts

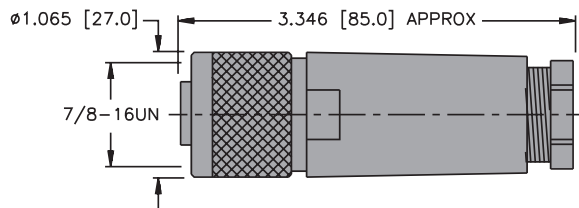




## 3-Pin *minifast*® Field Wireables

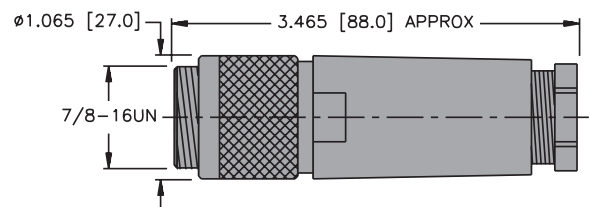
Application	Specifications	Female	Male
Mates with all 3-pin cordsets and receptacles	PG 9 cable gland, accepts 6-8 mm cable, Screw terminals Accepts up to 16 AWG conductors	B 4131-0/9	BS 4131-0/9
Mates with all 3-pin cordsets and receptacles	PG 13.5 cable gland, accepts 10-12 mm cable, Screw terminals Accepts up to 16 AWG conductors	B 4131-0/13.5	BS 4131-0/13.5

**B 4131-0/\***



**Female Connector**

**BS 4131-0/\***



**Male Connector**

### Pinouts

Female	Male
<b>3-Pin</b>	<b>3-Pin</b>

# Sensors

## Mating Cordsets



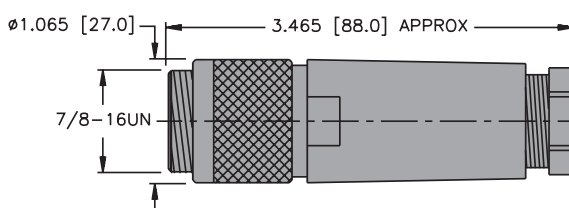
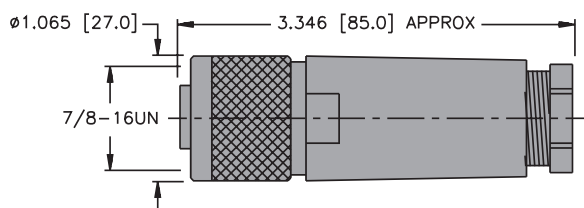
### 4 and 5-Pin *minifast*® Field Wireables

Application	Specifications	Female	Male
Mates with all 4-pin cordsets and receptacles	PG 9 cable gland, accepts 6-8 mm cable, Screw terminals Accepts up to 16 AWG conductors	B 4141-0/9	BS 4141-0/9
Mates with all 4-pin cordsets and receptacles	PG 13.5 cable gland, accepts 10-12 mm cable, Screw terminals Accepts up to 16 AWG conductors	B 4141-0/13.5	BS 4141-0/13.5

Application	Specifications	Female	Male
Mates with all 5-pin cordsets and receptacles	PG 9 cable gland, accepts 6-8 mm cable, Screw terminals Accepts up to 16 AWG conductors	B 4151-0/9	BS 4151-0/9
Mates with all 5-pin cordsets and receptacles	PG 13.5 cable gland, accepts 10-12 mm cable, Screw terminals Accepts up to 16 AWG conductors	B 4151-0/13.5	BS 4151-0/13.5
Mates with all 5-pin cordsets and receptacles	PG 16 cable gland, accepts 12-14 mm cable, Screw terminals Accepts up to 16 AWG conductors	B 4151-0/16	BS 4151-0/16

**B 41\*1-0/\***

**BS 41\*1-0/\***

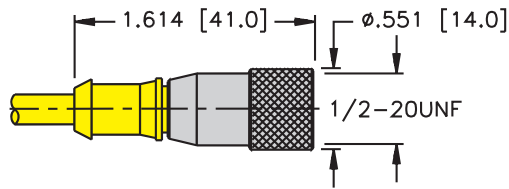


**Female Connector**

**Male Connector**

### Pinouts

Female		Male	
<b>4-Pin</b>	<b>5-Pin</b>	<b>4-Pin</b>	<b>5-Pin</b>

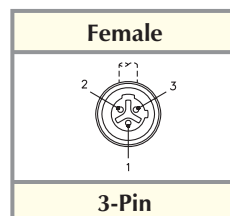


**3-Pin *microfast*® Cordset  
Standard Plug Body  
250 V, 4 A**

**3-Pin**

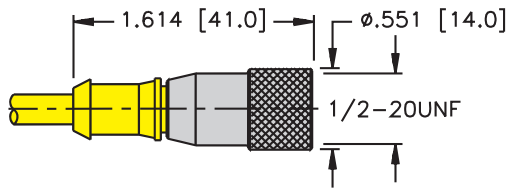
Application	Part Number	Cable Specifications	Pinout
3-Wire AC Sensors UL Recognized CSA Certified	KB 3T-*	3/22 AWG Yellow PVC 105°C 5.2 mm OD	1. GN 2. RD/BK 3. RD/WH
	KB 3T-*/S90	3/18 AWG Yellow PUR 80°C 5.7 mm OD	1. GN 2. RD/BK 3. RD/WH

**Pinouts**



# Sensors

## Mating Cordsets



**4 and 5-Pin *microfast*® Cordset  
Standard Plug Body  
250 V, 4 A**

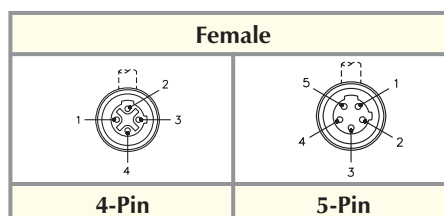
### 4-Pin

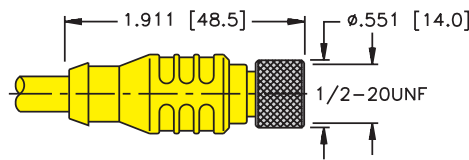
Application	Part Number	Cable Specifications	Pinout
4-Wire AC Sensors UL Recognized CSA Certified	KB 4T-*	4/22 AWG Yellow PVC 105°C 5.7mm OD	1. RD/BK 2. RD/WH 3. RD 4. GN
	KB 4T-*/S90	4/22 AWG Yellow PUR 80°C 5.7 mm OD	1. RD/BK 2. RD/WH 3. RD 4. GN

### 5-Pin

Application	Part Number	Cable Specifications	Pinout
5-Wire AC Sensors UL Recognized CSA Certified	KB 5T-*	5/22 AWG Yellow PVC 105°C 5.7 mm OD	1. RD/WH 2. RD 3. GN 4. RD/YE 5. RD/BK

### Pinouts

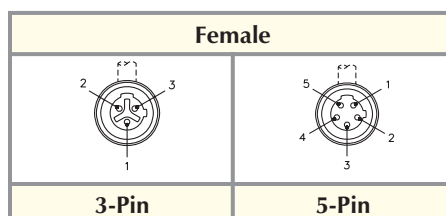




**3 and 5-Pin *microfast*® Cordset  
Heavy Duty Plug Body  
250V, 4 A**

Application	Part Number	Cable Specifications	Pinout
3-Wire AC Sensors Heavy Duty UL Recognized CSA Certified	KBE 3T-*	3/18 AWG Yellow PVC 105°C 7.3 mm OD	1. GN 2. RD/BK 3. RD/WH
	KBE 3T-*/S600	3/18 AWG Yellow Rubber 105°C 7.3 mm OD	1. GN 2. RD/BK 3. RD/WH
5-Wire AC Sensors Heavy Duty UL Recognized CSA Certified	KBE 5T-*	5/18 AWG Yellow PVC 105°C 7.3 mm OD	1. RD/WH 2. RD 3. GN 4. RD/YE 5. RD/BK
	KBE 5T-*/S600	5/18 AWG Yellow CPE, SJOOW 105°C 9.4 mm OD	1. RD/WH 2. RD 3. GN 4. RD/YE 5. RD/BK

**Pinouts**



# Sensors

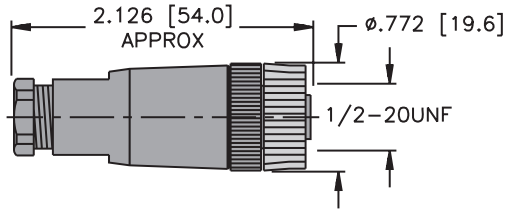
## Mating Cordsets



### 3-Pin *microfast*® Field Wireables

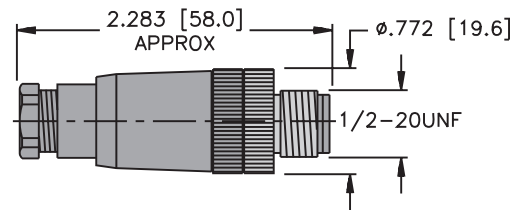
Application	Specifications	Straight/Female	Right Angle/Female	Straight/Male	Right Angle/Male
Mates with 3-pin cordsets and receptacles	PG 7 cable gland, accepts 4-6 mm cable Screw terminals	MF 3131-0	MF 3231-0	MFS 3131-0	MFS 3231-0

MF 31 ..



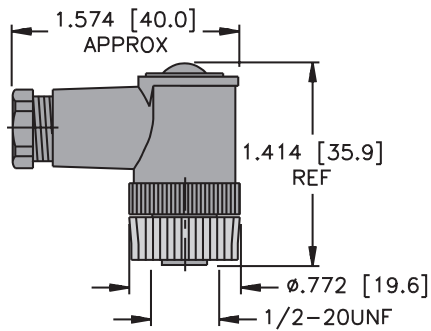
Female Connector

MFS 31 ..



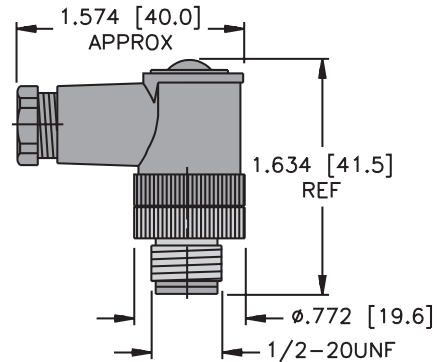
Male Connector

MF 32 ..



Female Connector

MFS 32 ..



Male Connector

### Pinouts

Female	Male
3-Pin	3-Pin


**Notes**




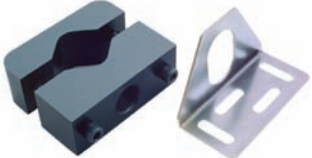


# Sensors

## Accessories

### Selection Guide

Die Protector	Whisker Probe	Quick Mount
		
Page L3	Page L4	Page L5

Cushion Mount	Mounting Blocks	Actuation Magnets	Mounting Brackets
			
Page L5	Page L6	Page L9	Page L7 - L12

Mounting Clamps	Protective Housing - "Wet Suit"	Spacer Plates
		
Page L13 - L14	Page L15	Page L17

Sensing Gap Gages	Firefast	Teflon/Ceramic Caps
		
Page L16	Page L17	Page L18

**Selection Guide**

Plastic Covers	Threaded and Bolt on Tank Wells	Teflon Covers
		
Page L19-L20	Page L21-L23	Page L23
Conduit Adapters	Cable Glands	Plug Taps
		
Page L24	Page L25	Page L27
Lockwashers and Locknuts	Test Box	Labels
		
Page L26	Page L28	Page L28

Cords - Acc

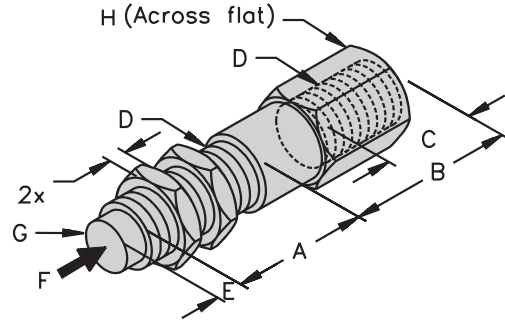
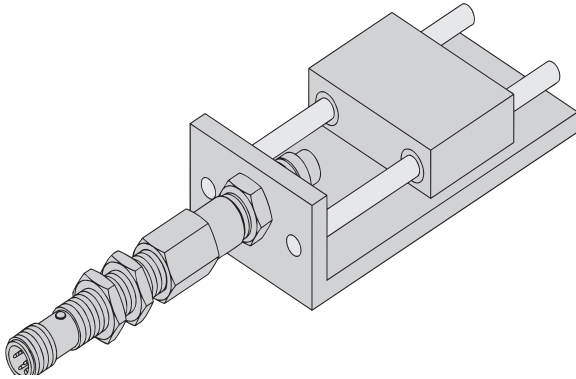
# Sensors

## Accessories

### Die Protector

Part Number	ID Number	Dimensions							
		A	B	C	D	E	F	G	H
DP-08-25-08	A2521	0.984 [25.0]	1.252 [31.8]	0.654 [16.6]	M8x1	0.123 [3.2]	2000 N 450 lbft	0.230 [5.8]	0.437 [11.1]
DP-12-25-12	A2519	0.984 [25.0]	1.252 [31.8]	0.654 [16.6]	M12x1	0.170 [4.3]	20500 N 4608 lbft	0.370 [9.4]	0.618 [15.7]
DP-12-50-12	A9169	1.969 [50.0]	1.252 [31.8]	0.654 [16.6]	M12x1	0.165 [4.2]	20500 N 4608 lbft	0.370 [9.4]	0.618 [15.7]
DP-18-25-18	A2520	0.984 [25.0]	1.252 [31.8]	0.658 [16.7]	M18x1	.170 [4.3]	20500 N 4608 lbft	0.559 [14.2]	.870 [22.1]

Inches [mm]



### Recommended Sensors for Die Protector

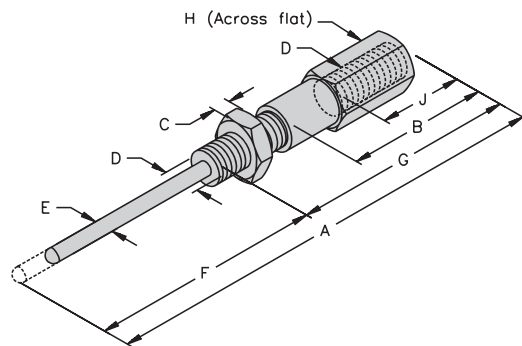
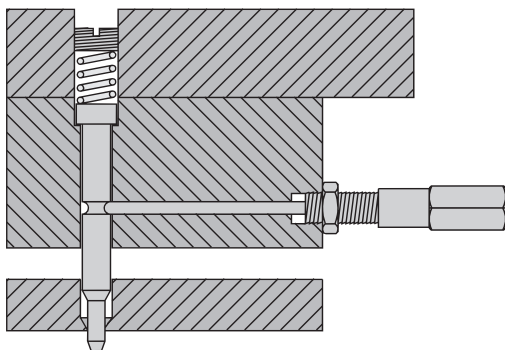
Die Protector	DP-08-25-08	DP-12-25-12	DP-18-25-18
Sensors	Bi 1.5U-EG08-AP6X Bi 2-EG08-AP6X	Bi 2-G12-AP6X-H1141 Bi 2U-EM12-AP4X	Bi 5-G18-AP6X (When not fully engaged)

Note: Works with all shielded NPN, PNP, quick disconnect or potted-in cable versions of the listed part numbers.

**Whisker Probe**

Part Number	ID Number	Dimensions									Probe Travel
		A	B	C	D	E	F	G	H	J	
WP-08-50-03	A2527	3.921 [99.6]	1.252 [31.8]	0.150 [3.8]	M8x1	.126 [3.2]	2.000 [50.8]	1.949 [49.5]	.437 [11.1]	0.858 [21.8]	For activation: .071[1.80] to .075[1.91] Maximum: .080[2.03]
WP-12-50-03	A2528	3.921 [99.6]	1.252 [31.8]	0.150 [3.8]	M12x1	.126 [3.2]	2.000 [50.8]	1.949 [49.5]	.437 [11.1]	0.858 [21.8]	For activation: .056(1.42) to .080(2.03) Maximum: .085[2.15]
WP-12-50-06	A2529	3.921 [99.6]	1.252 [31.8]	0.150 [3.8]	M12x1	.252 [6.4]	2.000 [50.8]	1.949 [49.5]	.622 [15.8]	0.709 [18.0]	
WP-12-100-06	A9195	5.91 [150]	1.252 [31.8]	0.150 [3.8]	M12x1	.252 [6.4]	4.00 [102]	1.949 [49.5]	.622 [15.8]	0.709 [18.0]	

Inches [mm]



**Recommended Sensors for Whisker Probe**

Whisker Probe	WP-08-50-03	WP-12-50-03	WP-12-50-06
Sensors	Bi 1-G08-AN6 Bi 1.5-G08-AP6X Bi 1.5U-EG08-AP6X Bi 2-EG08-AP6X	Bi 2-G12-AP6X-H1141 Bi 2U-EM12-AP4X Bi 3U-M12-AP6X-H1141	Bi 2-G12-AP6X-H1141 Bi 2U-EM12-AP4X Bi 3U-M12-AP6X-H1141

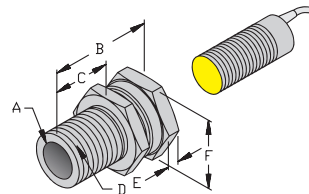
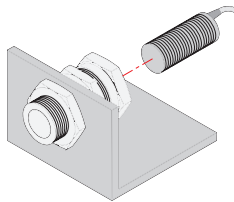
Note: Works with all shielded NPN, PNP, quick disconnect or potted-in cable versions of the listed part numbers.

Cords - Acc

Quick Mount

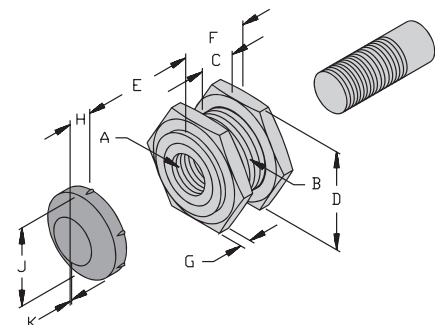
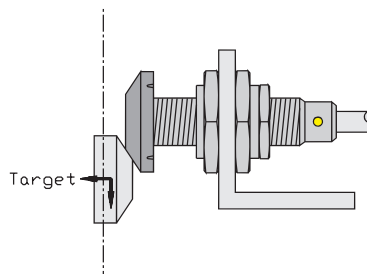
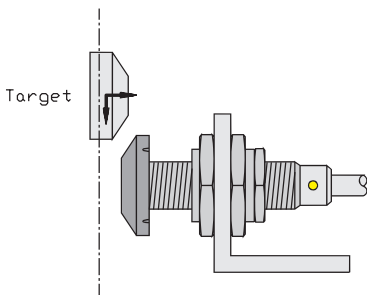
Part Number	ID Number	Dimensions					
		A	B	C	D	E	F
QM-08 QM-08L	A2511	0.32 [8.18]	1.28 [32.4]	0.69 [17.5]	M12x1	0.15 [3.85]	0.67 [16.9]
	A2512		1.90 [48.0]	1.34 [34.0]			
QM-12 QM-12L QM-12L-T	A2513	0.48 [12.1]	1.34 [33.7]	0.77 [19.5]	M16x1	0.16 [4.01]	0.86 [21.8]
	A2514		1.76 [44.8]	1.18 [30.0]			
	A2542		1.76 [44.8]	1.18 [30.0]			
QM-18 QM-18L QM-18L-T	A2515	0.71 [18.1]	1.52 [38.5]	0.79 [20.0]	M24x1.5	0.19 [4.95]	1.18 [30.0]
	A2516		2.28 [58.0]	1.57 [40.0]			
	A2543		2.28 [58.0]	1.57 [40.0]			
QM-30 QM-30L QM-30L-T	A2517	1.19 [30.1]	1.50 [35.0]	0.79 [20.0]	M36x1.5	0.24 [6.13]	1.61 [41.0]
	A2518		2.28 [58.0]	1.57 [40.0]			
	A2544		2.28 [58.0]	1.57 [40.0]			

Inches [mm]



Cushion Mount

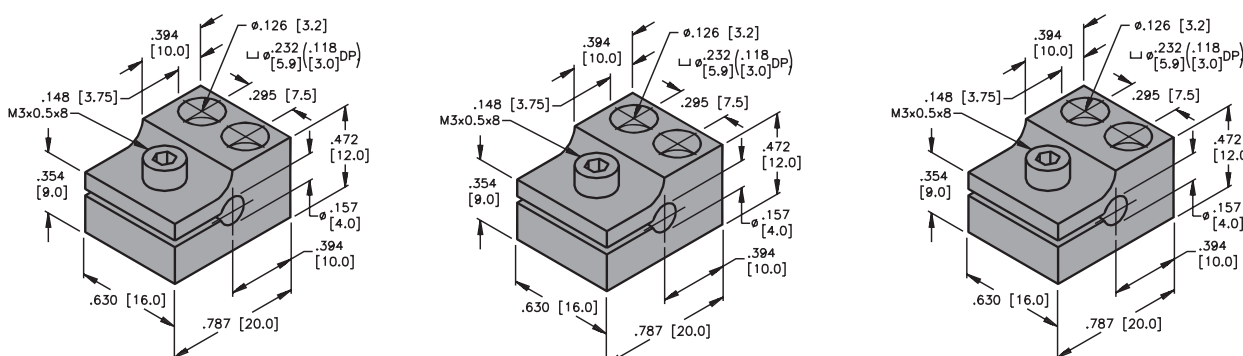
Part Number	ID Number	Dimensions									
		A (INSIDE THREAD)	B (OUTSIDE THREAD)	C (MAX.)	D (Across FLATS)	E (MAXIMUM ALLOWABLE OVERTRAVEL)	F	G	H	J	K
CM-08 CM-08N	A2503 A2504	M8x1	M16x1.5	.433 [11.0]	.875 [22.2]	.395 [10.0]	.750 [19.1]	.155 [3.94]	.200 [5.08]	.600 [15.2]	.0004 [.010]
CM-12 CM-12N	A2505 A2506	M12x1	M22x1.5	.433 [11.0]	1.19 [30.2]	.395 [10.0]	.750 [19.1]	.155 [3.94]	.245 [6.22]	.860 [21.8]	.010 [.250]
CM-18 CM-18N	A2507 A2508	M18x1	M30x1.5	.598 [15.2]	1.38 [35.1]	.395 [10.0]	1.00 [25.4]	0.02 [5.08]	.315 [8.00]	1.18 [30.0]	.001 [.035]
CM-30 CM-30N	A2509 A2510	M30x1.5	M47x1.5	.972 [24.7]	2.05 [52.1]	.591 [15.0]	1.37 [34.9]	0.20 [5.08]	.315 [8.00]	1.75 [44.5]	.035 [.890]



## Mounting Blocks

Part Number	ID Number	Barrel Diameter
MBS-40	M6947700	4.0 mm
MBS-65	M6947800	6.5 mm
MBS-80	S6947900	8.0 mm

Material: Aluminum  
Finish: Black Anodized



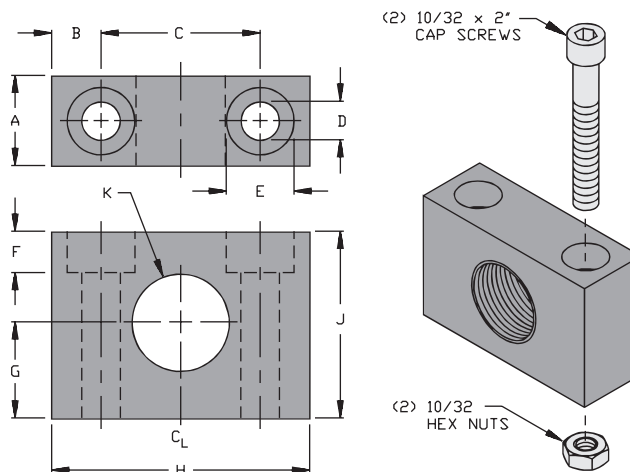
MBS-40                      MBS-65                      MBS-80

For use with H Barrel *picoprox*<sup>®</sup> sensors.

Inches [mm]

Part Number	ID Number	Barrel Diameter	Dimensions									
			A	B	C	D	E	F	G	H	J	
MB-S12	A3150	12 mm	0.44 [11.2]	0.24 [6.2]	0.77 [19.6]	0.20 [5.0]	0.34 [8.7]	0.20 [5.0]	0.45 [11.4]	1.26 [32.0]	0.91 [23.0]	M12x1
MB-S18	A3155	18mm	0.63 [16.0]	0.30 [7.6]	1.20 [30.5]	0.22 [5.5]	0.38 [9.6]	0.25 [6.4]	0.57 [14.5]	1.80 [45.8]	1.15 [29.3]	M18x1

Material: Delrin



For use with 12 and 18 mm threaded barrel sensors. Mounting hardware included.

Cords - Acc

Mounting Brackets

Part Number	ID Number
MB-Q130	A3145

Material: Stainless Steel

For use with Bottle and Can sensors.

Part Number	ID Number
LSAP-2	M6942900

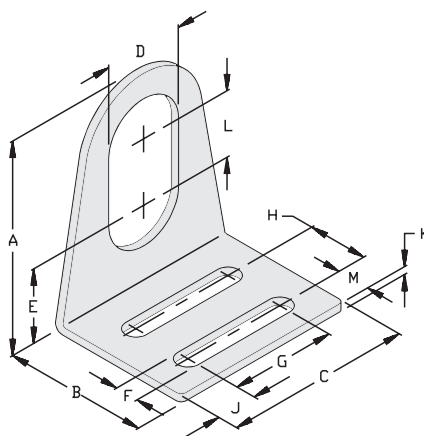
Material: Stainless Steel

For use with Limit Switch Style *combiprox*, *C\*prox* and *multiprox* sensors.

## Mounting Brackets

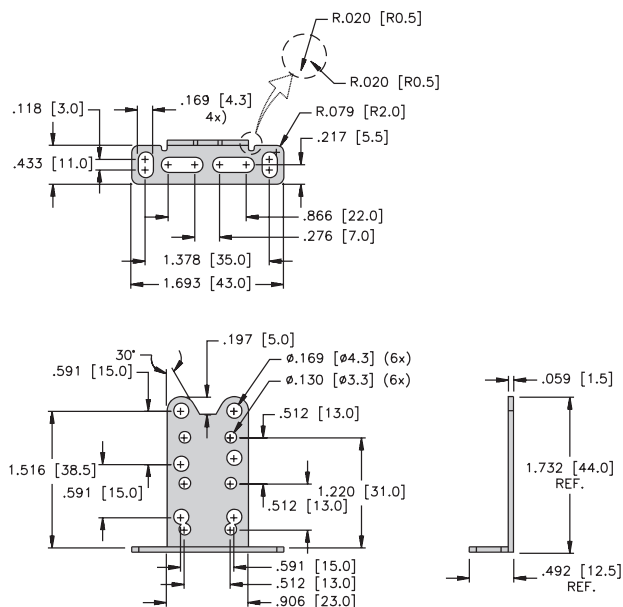
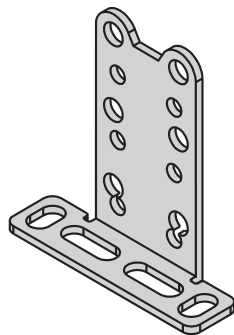
Part Number	ID Number	Dimensions											
		A	B	C	D	E	F	G	H	J	K	L	M
MBSS-08	A2522	1.00 [25.4]	1.13 [28.7]	1.25 [31.8]	.344 [8.74]	.312 [7.92]	.218 [5.54]	.625 [15.9]	.468 [11.9]	.312 [7.92]	.070 [1.78]	.375 [9.53]	.281 [7.14]
MBSS-12	A2523	1.50 [38.1]	1.37 [34.8]	1.50 [38.1]	.500 [12.7]	.550 [13.9]	.218 [5.54]	.750 [19.1]	.563 [14.3]	.375 [9.53]	.070 [1.78]	.500 [12.7]	.312 [7.92]
MBSS-18	A2524	2.00 [50.8]	1.37 [34.8]	1.75 [44.5]	.750 [19.1]	.218 [5.54]	.218 [5.54]	1.00 [25.4]	.563 [14.3]	.375 [9.53]	.070 [1.78]	.625 [15.9]	.312 [7.92]
MBSS-30	A2525	2.50 [63.5]	1.75 [44.5]	2.25 [57.2]	1.18 [30.5]	.907 [23.0]	.218 [5.54]	1.37 [34.8]	.812 [20.6]	.440 [11.2]	.085 [2.16]	.750 [19.1]	.406 [10.3]
MBSS-47	A2526	3.50 [88.9]	2.00 [50.8]	2.50 [63.5]	1.87 [47.5]	1.50 [38.1]	.218 [5.54]	1.50 [38.1]	1.00 [25.4]	.500 [12.7]	.120 [3.05]	.750 [19.1]	.500 [12.7]

Inches [mm]  
Material: 304 Stainless Steel



Part Number	ID Number
MB-Q08/Q10	A3563

Inches [mm]  
Material: Stainless Steel

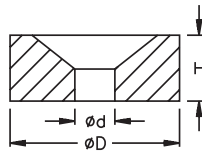


Cords - Acc



Actuation Magnets

Actuation Magnet Part Numbers	Diameter D (mm)	Height H	Drilling for mounting d	Sensing Range M12	Sensing Range EG08	Material
DMR15-6-3	15	6	3	36	32	Barium Ferrite (Oxyd 300)
DMR20-10-4	20	10	4	59	50	
DMR31-15-5	31	15	5	90	78	



Mounting Brackets

Part Number	ID Number
MB-Q14/20	A3147

Material: Stainless Steel

Inches [mm]

## Mounting Brackets

Part Number	ID Number
MB-Q50/CK40	A3148

Material: Stainless Steel

10-32x1.5 SCREW 2x

10-32x0.5 SCREW 2x

Dimensions (Inches [mm]):  
 .874 [22.2], .362 [9.2], .787 [20.0], 1.181 [30.0], 1.189 [30.2], 1.575 [40.0], 2.252 [57.2], 1.575 [40.0], 2.764 [70.2], .246 [6.25]

Inches [mm]

Part Number	ID Number
MB-Q80	A3144

Material: Stainless Steel

#10 NUT 4x

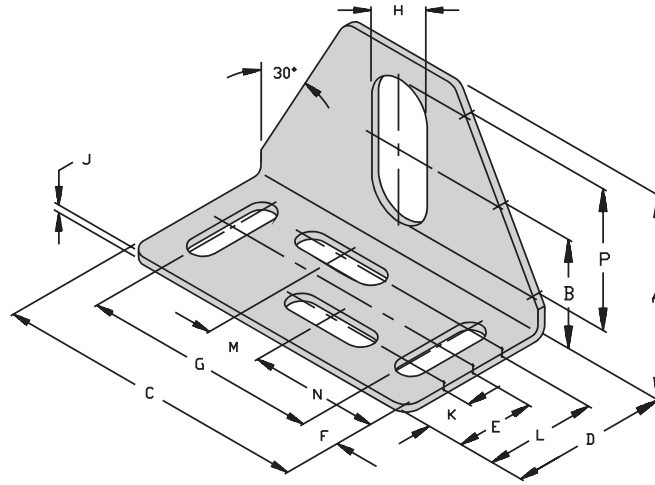
Dimensions (Inches [mm]):  
 3.370 [85.6] REF, 3.150 [80.0] TYP, 2.559 [65.0] TYP, .350 [8.9] REF

Cords - Acc

Mounting Brackets

Part No.	ID No.	Barrel Dia.	Dimensions														SLOT
			A	B	C	D	E	F	G	H	J	K	L	M	N	P	
MB-8	A3130-1	8 mm	1.26 [32.0]	0.66 [16.7]	2.00 [50.8]	1.00 [25.4]	0.45 [11.5]	0.30 [7.5]	1.41 [35.8]	0.33 [8.4]	0.06 [1.5]	0.24 [6.0]	0.67 [17.0]	0.35 [8.8]	0.83 [21.0]	.84 [21.4]	0.16 x 0.59 [4.0 x 15.0]
MB-12	A3130	12 mm	1.63 [41.5]	0.87 [22.15]	2.50 [63.5]	1.25 [31.8]	0.61 [15.5]	0.31 [7.9]	1.88 [47.8]	0.50 [12.7]	0.06 [1.5]	0.35 [9.0]	0.87 [22.0]	0.45 [11.5]	1.02 [26.0]	1.13 [28.7]	0.22 x 0.73 [5.6 x 18.6]
MB-18	A3135	18 mm	1.63 [41.5]	0.79 [20.0]	2.50 [63.5]	1.25 [31.8]	0.61 [15.5]	0.31 [7.9]	1.88 [47.8]	0.75 [19.1]	0.06 [1.5]	0.35 [9.0]	0.87 [22.0]	0.45 [11.5]	1.04 [26.3]	1.15 [29.1]	0.22 x 0.75 [5.6 x 19.0]
MB-30	A3140	30 mm	2.62 [66.5]	1.32 [33.5]	4.25 [108.0]	1.75 [44.5]	0.88 [22.4]	0.37 [9.5]	3.50 [88.9]	1.19 [30.2]	0.07 [1.8]	0.63 [16.0]	1.14 [29.0]	1.18 [30.0]	1.54 [39.0]	2.06 [52.2]	0.28 x 1.25 [7.1 x 31.8]

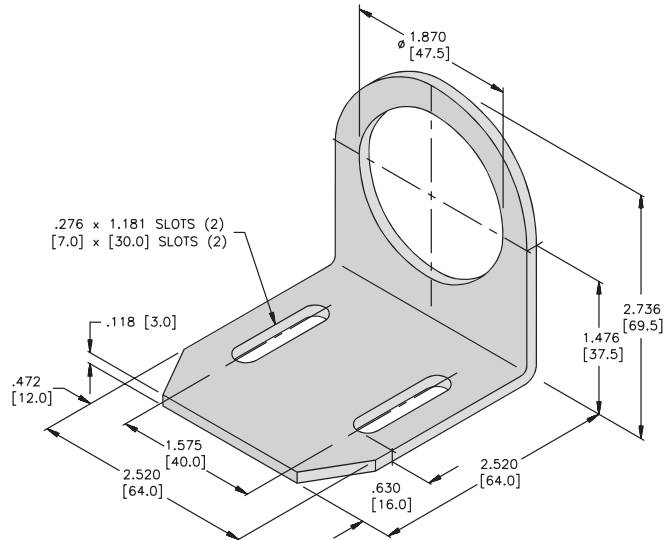
MB-8, MB-18 Material: 16 Gage Cold Roll Steel  
 MB-12, MB-30 Material: 14 Gage Cold Roll Steel  
 Finish: Galvanized



Inches [mm]

Part Number	ID Number
MB-47	M6945200

Material: Cold Roll Steel  
 Finish: Galvanized

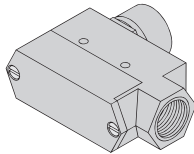


## Mounting Brackets

Part Number	ID Number
TBZE-L	A5150
TBZE-R	A5151

Material:  
Galvanized Plated Steel

Replaces:



**TBZE-L**

**TBZE-R**

For use with **Q08** rectangular housing and 18 mm barrel sensors.

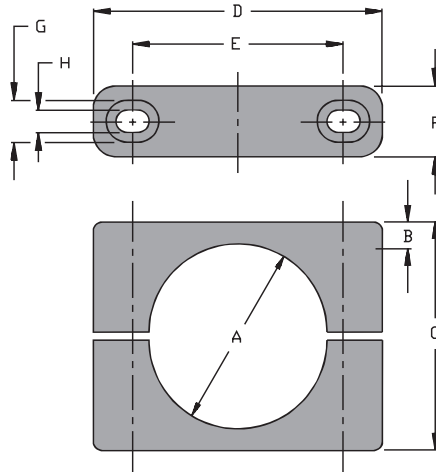
Inches [mm]

Cords - Acc

Mounting Clamps

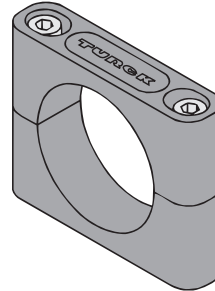
Part Number	ID Number	Barrel Diameter	Dimensions							
			A	B	C	D	E	F	G	H
BS-11	A3075	11 mm	0.43 [11.0]	0.20 [5.0]	0.79 [20.0]	1.26 [32.0]	0.79 [20.0]	0.47 [12.0]	0.32 [8.2]	0.17 [4.3]
BS-20	M6946400	20 mm	0.79 [20.0]	0.24 [6.0]	1.18 [30.0]	1.81 [46.0]	1.22 [31.0]	0.59 [15.0]	0.37 [9.5]	0.21 [5.3]
BS-40	M6946600	40 mm	1.57 [40.0]	0.24 [6.0]	1.97 [50.0]	2.56 [65.0]	1.87 [47.5]	0.63 [16.0]	0.37 [9.5]	0.21 [5.3]

Material:  
Bracket - PBT  
Screws - Galvanized Zinc  
Inches [mm]



SCREWS INCLUDED:

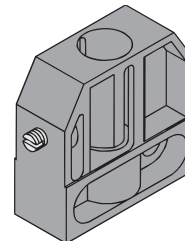
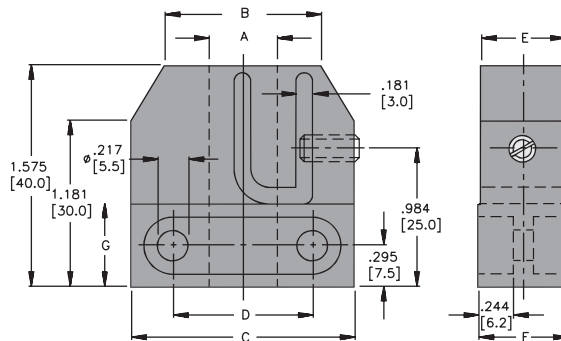
- BS-11: (2) M4x22 -SLOTTED HEAD
- BS-20: (2) M5x30 -CAP SCREWS
- BS-40: (2) M5x50 -CAP SCREWS



For use with 11, 20 and 40 mm smooth plastic barrel sensors.

Part Number	ID Number	Barrel Diameter	Dimensions						
			A	B	C	D	E	F	G
BS-12	M6947000	12 mm	0.48 [12.2]	1.10 [28.0]	1.57 [40.0]	0.98 [25.0]	0.59 [15.0]	0.63 [16.0]	0.59 [15.0]
BS-18	M6947100	18 mm	0.72 [18.2]	1.30 [33.0]	1.77 [45.0]	1.18 [30.0]	0.83 [21.0]	0.87 [22.0]	0.59 [15.0]

Material: PA 66-GF  
Inches [mm]

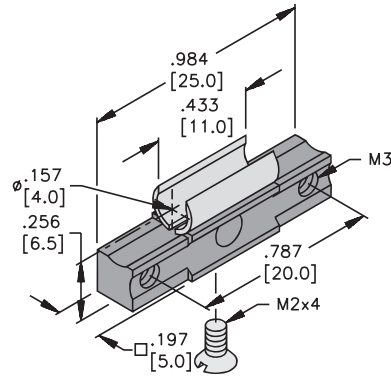


For use with 12 and 18 mm threaded barrel sensors.

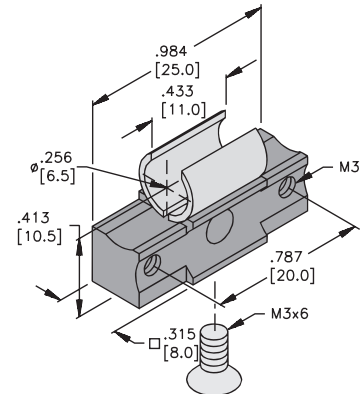
## Mounting Clamps

Part Number	ID Number	Barrel Diameter
BS-540	M6947500	4.0 mm
BS-865	S6947600	6.5 mm

Block Material: Aluminum  
Sleeve Material: Steel  
Inches [mm]



BS-540

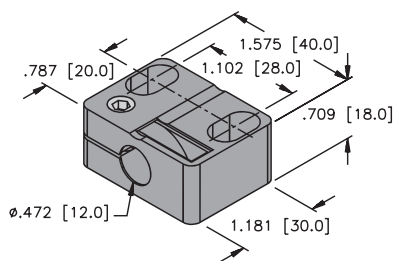


BS-865

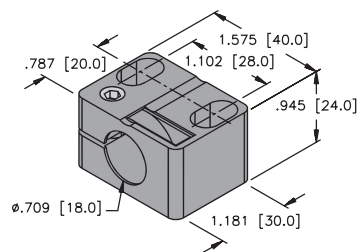
For use with H Barrel *picoprox*<sup>®</sup> sensors.

Part Number	ID Number	Barrel Diameter
BST-12N	M6947213	12 mm
BST-18B	M6947214	18 mm
BST-30B	M6947216	30 mm

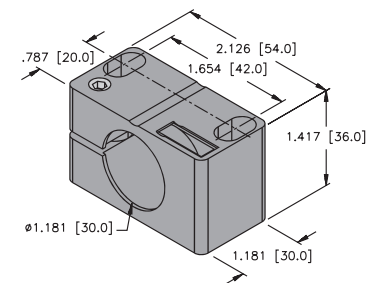
Material: PA 66-6F



BST-12N



BST-18B



BST-30B

# Sensors

## Accessories

Part Number	ID Number	A	B	C	D
TSG-12	A2500	1.75 [44.5]	1.25 [31.8]	12 mm (threaded or non-threaded)	0.37-0.81 [9.40-20.6]
TSG-18	A2501	1.90 [48.3]	1.48 [37.5]	18 mm (threaded or non-threaded)	0.63-1.12 [16.0-28.4]
TSG-30	A2502	3.45 [87.6]	2.00 [50.8]	30 mm (threaded or non-threaded)	1.00-1.75 [25.4-44.5]

Inches [mm]

## Protective Housing "Wet Suit"

Part Number	ID Number
SG40/2	M6949700

For extreme ambient conditions or long term exposure to elevated temperatures up to 170°C (338°F). Especially resistant to UV-radiation and ozone.  
IP 68, NEMA 13

Housing Material: ULTEM 1000  
Cover Plate Material: PBT-GF  
Cable Gland Material: PVDF  
Seal Material: Viton  
Inches [mm]

Recommended cable styles: 16-18 AWG  
For use with Limit Switch Style *combiprox*, *multiprox*, *C\*prox* and *K40SR* sensors.

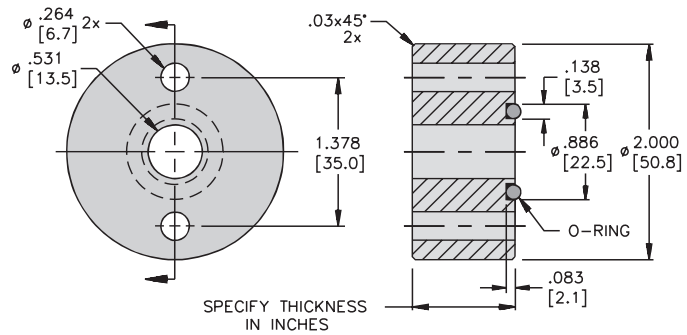
**Sensing Gap Gages**

Part Number	ID Number	Barrel Diameter	Dimensions			
			A	B	C	D
SG-Bi0.8-0.64	A5300	5 mm	0.197 [5.0]	0.025 [0.64]	0.378 [9.6]	0.252 [6.4]
SG-Bi 1-0.81	A5301	8 mm	0.315 [8.0]	0.032 [0.81]	0.378 [9.6]	0.374 [9.5]
SG-Bi 2-1.62	A5302	12 mm	0.472 [12.0]	0.064 [1.62]	0.500 [12.7]	0.630 [16.0]
SG-Bi 5-4.05	A5303	18 mm	0.709 [18.0]	0.160 [4.05]	0.500 [12.7]	0.878 [22.3]
SG-Bi10-8.1	A5304	30 mm	1.181 [30.0]	0.319 [8.1]	0.752 [19.1]	1.492 [37.9]
SG-Bi15-12.15	A5305	30 mm	1.181 [30.0]	0.478 [12.15]	0.748 [19.0]	1.492 [37.9]
Use above Gap Gages for embeddable (Shielded) sensors.						
SG-Ni 2-1.62	A5306	8 mm	0.315 [8.0]	0.064 [1.62]	0.347 [9.5]	0.378 [9.6]
SG-Ni 4-MG12-3.24	A5307	12 mm	0.472 [12.0]	0.128 [3.24]	0.528 [13.4]	0.626 [15.9]
SG-Ni 4-S12-3.24	A5308	12 mm	0.472 [12.0]	0.128 [3.24]	0.500 [12.7]	0.626 [15.9]
SG-Ni 5-4.05	A5309	12 mm	0.472 [12.0]	0.160 [4.05]	0.500 [12.7]	0.626 [15.9]
SG-Ni 8-6.48	A5310	18 mm	0.709 [18.0]	0.255 [6.48]	0.500 [12.7]	0.878 [22.3]
SG-Ni10-MG18-8.1	A5311	18 mm	0.709 [18.0]	0.319 [8.1]	0.500 [12.7]	0.878 [22.3]
SG-Ni10-P18-8.1	A5312	18 mm	0.709 [18.0]	0.319 [8.1]	0.756 [19.2]	0.752 [19.1]
SG-Ni15-MG30-12.15	A5313	30 mm	1.181 [30.0]	0.478 [12.15]	1.063 [27.0]	1.240 [31.5]
Use above Gap Gages for non-embeddable (Nonshielded) sensors.						
<p>Material: White Delrin Inches [mm]</p>						


Cords - Acc



Spacer Plates

<p style="text-align: center;"><b>Part Number</b></p> <p style="text-align: center;">SP-_. ____<sup>1)</sup>-C</p> <p>Material: Aluminum Inches [mm]</p>	 <p style="text-align: center;">SPECIFY THICKNESS IN INCHES</p>
<p><sup>1)</sup> add desired thickness in inches. Minimum thickness: 0.125", in .005 increments. For use with Cylinder Position Indicators, <i>CRS Series</i></p>	

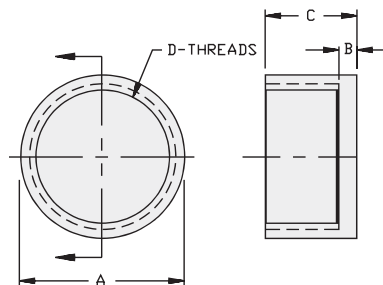
firefast™ Connector Protective Sleeving

Part Number	ID Number	
FF 1/2INCH BLACK (10/BAG)	A0076	
FF 3/4INCH BLACK (10/BAG)	A0075	
FF 1/2INCH BLACK 50 FOOT ROLL	A0078	
FF 3/4INCH BLACK 50 FOOT ROLL	A0079	

## Teflon/Ceramic Covers

Part Number	ID Number	Barrel Diameter	Dimensions			
			A	B	C	D
CAP 12-PTFE	M69662 00	12 mm Embeddable	0.63 [16.0]	0.03 [0.7]	0.63 [16.0]	M12x1
CAP 18N-PTFE	A3056	18 mm Nonembeddable	0.87 [22.0]	0.04 [1.0]	0.79 [20.0]	M18x1
CAP 18-PTFE	A3055	18 mm Embeddable	0.87 [22.0]	0.04 [1.0]	0.35 [9.0]	M18x1
CAP 30N-PTFE	A3058	30 mm Nonembeddable	1.34 [34.0]	0.05 [1.2]	1.14 [29.0]	M30x1.5
CAP 30-PTFE	A3057	30 mm Embeddable	1.34 [34.0]	0.05 [1.2]	0.35 [9.0]	M30x1.5
CAP 47-PTFE	A3060	47 mm Nonembeddable	2.20 [55.8]	0.06 [1.6]	0.38 [9.7]	PG 36

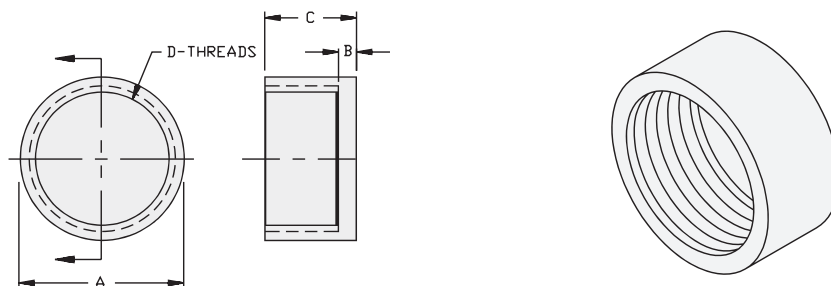
Material: PTFE  
Inches [mm]



For use with metal barrel sensors.

Part Number	ID Number	Dimensions				Max. Temp.	Density	Porosity	Thermal Conductivity (@20°C)
		A	B	C	D				
CAP 12-CER	A2530	0.63 [16.0]	0.04 [1.10]	.352 [8.94]	M12x1	4172°F (2300°C)	3.2 oz/in <sup>3</sup> (6 g/cm <sup>3</sup> )	Impervious	14 BTU • in/ft <sup>2</sup> • m • °F (2 W/m • °K)
CAP 18-CER	A2531	0.88 [22.3]	0.04 [1.10]	.352 [8.94]	M18x1				
CAP 30-CER	A2532	1.34 [34.0]	0.08 [2.00]	.352 [8.94]	M30x1.5				

Inches [mm]  
Material: Ceramic



For use with embeddable metal barrel sensors.

Cords - Acc

# Sensors

## Accessories

### Teflon Covers

Part Number	ID Number	Material
T-CK40-T-FC	A5202	Teflon <sup>®</sup>
T-CK40-D-FC	A5160	Delrin <sup>®</sup>
T-CK40-T-MCC	A5201	Teflon
T-CK40-T-MCB	A9126	Teflon

Inches [mm]

A9126

A5202  
A5160

A5201

For use with **CK40** style sensors.

Part Number	ID Number
T-CP40-T-C	A5204

Material: Teflon  
Inches [mm]

A5204

For use with **CP40** style sensors.

Part Number	ID Number
T-CP80-T	A5207

Material: Teflon  
Inches [mm]

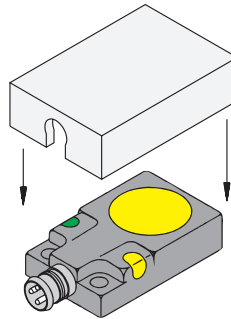
A5207

For use with **CP80** style sensors.

## Teflon Covers

Part Number	ID Number
T-Q08-T-MCC	A5155
T-Q14-T-MCC	A5154
T-Q20-T-MCC	A5156

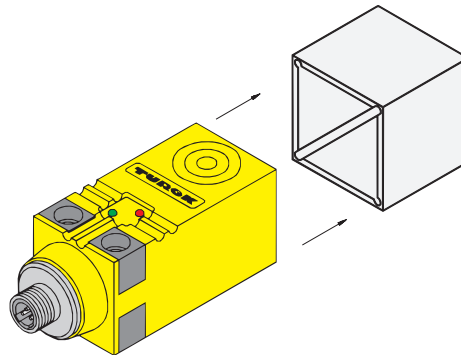
Material: Teflon  
Inches [mm]



For use with **Q08** style sensors.

Part Number	ID Number
T-Q34-D-FC	A5210

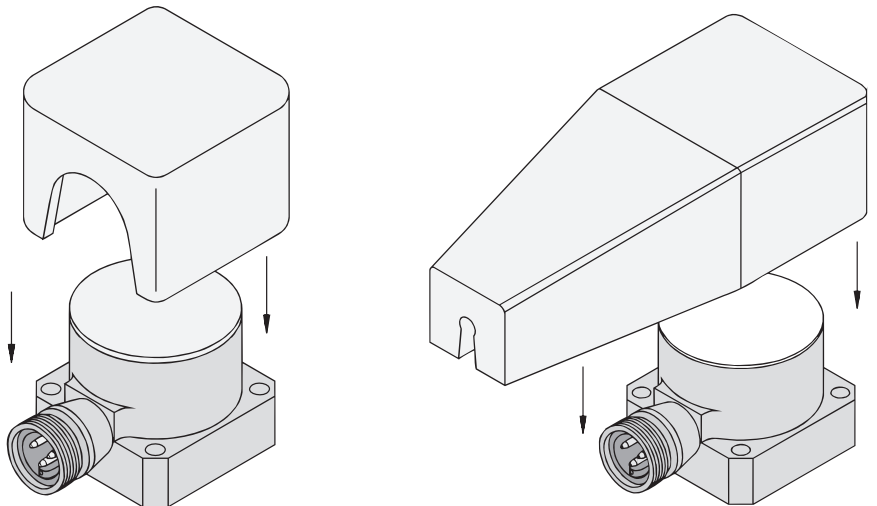
Material: HDPE  
Inches [mm]



For use with **Q34** style sensors.

Part Number	ID Number	Material
T-Q50-T	A5205	Teflon
T-Q50-D	A5206	HDPE

Inches [mm]



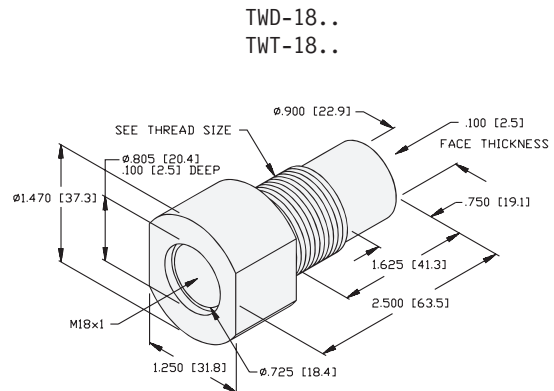
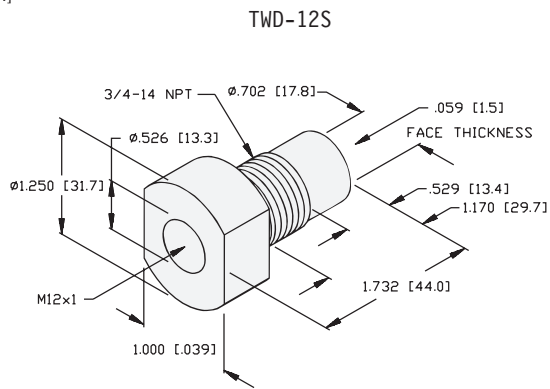
For use with **Q50** style sensors.

Cords - Acc

Threaded Tank Wells

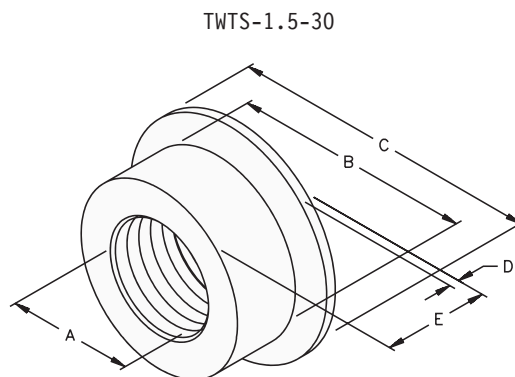
Part Number	ID Number	Material	Thread Size	Drill Size	Application
TWD-12S	A5051	Delrin	3/4-14 NPT	59/64	12 mm threaded capacitive sensors for liquid level sensing.
TWD-18S	A5055	Delrin	3/4-14 NPT	59/64	18 mm threaded capacitive sensors for liquid level sensing.
TWT-18S	A5050	Teflon	3/4-14 NPT	59/64	18 mm threaded capacitive sensors for liquid level sensing.
TWD-18S-1	A5057	Delrin	1-11 1/2 NPT	1-5/32	18 mm threaded capacitive sensors for liquid level sensing.
TWT-18S-1	A5056	Teflon	1-11 1/2 NPT	1-5/32	18 mm threaded capacitive sensors for liquid level sensing.

Pressure Rating: 150 PSI  
Inches [mm]



Part Number	ID Number	Dimensions			
		A	B	C	D
TWTS-1.5-30	A5077	M30x1.5	1.500 [38.1]	1.984 50.4	1.000 [25.4]
TWTS-2-30	A5076	M30x2.0	2.008 [51.0]	2.520 [64.0]	1.000 [25.4]

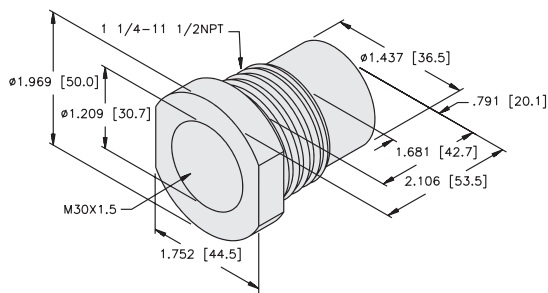
Inches [mm]



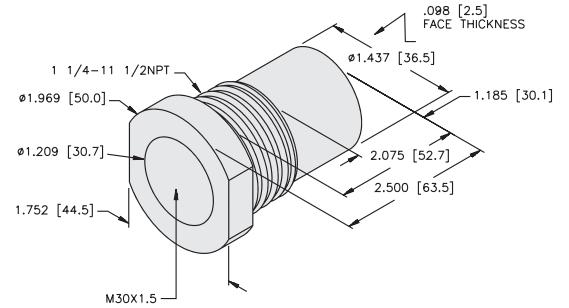
Threaded Tank Wells

Part Number	ID Number	Material	Thread Size	Drill Size	Application
TWD-30S	A5065	Delrin	1 1/4-11 1/2 NPT	1-1/2	30 mm threaded capacitive sensors for liquid level sensing.
TWT-30S	A5060	Teflon	1 1/4-11 1/2 NPT	1-1/2	30 mm threaded capacitive sensors for liquid level sensing.
TWD-40S	A5075	Delrin	1 1/2-11 1/2 NPT	1-47/64	40 mm smooth capacitive sensors for liquid level sensing.
TWT-40S	A5070	Teflon	1 1/2-11 1/2 NPT	1-47/64	40 mm smooth capacitive sensors for liquid level sensing.
TWT-30S-SHORT	A5062	Teflon	1 1/4-11 1/2 NPT	1-1/2	30 mm threaded capacitive sensors for liquid level sensing.

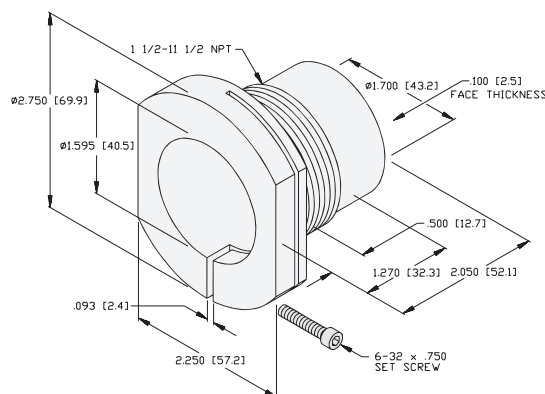
TWT-30S-SHORT



TWD-30S..  
TWT-30S..



TWD-40..  
TWT-40..



Cords - Acc

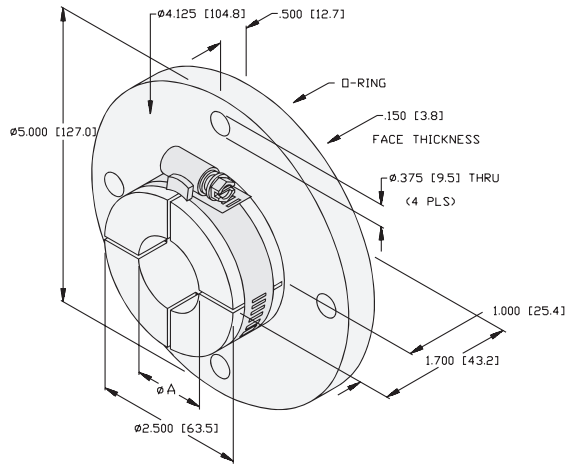
# Sensors

## Accessories

### Bolt-on Tank Wells

Part Number	ID Number	Dimensions
TWU-30B	A5005	1.181 [30.0]
TWU-40B	A5000	1.575 [40.0]

Material: UHMW/PE  
 Pressure Rating: 80 PSI  
 Inches [mm]

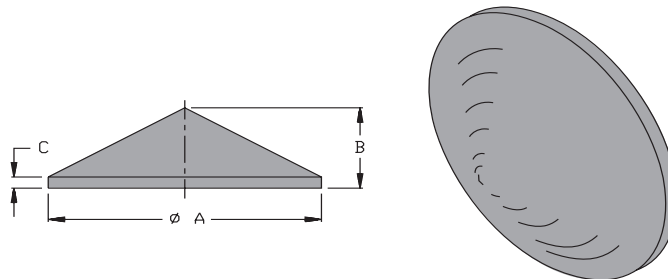


For use with 30 and 40 mm barrel sensors.

### Plastic Covers

Part Number	ID Number	Sensor Diameter	Dimensions		
			A	B	C
CP80-P-CONE	A5218	80 mm	2.756 [70.0]	0.925 [23.5]	0.129 [3.3]
K90-P-CONE	A5220	90 mm	3.150 [80.0]	1.250 [31.2]	0.341 [8.7]

Material: PVC  
 Inches [mm]



For use with CP80, K90 and K90SR style sensors.

## Conduit Adapters

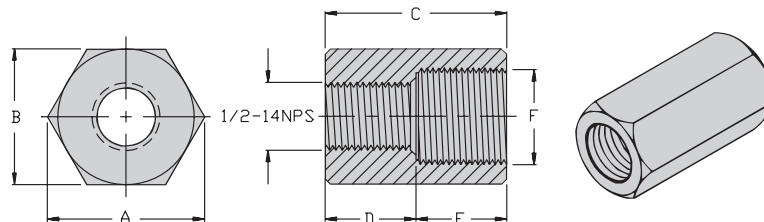
Part Number	ID Number	Barrel Diameter	Dimensions					
			A	B	C	D	E	F
TMF 12-G	A3310	12 mm	1.15 [29.2]	1.00 [25.4]	1.00 [25.4]	0.50 [12.7]	0.50 [12.7]	M12x1
TMF 18-G	A3320	18 mm	1.15 [29.2]	1.00 [25.4]	1.00 [25.4]	0.50 [12.7]	0.50 [12.7]	M18x1
TMF 30-G	A3345	30 mm	1.73 [44.0]	1.50 [38.1]	1.00 [25.4]	0.60 [15.2]	0.40 [10.2]	M30x1.5
TMF 47-G	A3360	47 mm	2.30 [58.4]	2.00 [50.8]	1.75 [44.5]	1.05 [26.7]	0.70 [17.8]	PG36

Use above Conduit Adapters with G and P Barrel sensors.

TMF 18-MS	A3330	18 mm	1.15 [29.2]	1.00 [25.4]	2.00 [50.8]	1.50 [38.1]	0.50 [12.7]	M18x1
TMF 30-MS	A3355	30 mm	1.73 [44.0]	1.50 [38.1]	2.00 [50.8]	0.60 [15.2]	1.40 [35.6]	M30x1.5

Use above Conduit Adapters with M and S Barrel sensors.

Material: Aluminum  
Inches [mm]



Part Number	ID Number
TMF 9-14	A3290
<p>Material: Delrin Inches [mm]</p>	
For use with Integral Terminal Chamber style sensors.	

Part Number	ID Number
TMF 13.5-14	A4500
<p>Material: Delrin Inches [mm]</p>	
For use with Integral Terminal Chamber style sensors.	



Cable Glands

Part Number	ID Number
Cable Gland PG 9	A3054
Material: Polyamide Plastic Recommended Cable Style: 18 and 20 AWG Inches [mm]	
For use with Integral Terminal Chamber style sensors.	

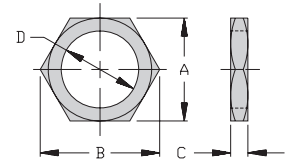
Part Number	ID Number
Cable Gland M20	A0936
Material: Polyamide Plastic Inches [mm]	
For use with Long Range Integral Terminal Chamber style sensors.	

Part Number	ID Number
Cable Gland 1/2-14NPT	A3480
Material: Polyamide Plastic Recommended Cable Style: 18 and 20 AWG Inches [mm]	
For use with Integral Terminal Chamber style sensors.	

## Locknuts

### Chrome Plated Brass

Part Number	ID Number	Barrel Diameter	Dimensions			D
			A	B	C	
LN-M05	A3119	5 mm	0.28 [7.0]	0.32 [8.0]	0.10 [2.5]	M5x0.5
LN-M08	A3120	8 mm	0.51 [13.0]	0.58 [14.7]	0.16 [4.0]	M8x1
LN-M12	A3122	12 mm	0.67 [17.0]	0.76 [19.4]	0.16 [4.0]	M12x1
LN-M18	A3125	18 mm	0.94 [24.0]	1.08 [27.4]	0.16 [4.0]	M18x1
LN-M30	A3126	30 mm	1.42 [36.0]	1.63 [41.4]	0.20 [5.0]	M30x1.5
LN-PG36	A3440	47 mm	2.01 [51.1]	2.20 [56.0]	0.20 [5.0]	PG36
LN 1/4-18	A3131	—	0.43"	0.49"	0.22"	1/4-18
LN 1/2-14	A3132	—	0.74"	0.85"	0.43"	1/2-14



### 300 Series Stainless Steel

LN-SS12	A3123	12 mm	0.67 [17.0]	0.76 [19.4]	0.16 [4.0]	M12x1
LN-SS18	A3123-0	18 mm	0.94 [24.0]	1.08 [27.4]	0.16 [4.0]	M18x1
LN-SS30	A3123-1	30 mm	1.42 [36.0]	1.63 [41.4]	0.20 [5.0]	M30x1.5

### Teflon® Coated

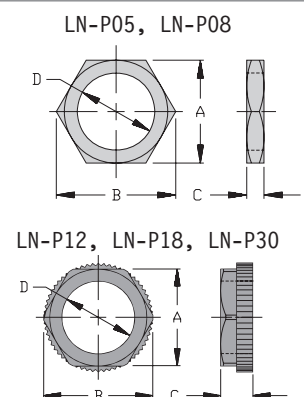
LN-MT12	A3109	12 mm	0.67 [17.0]	0.76 [19.4]	0.16 [4.0]	M12x1
LN-MT18	A3108	18 mm	0.94 [24.0]	1.08 [27.4]	0.16 [4.0]	M18x1
LN-MT30	A3107	30 mm	1.42 [36.0]	1.63 [41.4]	0.20 [5.0]	M30x1.5

For use with Teflon coated threaded metal barrel sensors.

### Polyamide Plastic \*

LN-P05	A3443	5 mm	0.31 [7.9]	0.35 [9.0]	0.08 [2.0]	M5x0.5
LN-P12	A3446	12 mm	0.67 [17.0]	0.75 [19.0]	0.32 [8.0]	M12x1
LN-P18	A3448	18 mm	0.94 [24.0]	1.06 [27.0]	0.32 [8.0]	M18x1
LN-P30	A3450	30 mm	1.42 [36.0]	1.58 [40.1]	0.39 [10.0]	M30x1.5

For use with threaded plastic barrel sensors.  
\* 5 mm Plastic Nut Material: Delrin  
Inches [mm]

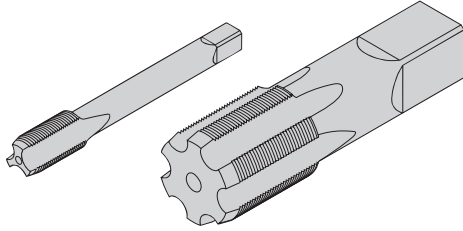


# Sensors

## Accessories

### Plug Taps

Part Number	ID Number	Thread	Drill Hole Diameter (mm)
PT-M05	A3160	M5x0.5	4.5
PT-M08	A3162	M8x1	7.0
PT-M12	A3166	M12x1	11.0
PT-M18	A3168	M18x1	17.0
PT-M30	A3170	M30x1.5	28.5
PT-PG 9	A3467	PG 9	14.0
PT-PG 13.5	A3464	PG13.5	19.0
PT-PG 21	A3466	PG21	27.0
PT-PG 36	A3468	PG36	45.5

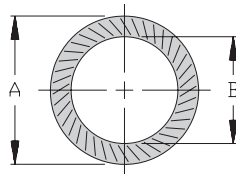


Inches [mm]

### Lockwashers

Part Number	ID Number	Sensor Diameter	Dimensions	
			A	B
LW-12	A3127	12 mm	0.70 [17.8]	0.52 [13.2]
LW-18	A3128	18 mm	1.06 [26.8]	0.76 [19.3]
LW-30	A3129	30 mm	1.76 [44.8]	1.26 [32.0]

Material: Brass  
 Finish: Copper, Nickel, Chrome Plating  
 Inches [mm]



For use with threaded barrel sensors.

**Test Box**

Part Number	ID Number	Description
TB 1-B	A3475-1	DC powered test box allows you to quickly test DC sensors.
<p>Inches [mm]</p>		

**Intrinsic Safety Labels**

Part Number	ID Number	Description
IS Labels	A4302	IS Decal 0.59" x 2.36" (10 per sheet)
IS Labels	A4301	IS Decal 2.25" x 3.00" (10 per sheet)
IS Labels	A4300	IS Decal 4.5" x 5.5" (Individual) - Not Pictured
<p>For identification of intrinsic safety wiring that is not color-coded blue</p>		

Cords - Acc

# Sensors

## Reference Tables

### Selection Guide

<i>Reference Tables</i>	Page Number
Cable Diameters of Potted-In Cable Sensors . . . . .	L30 - L31
Fahrenheit to Celsius Temperature . . . . .	L32
Millimeter Equivalents of Decimals and Fractions . . . . .	L33
<i>Specifications</i> . . . . .	M1 - M36
<i>Indexes</i>	
Complete Part Number Index . . . . .	N1
<i>Additional Information</i>	
Warranty Terms and Conditions . . . . .	N20 - N21

## Cable Diameters of Potted-In Cable Sensors

Housing Style	# of Conductors	Material	AWG	Cable Dia.
H04	3	PUR	26	3
EH04	3	PUR	26	3
H04	2	PVC	26	3.2
EH04	2	PVC	26	3.2
G05	2	PVC	26	3.2
EG05	2	PVC	26	3.2
G05	3	PUR	26	3
EG05	3	PUR	26	3
H6.5	2	PVC	22	5.2
EH6.5	2	PVC	22	5.2
EH6.5K	2	PVC	22	5.2
H6.5	3	PUR	24	4
EH6.5	3	PUR	24	4
EH6.5K	3	PUR	24	4
HS540	3	PUR	26	3
HS540	3	PUR	26	3
HS865	2	PVC	24	4
HS866	3	PUR	24	4
GO8	3	PUR	24	4
GO8	2	PUR	24	4
BC3-M12	3	PVC	24	4
BC3-S12	3	PVC	24	4
G12	3	PVC	22	5.2
M12	3	PVC	22	5.2
P12	3	PVC	22	5.2
S12	3	PVC	22	5.2
G12	2	PVC	22	5.2
M12	2	PVC	22	5.2
P12	2	PVC	22	5.2
S12	2	PVC	22	5.2
BC5-M18	3	PVC	22	5.2
BC5-S18	3	PVC	22	5.2
G18	3	PVC	22	5.2
M18	3	PVC	22	5.2
G18	2	PVC	21	5.2
M18	2	PVC	21	5.2

Housing Style	# of Conductors	Material	AWG	Cable Dia.
S185	3	PVC	22	5.2
BC10-M30	4	PVC	22	5.2
BC10-S30	4	PVC	22	5.2
BC10-S30	2	PVC	22	5.2
G30	3	PVC	22	5.2
M30	3	PVC	22	5.2
M30	2	PVC	21	5.2
G30	2	PVC	21	5.2
PT30	2	PUR	22	5.2
PT30	4	PVDF	22	5.2
KT34	4	PVDF	22	5.2
BC15-K34	3	PVC	22	5.2
G47	3	PVC	19	6.3
G47	2	PVC	21	7.3
Q5.5	3	PUR	26	3
QF5.5	2	PUR	26	3
QF5.5	3	PUR	26	3
Q6.5	3	PUR	26	3
Q6.5	2	PVC	22	5.2
Q9.5	3	PUR	26	3
Q06	3	PUR	24	4
Q8SE	3	PUR	26	3
BC 5-Q08	3	PVC	24	4
Q08	4	PVC	22	4
Q08	3	PVC	22	4
Q08	2	PVC	22	4
BC8-Q10	3	PVC	24	4
Q10	3	PUR	24	4
Q10S	4	PUR	24	4
Q10S	3	PUR	24	4
Q10S	2	PVC	22	4
Q11S	2	PVC	22	5.2
Q55E	3	PUR	26	3
Q07	3	PUR	26	3
K11	3	PVC	22	5.2

Cords - Acc

# Sensors

## Reference Tables

### Cable Diameters of Potted-In Cable Sensors

Housing Style	# of Conductors	Material	AWG	Cable Dia.
Q11S	3	PUR	24	4
Q12	3	PVC	22	5.2
BC10-Q14	3	PVC	24	4
Q14	3	PVC	22	5.2
BC20-Q20	3	PUR	22	5.2
Q18	3	PVC	22	5.2
Q20	3	PVC	22	5.2
Q25	3	PVC	22	5.2
Q26	2	PVC	22	5.2
Q30	3	PVC	22	5.2
Q80	2	PVC	22	5.2
INT-AG	2	PUR	26	3
INT-Y1	2	PVC	26	3.2
INT	3	PUR	26	3
INR	3	PUR	28	2
BIM-M12E	2	PUR	22	5.2
BIM-M12E	3	PUR	22	5.2

Housing Style	# of Conductors	Material	AWG	Cable Dia.
NST	2	PVC	24	4
NST	3	PVC	24	4
PST	2	PVC	24	4
PST	3	PVC	24	4
PSM	3	PVC	24	4
KST	3	PVC	24	4
QST	2	PVC	24	4
QST	3	PVC	24	4
AKT-Y1	2	PVC	24	4
AKT-AD	2	PVC	22	5.2
AKT	3	PVC	24	4
IKT-Y1	2	PVC	24	4
IKT-AD	2	PVC	21	5.2
IKT	3	PVC	24	4
IKE-Y1	2	PVC	24	4
IKE-AD	2	PVC	21	5.2
IKE	3	PVC	24	4
IKT-Y1	2	PVC	24	4
IKT-AD	2	PVC	21	5.2
IKT	3	PVC	24	4

**Fahrenheit to Celsius Temperature**

Degrees Fahrenheit	Degrees Celsius
-70	-56.7
-65	-53.9
-60	-51.2
-55	-48.4
-50	-45.6
-45	-42.8
-40	-40.0
-35	-37.3
-30	-34.5
-25	-31.7
-20	-28.9
-15	-26.1
-10	-23.4
0	-17.8
5	-15.0
10	-12.2
15	-9.5
20	-6.7
25	-3.9
30	-1.1
*32	*0.0
35	1.7
40	4.4
45	7.2
50	10.0
55	12.8
60	15.6
65	18.3
70	21.1
75	23.9
80	26.7
85	29.5
90	32.2

Degrees Fahrenheit	Degrees Celsius
95	35.0
100	37.8
105	40.6
110	43.4
115	46.1
120	48.9
125	51.7
130	54.5
135	57.3
140	60.0
145	62.8
150	65.6
155	68.4
160	71.2
165	73.9
170	76.7
175	79.5
180	82.3
185	85.1
190	87.8
195	90.6
200	93.4
205	96.2
210	99.0
**212	**100.0

\* Water Freezing Point  
 \*\* Water Boiling Point  
 For temperature conversions not given  
 use the following formulas:  
 $^{\circ}\text{Celsius} = (^{\circ}\text{Fahrenheit} - 32) \times .556$   
 $^{\circ}\text{Fahrenheit} = (^{\circ}\text{Celsius} \times 1.8) + 32$

Cords - Acc



# Sensors

## Reference Tables

### Millimeters Equivalents of Decimals and Fractions

Millimeters	Inches	Fraction
0.10	0.0039	
0.20	0.0079	
0.30	0.0118	
0.40	0.0157	
0.50	0.0197	
0.60	0.0236	
0.70	0.0276	
0.80	0.0315	
0.90	0.0354	
1.00	0.0394	
1.59	0.0625	1/16
2.00	0.0787	
3.00	0.1181	
3.18	0.1250	1/8
4.00	0.1575	
4.76	0.1875	3/16
5.00	0.1969	
6.00	0.2362	
6.35	0.2500	1/4
7.00	0.2756	
7.94	0.3125	5/16
8.00	0.3150	
9.00	0.3543	
9.53	0.3750	3/8
10.00	0.3937	
11.00	0.4331	
11.11	0.4375	7/16
12.00	0.4724	
12.70	0.5000	1/2
13.00	0.5118	
14.00	0.5512	
14.29	0.5625	9/16
15.00	0.5906	
15.88	0.6250	5/8
16.00	0.6299	
17.00	0.6693	
17.46	0.6875	11/16
18.00	0.7087	
19.00	0.7480	
19.05	0.7500	3/4
20.00	0.7874	
20.64	0.8125	13/16
21.00	0.8268	
22.00	0.8661	
22.23	0.8750	7/8
23.00	0.9055	
23.81	0.9375	15/16
24.00	0.9449	

Millimeters	Inches	Fraction
25.40	1.000	1.000
26.00	1.024	
27.00	1.063	
28.00	1.102	
29.00	1.142	
30.00	1.181	
31.00	1.220	
32.00	1.260	
33.00	1.299	
34.00	1.339	
35.00	1.378	
36.00	1.417	
37.00	1.457	
38.00	1.496	
39.00	1.535	
40.00	1.575	
41.00	1.614	
42.00	1.654	
43.00	1.693	
44.00	1.732	
45.00	1.772	
46.00	1.811	
47.00	1.850	
48.00	1.890	
49.00	1.929	
50.00	1.969	
51.00	2.008	
52.00	2.047	
53.00	2.087	
54.00	2.126	
55.00	2.165	
56.00	2.205	
57.00	2.244	
58.00	2.283	
59.00	2.323	
60.00	2.362	
61.00	2.402	
62.00	2.441	
63.00	2.480	
64.00	2.520	
65.00	2.559	
66.00	2.598	
67.00	2.638	
68.00	2.677	
69.00	2.717	
70.00	2.756	
71.00	2.795	
72.00	2.835	

Millimeters	Inches	Fraction
73.00	2.874	
74.00	2.913	
75.00	2.953	
76.00	2.992	
77.00	3.031	
78.00	3.071	
79.00	3.110	
80.00	3.150	
81.00	3.189	
82.00	3.228	
83.00	3.268	
84.00	3.307	
85.00	3.346	
86.00	3.386	
87.00	3.425	
88.00	3.465	
89.00	3.504	
90.00	3.543	
91.00	3.583	
92.00	3.622	
93.00	3.661	
94.00	3.701	
95.00	3.740	
96.00	3.780	
97.00	3.819	
98.00	3.858	
99.00	3.898	
100.00	3.937	

Notes:

1M = 100 cm = 1000 mm

For conversions not given  
use the following formulas:

Millimeters = Inches x 25.4

Inches = Millimeters ÷ 25.4

**Notes:**

**Selection Guide - Section M**

**Introduction to Sensor Products**

Introduction . . . . .	M2
Glossary of Terms . . . . .	M3 - M4

**Wiring Instructions - DC (Green)**

<b>euromat</b> <sup>®</sup> Pinout Diagrams and Mating Cordset . . . . .	M5 - M6
DC Outputs, Short-Circuit and Overload Protection, TTL Compatible . . . . .	M7
Sinking and Sourcing . . . . .	M8
"AD" 2-Wire DC Output . . . . .	M8
"AN4" and "AP4", "AN6(7)" and "AP6(7)" 3-Wire DC Outputs . . . . .	M9
"VN4" and "VP4", "VN6" and "VP6" 4-Wire DC Outputs . . . . .	M10
"LIU" 4-Wire Linear Analog DC Output . . . . .	M11
Series / Parallel Connection . . . . .	M11 - M12

**Wiring Instructions - AC (Red)**

AC and AC/DC Outputs . . . . .	M13
Short-Circuit and Overload Protection . . . . .	M14
Series Connection, Mechanical Switches in Series . . . . .	M15
Parallel Connection, Mechanical Switches in Parallel . . . . .	M16

**Wiring Instructions - NAMUR (Blue)** 

NAMUR (Y0 and Y1) Outputs, Typical Output Curves. . . . .	M17
Typical Intrinsically Safe Installation, Interface Circuits. . . . .	M18

**Compliances and Hazardous Locations**

Third Party Compliances    	M19
Hazardous Location Approvals  	M19 - M20

**Enclosure Ratings and Material Properties**

Enclosure Ratings . . . . .	M21
Material Descriptions - Plastic and Metal. . . . .	M22
Matrix of TURCK Sensor Materials . . . . .	M23 - M24
Chemical Compatibility . . . . .	M24

**General Specifications**

Operating Principles . . . . .	M26 - M27
Operating Distances . . . . .	M28 - M30
General Sensor Specifications "AC", "DC", "Namur", "Analog", "Capacitive" . . . . .	M31 - M36

# Important Safety Warning!

**TURCK** sensors and peripheral devices **DO NOT** include the self-checking redundant circuitry required to permit their use in personnel safety applications. A device failure or malfunction can result in either an energized or a de-energized output condition.

Never use these products as sensing devices for personnel protection. Their use as safety devices may create unsafe conditions that could lead to serious bodily injury or death.

## Selection Guide - Section A

### How does Proximity Sensing compare to conventional methods?

**TURCK** proximity sensors are entirely solid state electronic controls that contain no moving parts to wear out as do mechanical switches. They require no physical contact for actuation, no cams or linkages, have no contacts to bounce or arc and are completely encapsulated, making them impervious to most liquids, chemicals and corrosive agents. In addition, **TURCK** has a line of sensors that can be used in hazardous explosive environments without any special enclosures. See Hazardous Area Locations in Section A.

If any of the following conditions exists, a Proximity Sensor should be used:

- The object being detected is too small, too lightweight, or too soft to operate a mechanical switch.
- Rapid response and high switching rates are required, as in counting or ejection control applications.
- Object has to be sensed through non-metallic barriers such as glass, plastic, or paper carton.
- Hostile environments demand improved sealing properties, preventing proper operation of mechanical switches.
- Long life and reliable service are required.
- Fast electronic control system requires bounce-free input signal.

### Proximity Sensors are being used today in all industries:

Mining and Metallurgy	Sheet Metal Fabrication
Foundries	Automotive and Appliance Plants
Automatic Assembly and Robotics	Electroplating Installations
Conveyor Systems in Airports and Factories	Can Plants, Food Processing and Breweries
Chemical Plants and Oil Refineries	Shipyards, Docks, and Off-shore Drilling Rigs
Semiconductor Equipment	PC-board Handling Machinery

### Typical applications:

Parts Detection	Void or Jam Control	Valve Position Indication
Parts Counting	Feed Control	Missing Parts Control
Positioning	Indexing	Parts Diverting
Motion and Speed Control	Inter-lock Control	Coin Counting and Sorting
Bottle Cap or Can Lid Detection	Liquid Level Control	Edge Guide Control
Punch Press Feed and Ejection Control	Leak Detection	Robotics and Conveyors
Broken or Damaged Tool Detection	Machine Programming	

### Axial Approach

The approach of the target with its center maintained on the sensor reference axis.

### Axially Polarized Ring Magnet

A ring magnet whose poles are the two flat sides of the disk. Mounted on pistons for *permaprox*<sup>®</sup> cylinder position sensing through nonmagnetic cylinder walls.

### Capacitive Proximity Sensor

A proximity sensor producing an electrostatic field that senses conductive targets and nonconductive materials having a dielectric constant of >1 within its sensing zone.

### Complementary Output

Two outputs, one N.O. and one N.C., that can be used simultaneously. **The sum of both load currents cannot exceed the sensor's rated Continuous Load Current.**

### Continuous Load Current

The maximum current allowed to continuously flow through the sensor output in the ON state.

### Correction Factors

Percentage of the rated operating distance (Sn) that represents the operating distance for targets constructed from materials other than mild steel (mild steel's correction factor is 1.0).

### Differential Travel (Hysteresis)

The difference between the operating point as the target approaches the sensor face, and the release point as the target moves away. Given as a percentage of the operating distance (Sn).

### Dynamic Output

A sensor output that stays energized for a set duration of time, independent of the time the target is present (one-shot).

### Embeddable (Shielded) Proximity Sensor

A sensor that can be flush-mounted in any material without that material influencing the sensing characteristics.

### Free Zone

The space around a proximity sensor that must be kept free of any material capable of affecting the sensing characteristics.

### Inductive Proximity Sensor

A proximity sensor producing an electromagnetic field that senses only metal targets within its sensing zone.

### Inductive Magnet Operated Sensor (*permaprox*<sup>®</sup>)

A solid-state sensor consisting of a sensing element susceptible to magnetic field strengths of 20-350 Gauss, and switching circuitry similar to that of an inductive proximity sensor.

### Inrush Current

The maximum short-term load current that the output of a sensor can tolerate.

### IP Rating

Ingress Protection rating per IEC 529.

### Lateral Approach

The approach of a target perpendicular to the sensor reference axis.

### Load

A device or circuit that is operated by the energy output of another device such as a proximity sensor.

### M Threading

ISO 68 Metric straight threading, designated as "Nominal Size" X "Pitch", in mm. (Ex. M5X0.5)

### Minimum Load Current

The minimum amount of current that is required by the sensor for reliable operation.

### NAMUR

The acronym for a European standards organization.

### NAMUR Sensor

A 2-wire variable-resistance DC sensor whose operating characteristics conform to DIN 19 234. Requires a remote amplifier for operation. Typically used for intrinsically safe applications.

### NEMA Rating

An enclosure rating per NEMA Standard 250.

### No-Load Current

The current drawn by a DC proximity sensor from the power supply when the outputs are not connected to a load.

### Nonembeddable (Nonshielded) Proximity Sensor

A sensor is nonembeddable when a specified free zone must be maintained around its sensing face in order not to influence the sensing characteristics.

### Normally Closed (N.C.)

The output is OFF when the target is detected by the sensor.

### Normally Open (N.O.)

The output is ON when the target is detected by the sensor.

### NPN Output (Current Sinking)

A transistor output that switches the common or negative voltage to the load. Load is between sensor and positive supply voltage.

## NPSM Threading

American National Standard Straight Pipe Thread for Free-Fitting Mechanical Parts.

## NPT Threading

American National Standard Taper Pipe Thread.

## Off-State (Leakage) Current

The current that flows through the load circuit when the sensor is in the OFF-state. Also known as leakage or residual current.

## Operating Distance

A distance at which the target approaching the sensing face along the reference axis causes the output signal to change.

## Overload Protection

The ability of a sensor to withstand load currents between continuous load rating and short-circuit condition with no damage.

## PG Threading

Steel conduit threading per German standard DIN 40 430.

## PNP Output (Current Sourcing)

Transistor output that switches the positive voltage to the load. Load is between sensor and common.

## Programmable Output

Sensor output whose N.O. or N.C. function can be selected by means of a jumper or specific terminal connection.

## Radially Polarized Ring Magnet

A ring magnet whose poles are the inner and outer diameter rings.

## Rated Operating Distance (Sn)

A conventional quantity used to designate the operating distance. It does not take into account either manufacturing tolerances or variations due to external conditions such as voltage and temperature.

## Reference Axis

An axis perpendicular to the sensing face and passing through its center.

## Repeatability

The difference between actual operating distances measured at a constant temperature and voltage over an 8-hour period. It is expressed as a percentage (%) of rated operating distance (Sn).

## Response frequency

The maximum rate that the output can change in response to the input and still maintain linearity.

## Response Time

The time required for the device switching element to respond after the target enters or exits the sensing zone.

## Reverse Polarity Protection

Internal components that keep the sensor from being damaged by incorrect polarity connection to the power supply.

## Ripple

The alternating component remaining on a DC signal after rectifying, expressed in percentage of rated voltage.

## Sensing Face

The surface of the proximity sensor through which the electromagnetic (or electrostatic) field emerges.

## Short-Circuit Protection

The ability of a sensor to withstand a shorted condition (no current-limiting load connected) without damage.

## Slew Rate

The rate of change of the output voltage with respect to a step change in input. A change in output of 0 to 10 volts at a slew rate of 1.25 V/ms would take 8 ms to slew to the new value.

## Solid State

Pertains to devices using semiconductors instead of mechanical parts.

## Static Output

A sensor output that stays energized as long as the target is present.

## Switching Frequency

The maximum number of times per second that the sensor can change state (ON and OFF) under ideal conditions, usually expressed in Hertz (Hz).

## Time-Delay Before Availability

The length of time after power is applied to the sensor before it is ready to operate correctly, expressed in milliseconds (ms).

## Uprox Sensor<sup>®</sup>

An inductive proximity sensor that detects all metals at the same range. Uprox sensors are inherently weld-field immune, operate over a wider temperature range and have a higher switching frequency than standard inductive sensors.

## Weld-Field Immunity (WFI)

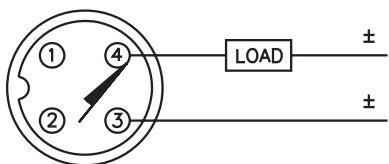
The ability of a sensor not to false-trigger in the presence of strong magnetic fields typically produced by resistance welders.

## Wire-Break Protection

Results in the output being OFF on a DC sensor if either supply wire is broken.

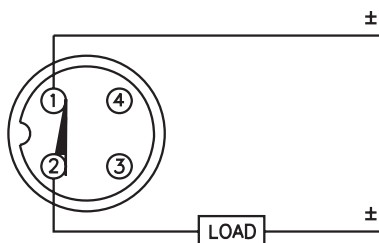
**euromast® Pinout Diagrams and Mating Cordset**

**AD4X-H1141**



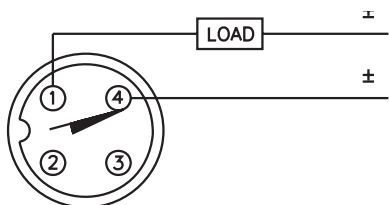
**Mating Cordset: RK 4.2T-\***

**RD4X-H1141**



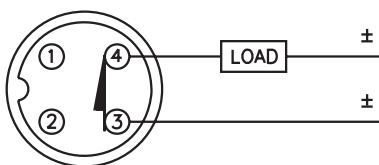
**Mating Cordset: RK 4.21T-\* (Y0)**

**AD4X-H1144**



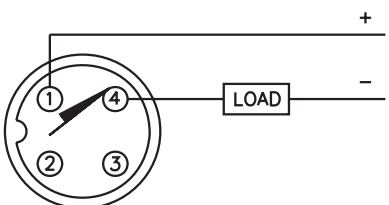
**Mating Cordset: RK 4.2T-\*/S674**

**RD4X-H1143**



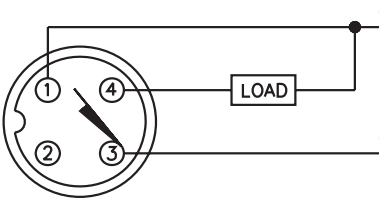
**Mating Cordset: RK 4.2T-\***

**AG41X-H1341**



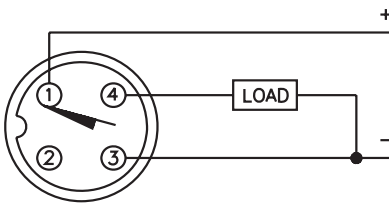
**Mating Cordset: RK 4.2T-\*/S748**

**AN6X-H1141/H1341**



**Mating Cordset: RK 4T-\***

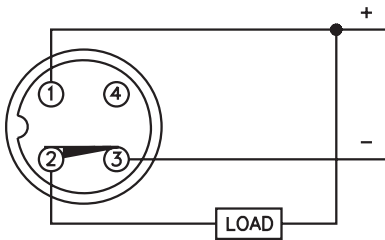
**AP6X-H1141/H1341**



**Mating Cordset: RK 4T-\***

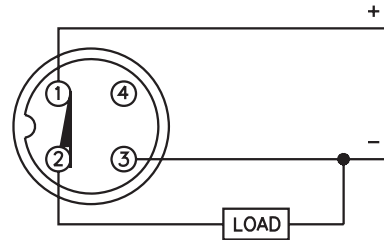
**euromast® Pinout Diagrams and Mating Cordset**

**RN6X-H1141**



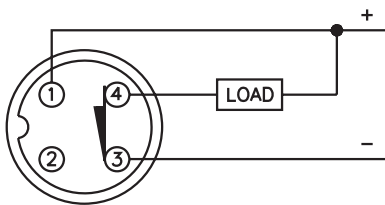
**Mating Cordset: RK 4.4T-\***

**RP6X-H1141**



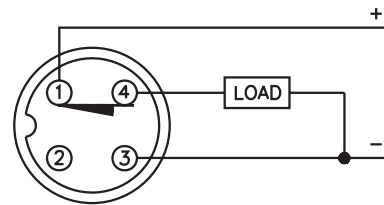
**Mating Cordset: RK 4.4T-\***

**RN6X-H1143/H1343**



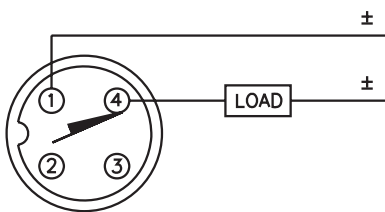
**Mating Cordset: RK 4.42T-\***

**RP6X-H1143/H1343**



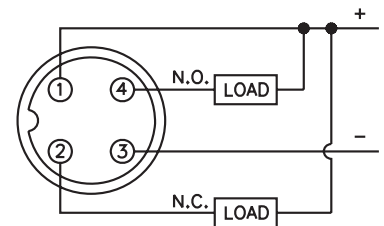
**Mating Cordset: RK 4T-\***

**AG41X-H3141**



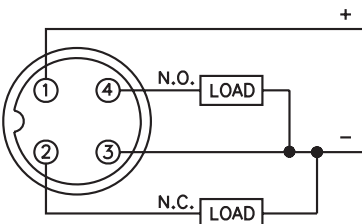
**Mating Cordset: RK 4.2T-\*/S748**

**VN4X2-H1141/H1341**



**Mating Cordset: RK 4.4T-\***

**VP4X2-H1141/H1341**



**Mating Cordset: RK 4.4T-\***



## DC Outputs

Two-, three-, or four-wire proximity sensors contain a transistor oscillator and a snap-action amplifier. This provides exceedingly high accuracy to a set switching point, even with very slowly approaching targets. Switching characteristics are unaffected by supply voltage fluctuations within the specified limits.

The sensors can drive electromechanical relays, counters, solenoids, or electronic modules, and interface directly with logic systems or programmable controllers without additional interface circuitry. They are available with either NPN output transistors (current sinking) or PNP output transistors (current sourcing).

Load current ratings vary from 100 mA to 200 mA depending on physical size. Standard voltage range is 10-30 VDC with certain types available for 10-65 VDC. All models incorporate wire-break, transient and reverse polarity protection.

Power-On false pulse suppression is also standard.

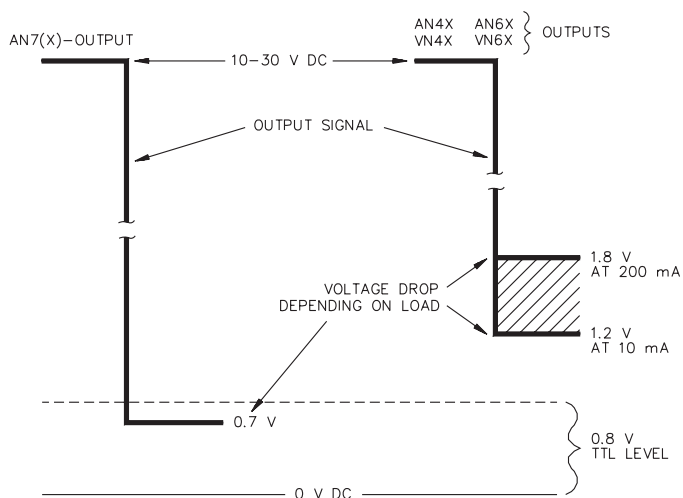
## Short-Circuit and Overload Protection

TURCK DC sensors with a Voltage Range designation of "4", "6" or "8" in the part number are short-circuit and overload protected (automatic reset). These sensors incorporate a specially designed circuit which continuously monitors the ON state output current for a short-circuit or overload condition. If either of these fault conditions occurs, the output is turned OFF and pulse tested until the fault is removed. This added protection causes a  $\leq 1.8$  V drop across the output in the normal ON state. This may be a problem when interfacing with some logic low inputs (see TTL compatibility).

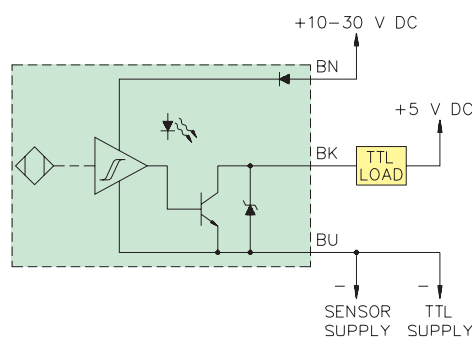
## TTL Compatibility

Some solid-state loads requiring NPN (sinking) input signals need a  $\leq 0.8$  V signal to reliably turn ON. **TURCK** DC sensors with TTL compatibility are designated with the voltage range "7" in the part number. The output of these sensors will have a voltage drop of  $\leq 0.7$  V (0.3 V typical), which will ensure reliable operation. Do not use voltage ranges "4" and "6" when TTL compatibility is required.

**Figure 1**



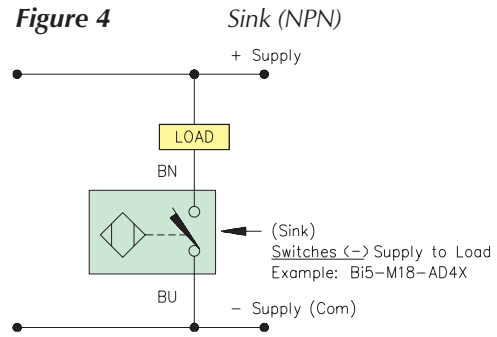
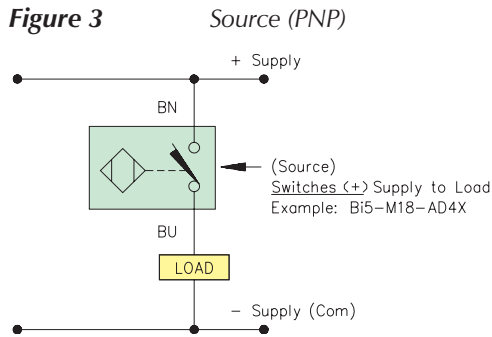
**Figure 2**



Voltage drop is measured from output wire black (BK) to ground wire blue (BU).

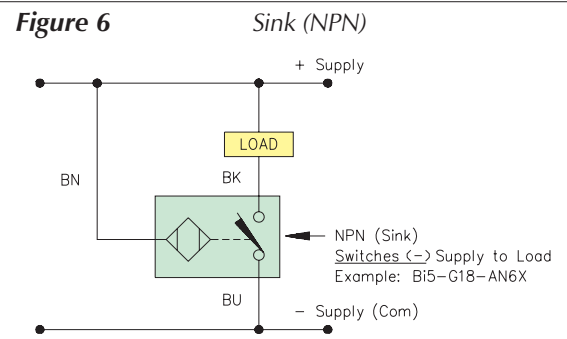
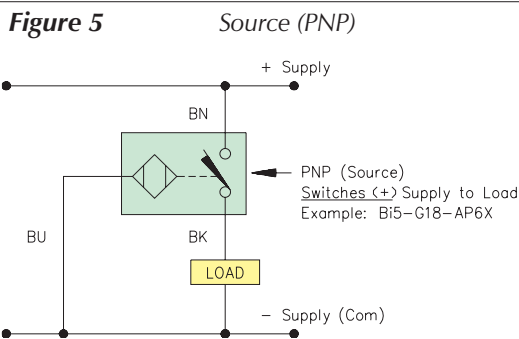
DC Sourcing and Sinking

2-Wire DC



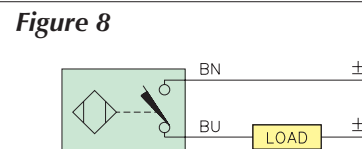
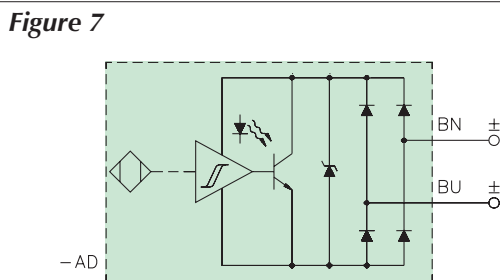
Note: TURCK 2-wire DC sensors with an "AD" designation are not polarity sensitive and can be used to sink or source a load.

3-Wire DC

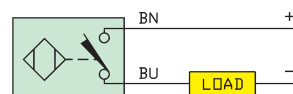
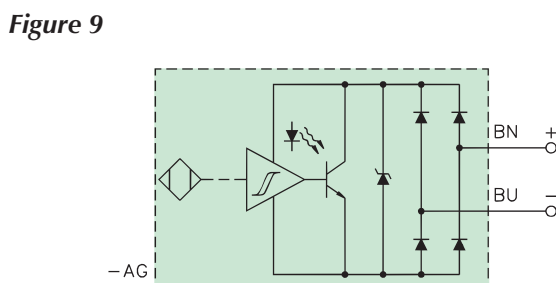


DC Outputs

"AD" 2-Wire DC Output



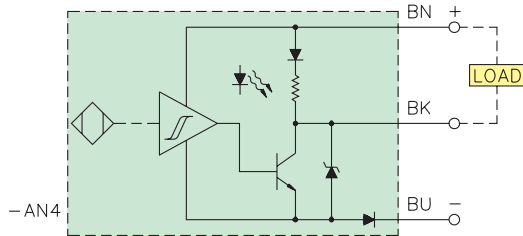
"AG" 2-Wire DC Output



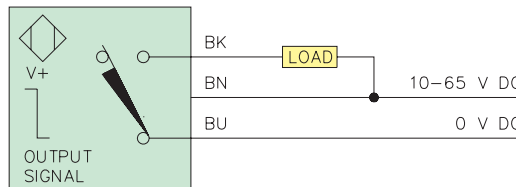
**DC Outputs**

**"AN4" and "AP4" 3-Wire DC Outputs**

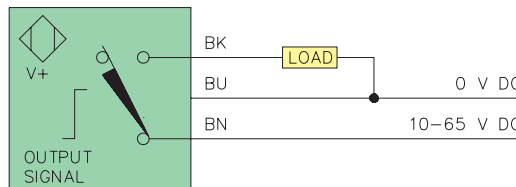
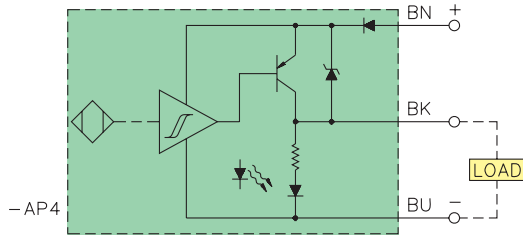
**Figure 10 Electronic Output Circuit**



**Figure 11 Wiring Diagram**



NPN transistor  
 (i.e. current sinking  
 negative switching)  
 N.O. output

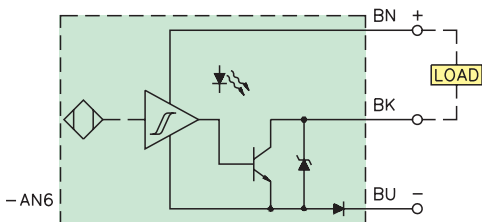


PNP transistor  
 (i.e. current sourcing  
 positive switching)  
 N.O. output

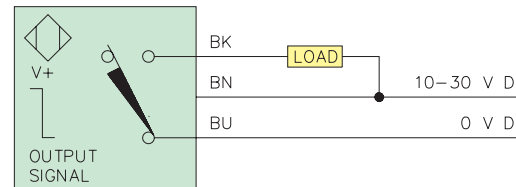
**"AP6" 3-Wire DC Outputs**

**"AN6(7)" and**

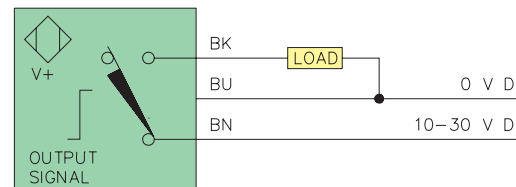
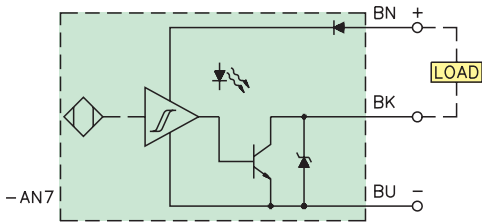
**Figure 12 Electronic Output Circuit**



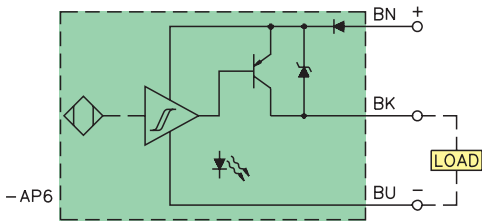
**Figure 13 Wiring Diagram**



NPN transistor  
 (i.e. current sinking  
 negative switching)  
 N.O. output



PNP transistor  
 (i.e. current sourcing  
 positive switching)  
 N.O. output



**TURCK TIP**

- Order current sinking (NPN) sensors with the voltage range "7" only when low voltage drop for TTL gates is required. In all other cases, order sensors with voltage ranges "4" or "6".

DC Outputs

“VN4” and “VP4” 4-Wire DC Outputs

Figure 14 Electronic Output Circuit

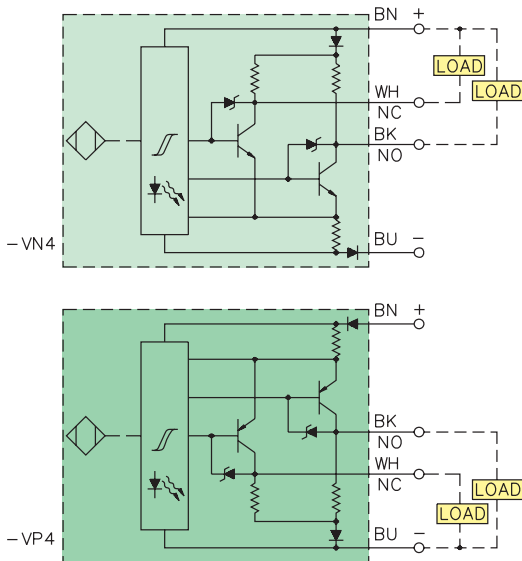
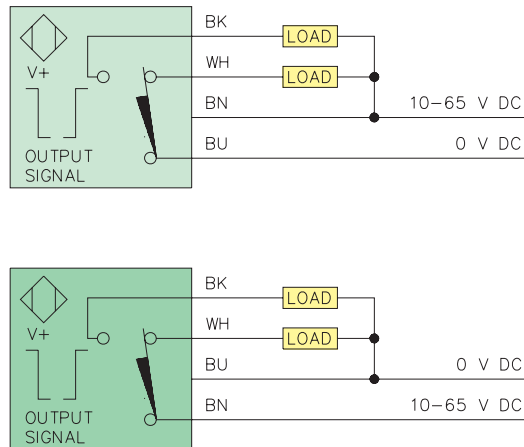


Figure 15 Wiring Diagram



NPN transistor  
(i.e. current sinking  
negative switching)  
complementary  
output (SPDT)

PNP transistor  
(i.e. current sourcing  
positive switching)  
complementary  
output (SPDT)

“VN6” and “VP6” 4-Wire DC Outputs

Figure 16 Electronic Output Circuit

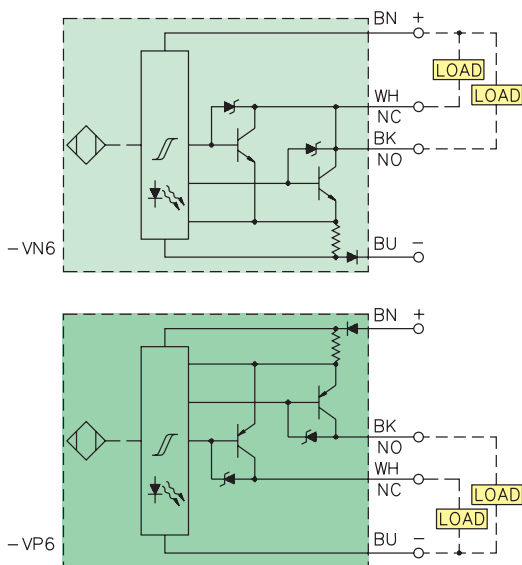
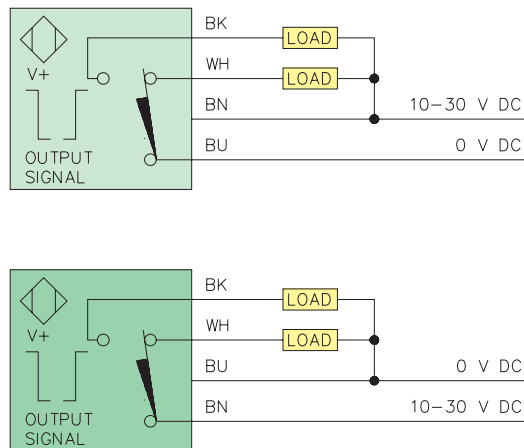


Figure 17 Wiring Diagram



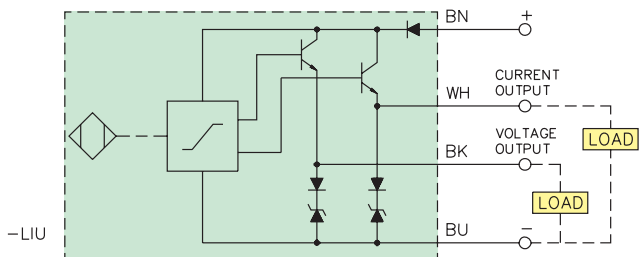
NPN transistor  
(i.e. current sinking  
negative switching)  
complementary  
output (SPDT)

PNP transistor  
(i.e. current sourcing  
positive switching)  
complementary  
output (SPDT)

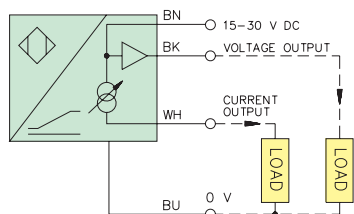
## DC Outputs

### "LIU" 4-Wire Linear Analog DC Output

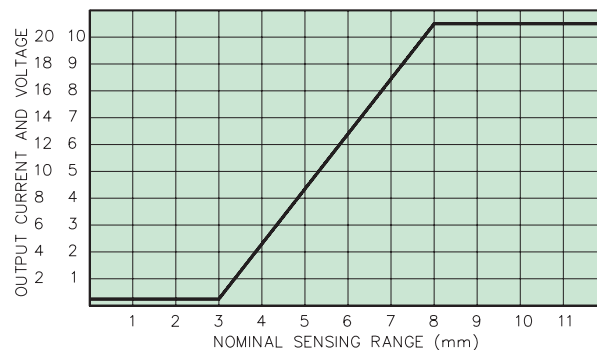
**Figure 18** Electronic Output Circuit



**Figure 20** Wiring Diagram



**Figure 19** Typical Response Curve



Linear Analog Output; Current and Voltage

## Series/Parallel Connection

### Logic functions with DC proximity sensors:

Self-contained proximity sensors can be wired in series or parallel to perform such logic functions as AND, OR, NAND, NOR. The wiring diagrams show the hook-up of four sensors with NPN and PNP outputs.

Take into account the accumulated no-load current and voltage drop per sensor added in the series string.

#### Series-connection:

- N.O. sensors: AND Function  
(target present, all sensors: load "on")
- N.C. sensors: NOR Function  
(target present, any sensor: load "off")

#### Parallel-connection:

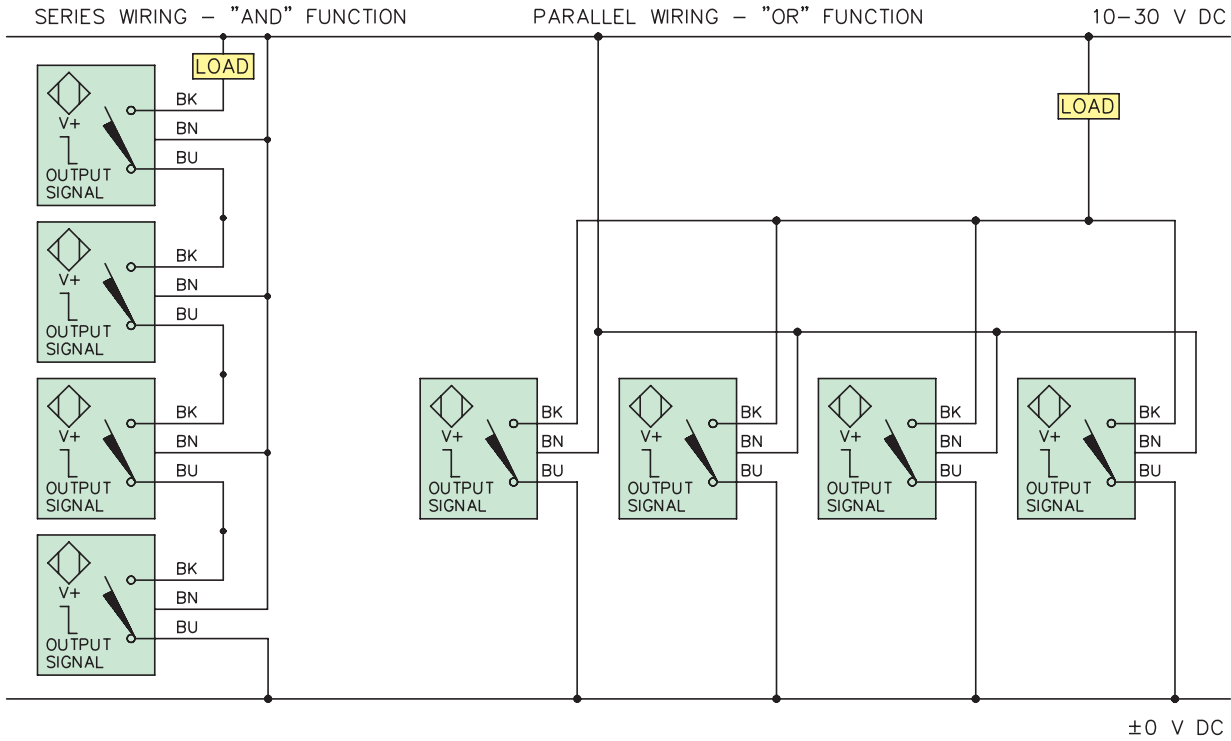
- N.O. sensors: OR Function  
(target present, any sensor: load "on")
- N.C. sensors: NAND Function  
(target present, all sensors: load "off")

### TURCK TIP

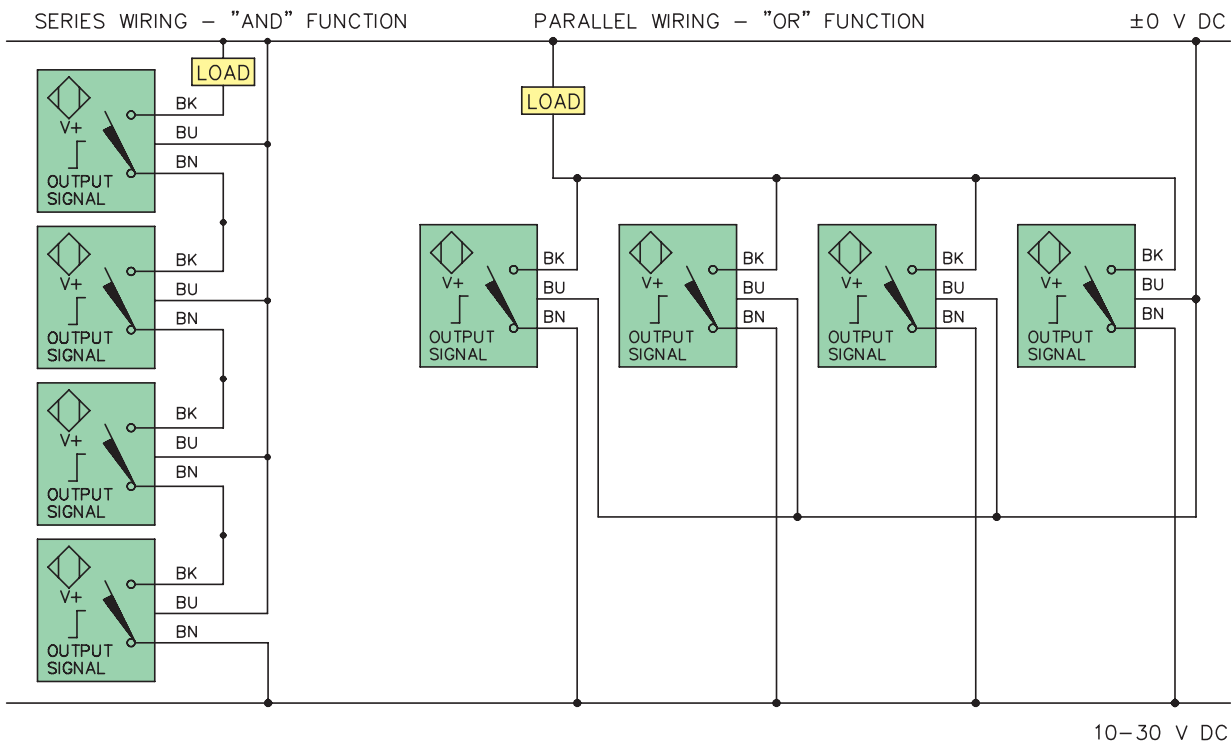
- To prevent the load from seeing the cumulative voltage drop of multiple 3-wire sensors in series, alternating polarity sensors can be used provided that the desired polarity is at the load.
- Wiring 3-wire sensors in series delays the load by the accumulated "time delay before availability" of all sensors in the string.

**Series/Parallel Connection**

**Figure 21 NPN Connection**

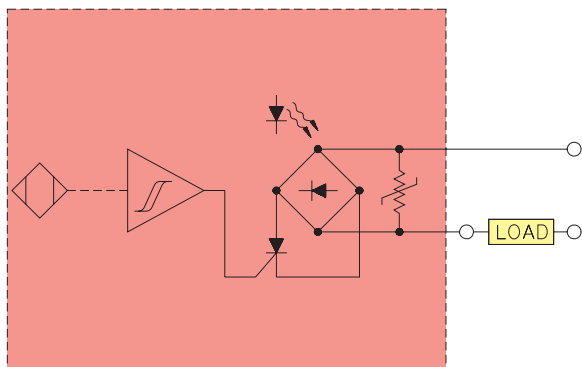


**Figure 22 PNP Connection**

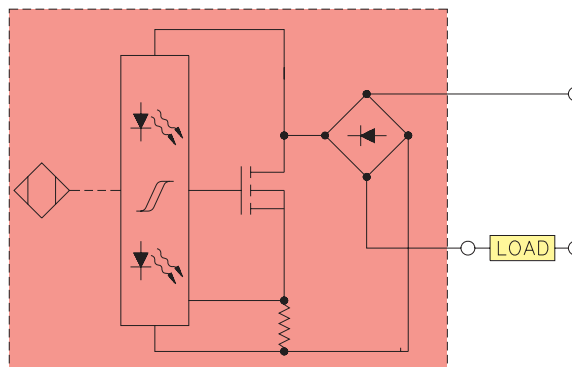


**AC and AC/DC Outputs**

**Figure 1** AC/DC Outputs - "3", "31", "33", non-SCP



**Figure 2** AC/DC Outputs - "30", "32", "40" SCP

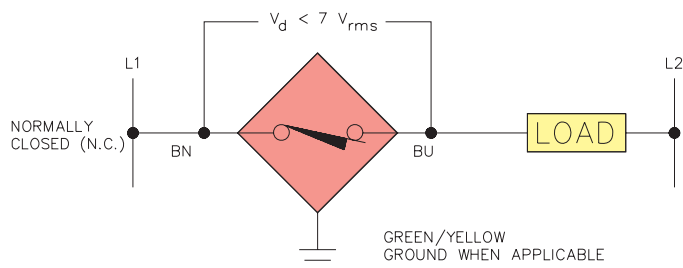
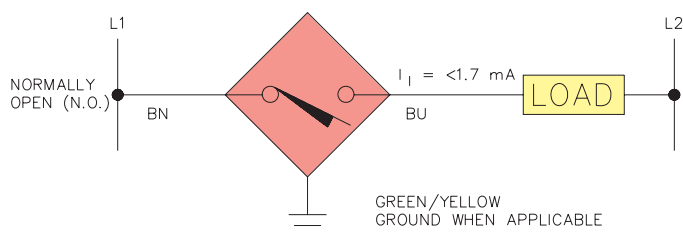


SCP = Short-circuit Protected

These sensors are used as pilot devices for AC-operated loads such as relays, contactors, solenoids, etc. The solid-state output permits use of the sensors directly on the line in series with an appropriate load. They, therefore, replace mechanical limit switches without alteration of circuitry, where operating speed or environmental conditions require the application of solid-state sensors.

These sensors are typically available in a voltage range of 20-250 VAC. All models are available with either normally open (N.O.), normally closed (N.C.) or programmable outputs (from N.O. to N.C.). Careful consideration must be given to the voltage drop across AC/DC sensors when used at 24 VDC.

**Figure 3** Electro-Mechanical Equivalents



Since the sensors are connected in series with the load by means of only two leads, an off-state current flows through the load in the magnitude of approximately 1.7 mA.

This, however, does not affect the proper and reliable performance of most AC loads. Another characteristic of solid state sensors is a 5 to 7 volt drop developed across the sensor in the ON state.

All models contain a snubber network to protect against transients from inductive loads, which can cause false triggering.

## Short-Circuit and Overload Protection

**TURCK** AC sensors with the Voltage Range designation "30", "32" or "40" are short-circuit and overload protected (manual reset). These sensors incorporate a specially designed circuit which continuously monitors the ON state output current for a short-circuit or overload condition. If either of these fault conditions occurs, the output is latched OFF until the power has been cycled OFF and ON again.

Always select short-circuit and overload protected sensors whenever possible.



**CAUTION!**



**DO NOT...**

operate an incandescent light bulb as a load.  
The extremely high cold current will cause an overload condition.



**DO NOT...**

operate a proximity sensor from a wall outlet without a load.  
This is considered a "dead" short and can cause catastrophic damage to nonshort-circuit protected sensors.



**DO NOT...**

directly operate a motor with a proximity sensor.  
The inrush current can cause an overload condition.  
Always use a motor starter, relay or other appropriate device.



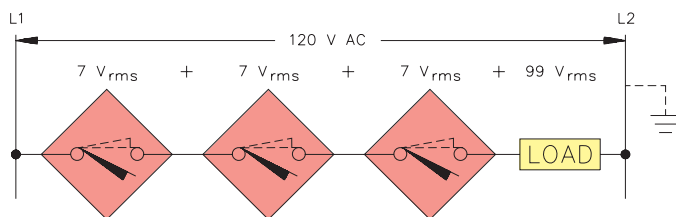
**DO NOT...**

forget to ground. AC and AC/DC sensors must be grounded or there exists a potential of electrical shock.



**Series Connection**

**Figure 4**



**Series-connection:** (Figure 4)

N.O. sensors: AND Function  
(target present, all sensors: load “on”)

N.C. sensors: NOR Function  
(target present, any sensor: load “off”)

The maximum number of sensors to be operated in series depends on the stability of the line voltage and the operating characteristics of the load in question. The supply voltage minus the accumulative on state voltage drop across the series connection (approximately  $7\text{ V}_{\text{rms}}$  per sensor) must be  $\geq$  the minimum required load voltage.

**Mechanical Switches in Series**

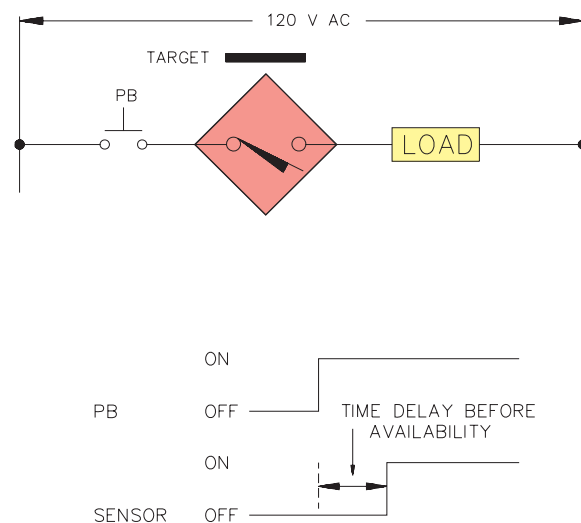
**Problem:**

Mechanical switches in series with proximity sensors should always be avoided because they can create an open circuit, leaving the proximity sensor without power. In order to operate properly, a proximity sensor should be powered continuously. A typical problem encountered when the mechanical contact closes while the target is present is a short time delay that is experienced before the load energizes (time delay before availability).

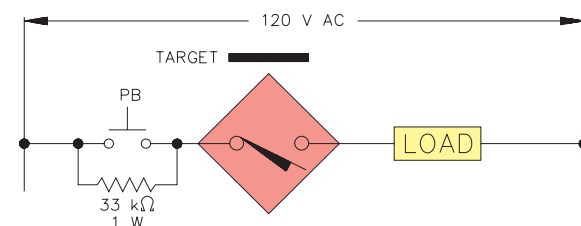
**Solution:**

A  $33\text{ k}\Omega$ ,  $1\text{ W}$  by-pass resistor can be added across the mechanical contact to eliminate the time delay before availability. This will allow enough leakage current to keep the sensor ready for instantaneous operation.

**Figure 5**



**Figure 6**



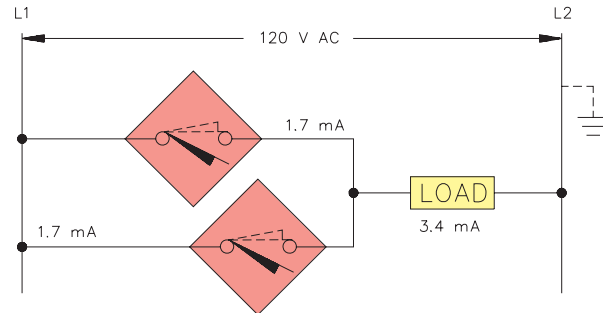
Parallel Connection

Figure 7

**Parallel Connection:** (Figure 7)

N.O. sensors: OR Function  
(target present, any sensor: load “on”)

N.C. sensors: NAND Function  
(target present, all sensors: load “off”)



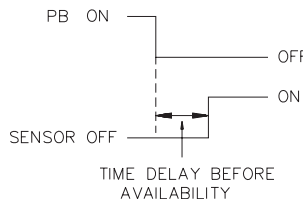
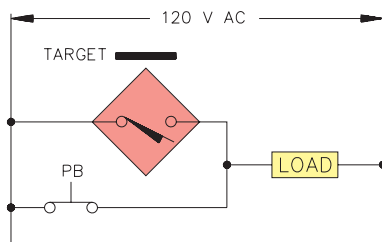
Wiring AC proximity sensors in parallel can result in inconsistent operation and should generally be avoided.

**On-state voltage drop:** With any sensor ON, the voltage across all other sensors is typically 7 Vrms. Since the minimum rated voltage for AC sensors is 20 Vrms, no other sensor with a target present can turn ON until the first sensor turns OFF. This transition is not instantaneous due to the time delay before availability, during which the load may drop out.

**Leakage current through the load:** This is equal to the total leakage of all sensors wired in parallel. Too much leakage into a solid state load can cause the input to turn ON and not turn OFF. Small relays may not drop out if the leakage current exceeds the relay’s holding current.

Mechanical Switches in Parallel

Figure 8

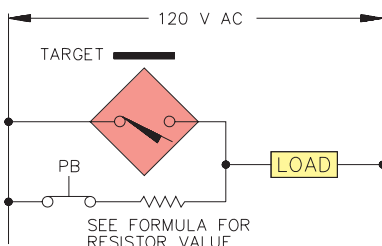


**Problem:**

As previously discussed, proximity sensors should be powered continuously to avoid the time delay before availability during power-up.

With mechanical switches in parallel, the sensor is shorted out every time the contact is closed, leaving it without power. If the target is present when the mechanical contact is opened, a small delay will be experienced during which the load may drop out.

Figure 9



**Solution:**

This delay can be avoided by adding a resistor in series with the mechanical contact. The voltage drop developed across the resistor with the contact closed will be enough to keep the sensor active. Use the formula below to determine the value and wattage.

**Formula:**

$$R = \frac{\text{minimum operating voltage of proximity sensor}}{\text{load current at operating voltage}}$$

**Example:**

$$R = \frac{20 \text{ V}}{180 \text{ mA}}$$

$$R = 110 \text{ W}$$

Minimum resistor wattage rating:  $E \times I$   
Example:  $20 \text{ V} \times 180 \text{ mA} = 3.6 \text{ W} \approx 5$  watts recommended

## NAMUR (Y0 and Y1) Output

NAMUR sensors are 2-wire sensing devices used with switching amplifiers. Because of the small amount of energy needed to operate NAMUR sensors, they can be used in intrinsically safe applications.

The operation of this sensor is similar to that of a variable resistor with a change in impedance as a target approaches the sensor. When no metal is being sensed, the inductive sensor is in a low impedance state and draws a current of more than 2.2 mA. When a metal target enters the high-frequency field radiated from the sensor head, the impedance increases as the target approaches. When fully damped, the sensor draws less than 1.0 mA. *Note: For capacitive and inductive magnet operated sensors, the current change characteristics are opposite.*

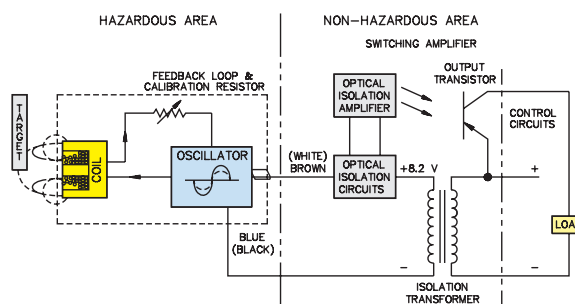
The current differential from the undamped to the damped (metal present) state is used to trigger an amplifier at a defined switching point. These sensors contain a relatively small number of components, which allows the construction of small devices and also assures a high degree of reliability.

In the undamped and damped state, the devices have fairly low impedance and are therefore, unaffected by most transients. NAMUR sensor circuits operate on direct current. Therefore, cable runs of several sensors may be run parallel to one another without mutual interference.

**Figure 1**

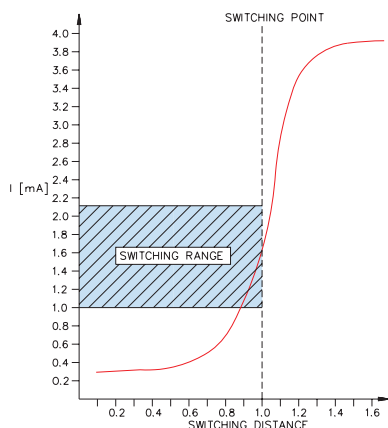
The NAMUR (Y0 and Y1) sensor behaves like a variable resistor when a target approaches.

The impedance increases or decreases between 1 kΩ and 8 kΩ.

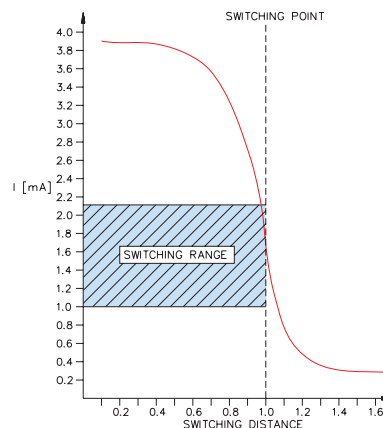


## Typical Output Curves

**Figure 2**



**Figure 3**

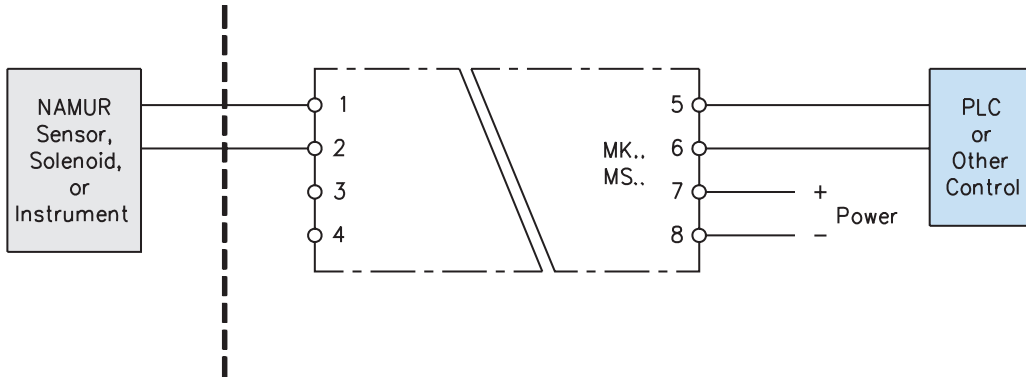


**Note:**

The typical curve of current versus sensing distance with 8.2 V DC supply and 1 kΩ source impedance. All NAMUR (Y0 and Y1) sensors are calibrated to pass through 1.55 mA at nominal sensing range  $\pm 10\%$ .

Typical Intrinsically Safe Installation

Figure 4



For guidance on installation of **TURCK** intrinsically safe systems, refer to the Instrument Society of America publication ISA-RP12.6-1995, "Wiring Practices for Hazardous (Classified) Locations Instrumentation".

The complete line of Intrinsically Safe and Associated Apparatus is featured in the **TURCK** "Isolated Barriers and Amplifiers" catalog.

Custom Interface Circuits

Figure 5

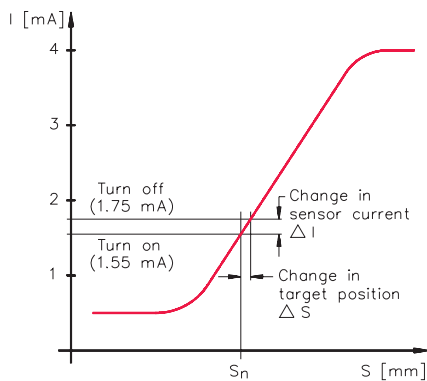
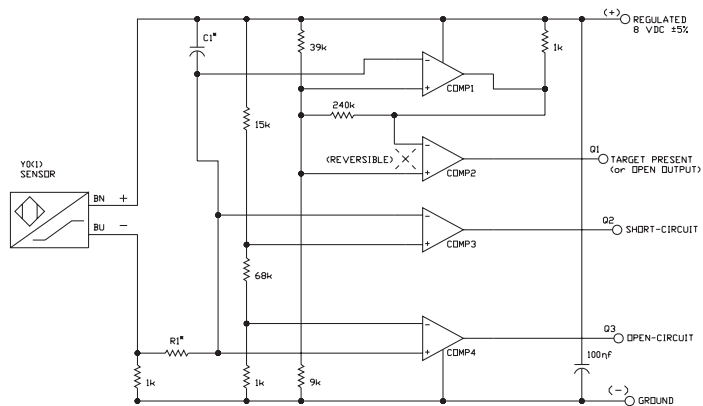


Figure 6



NAMUR sensors can operate outside the nominal operating values when the sensor is used in a nonhazardous area. The supply voltage limits are:  $V_{min} = 5 \text{ VDC}$ ;  $V_{max} = 30 \text{ VDC}$

Within this voltage range the load resistance  $R_i$  must be adjusted for the supply voltage.

The following table gives typical values:

$V_{supply} \text{ (DC)}$	$R_i \text{ (k}\Omega\text{)}$	$I_{sn} \text{ (mA)}$	$\Delta I \text{ (mA)}$
5	0.39	$\approx 0.7$	$\approx 0.1$
12	1.8	$\approx 2.3$	$\approx 0.3$
15	2.2	$\approx 2.9$	$\approx 0.4$
24	3.9	$\approx 3.8$	$\approx 0.5$

If these values are used, the current  $I_{sn}$  corresponds to the rated operating distance ( $S_n$ ) of the sensor. NAMUR sensors are short-circuit protected up to 15 VDC and reverse polarity protected up to 10 VDC.

### Third Party Compliances



**CSA - Canadian Standards Association**

CSA certifies devices for use in Canadian and American hazardous and non-hazardous locations.



**FM - Approvals**

FM approves devices for use in explosive hazardous locations in the US. Intrinsically safe (IS) devices are approved for Division 1 areas; nonincendive (NI) devices are approved for Division 2 areas.



**UL - Underwriter's Laboratories**

UL is a nationally recognized US test laboratory that tests equipment to meet US standards and jurisdictional requirements. UL lists stand-alone devices, such as sensors, and recognizes system components, such as relays.



Note: **TURCK** products comply with many International standards. Consult factory for more information.

### Hazardous Location Approvals

The NAMUR sensors shown in this catalog are Intrinsically Safe per the following:



**EUROPE:** CENELEC Standards EN 50 014 and EN 50 020; EC Directive 94/9/EC (ATEX)

**USA, CANADA:** Class I, II, III Division 1 Groups A, B, C, D, E, F, G\*

Any FM approved or CSA certified associated apparatus with the following Entity Concept parameters can be used with these sensors:

$$V_{OC} \text{ or } V_T \leq 15 \text{ V} \quad C_a \geq C_{\text{cable}} + 220 \text{ nF}$$

$$I_{SC} \text{ or } I_T \leq 60 \text{ mA} \quad L_a \geq L_{\text{cable}} + 280 \text{ } \mu\text{H}$$

\* Note: CSA does not allow the use of quick disconnects in Groups E and F

Many 3-wire DC sensors are Nonincendive for Class I, Division 2 hazardous areas and Suitable for Class II and Class III, Division 2 hazardous areas. Only those 3-wire sensors identified with the FM logo have this approval.

**USA:** Class I, II, III Division 2 Groups A, B, C, D, F, G

-AN6X, -AP6X

-RN6X, -RP6X Factory Mutual file number: 2T3A5.AX



## More on Hazardous Locations

Standards for Intrinsically Safe systems in hazardous locations are found in the following publications:

- United States: National Electrical Code 1996 (ANSI/NFPA 70) Articles 504 and 505  
Factory Mutual Approval Standard Class No. 3610  
Underwriters Laboratory Standard UL 913
- Canada: Canadian Electrical Code C22.1-94 Section 18 and Appendix F.
- Europe: CENELEC Standards EN 50 020 and EN 50 014

### Hazardous Location Definitions (U.S. and Canada)

- Class I Locations in which flammable gases or vapors exist or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.
- Class II Locations that are hazardous because of the presence of combustible dust.
- Class III Locations that are hazardous because of the presence of easily ignitable fibers or flyings, but in which such fibers or flyings are not likely to be suspended in the air in quantities sufficient to produce ignitable mixtures.
- Division 1 Locations in which hazardous concentrations in the air exist continuously, intermittently, or periodically under normal operating conditions.
- Division 2 Locations in which hazardous materials are handled, processed or used, but in which they are normally confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown.
- Group A Atmospheres containing acetylene.
- Group B Atmospheres containing hydrogen, fuel and combustible process gases containing more than 30% hydrogen by volume, or gases or vapors of equivalent hazard such as butadiene, ethylene oxide, propylene oxide and acrolein.
- Group C Atmospheres such as ethyl ether, ethylene, acetaldehyde, cyclopropane, or gases or vapors of equivalent hazard.
- Group D Atmospheres such as acetone, alcohol, ammonia, benzene, butane, cyclopropane, ethylene dichloride, gasoline, hexane, lacquer solvent vapors, methane, natural gas, naphtha, propane, xylene, or gases or vapors of equivalent hazard.
- Group E Atmospheres containing combustible metal dusts, including aluminum, magnesium, and their commercial alloys, and other combustible dusts with similarly hazardous characteristics.
- Group F Atmospheres containing combustible carbonaceous dusts, including carbon black, charcoal and coal.
- Group G Atmospheres containing other combustible dusts, such as chemical, agricultural or plastic dusts.

### Exerpt from National Electrical Code:

Intrinsically safe apparatus and wiring shall be permitted in any hazardous (classified) location for which it is approved, and the provisions of Articles 501 through 503 and 510 through 516 shall not be considered applicable to such installations except as required by Article 504.

Wiring of intrinsically safe circuits shall be physically separated from wiring of all other circuits that are not intrinsically safe. Means shall be provided to minimize the passage of gases and vapors. Installation of intrinsically safe apparatus and wiring shall be in accordance with the requirements of Article 504.

## Enclosure Ratings

### NEMA 250-1991

- NEMA 1** Enclosures are intended for indoor use primarily to provide a degree of protection against limited amounts of falling dirt.
- NEMA 3** Enclosures are intended for outdoor use primarily to provide a degree of protection against rain, sleet, windblown dust, and damage from external ice formation.
- NEMA 4** Enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water, hose-directed water, and damage from external ice formation.
- NEMA 4X** Enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, hose-directed water and damage from external ice formation.
- NEMA 6** Enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against hose-directed water, the entry of water during occasional temporary submersion at a limited depth, and damage from external ice formation.

### IEC 529

- IP 40** Protection against solid bodies larger than 1 mm. No protection against liquids.
- IP 65** Dust tight. Protection against water spray from all directions at 14.2 PSI through a 12.5 mm nozzle.
- IP 67** Dust tight. Protection against the effects of immersion in water for 30 minutes at 1 meter.
- IP 68** Dust tight. Protection against the effects of indefinite immersion in water at a pressure specified by the manufacturer. Ex. **TURCK's** IP 68 definitions is IP 67 plus.
- 24 hours at 70°C
  - 24 hours at -25°C
  - 7 days at 1 meter under water at a constant temperature
  - 10 cycles +70°C and -25°C, minimum of 1 hour @ each temperature

### IP 69K

Hot steam jet cleaning per EN 60529 (IP enclosure ratings) and DIN 40050-9

### TURCK TIP



**For oily environments** - Use plastic sensors with quick disconnects and **TURCK** PUR "/S90" cordsets.



**For washdown environments** - Use **TURCK's** Washdown or Amphibian<sup>®</sup> Sensors and appropriate mating cordsets.

**Material Descriptions**

**Plastics**

ABS - Acrylonitrile-Butadiene-Styrene	Impact resistant, rigid. Resistant to aqueous acids, alkalis, salts, alcohols, oils, concentrated hydrochloric acid; disintegrated by concentrated sulfuric or nitric acids, esters, ketones.
CPE, Thermoset (rubber cables)	Excellent resistance to oils, acids, chemicals, ozone, extreme temperatures, cuts, abrasions; flame retardant in welding applications.
PA - Polyamide (nylon)	Good mechanical strength, temperature resistant.
PA, Amorphous (Trogamid T)	Similar properties to nylon, but transparent. Hard, rigid, good chemical resistance.
PA 12-GF30	Nylon 12, 30% glass filled.
PA 66-GF25-V0	Nylon 66, 25% glass filled, self-extinguishing.
PBT - Polybutylene Terephthalate (when glass reinforced, Crastin®)	Good mechanical strength; resistant to abrasion; resistant to alcohols, oils, some acids, trichloroethylene.
PBT-GF30-V0	PBT, 30% glass filled, self-extinguishing.
PEI - Polyetherimide (Ultem®)	Excellent resistance to most commercial automotive fluids, fully hydrogenated hydrocarbons, alcohols, weak aqueous solutions. Withstands higher temperatures.
POM - Polyoxymethylene / Polyacetal (Delrin®)	High impact resistance; good mechanical strength; good resistance to oils, alcohols, alkalis, gasoline, xylene, toluene. Dielectric constant 3.7.
PP - Polypropylene	Excellent resistance against chemicals including acids, solvents and solutions. High temperature resistance and good mechanical strength.
PTFE - Polytetrafluoroethylene (Teflon®)*	Optimum resistance against high temperature and chemicals; low dielectric constant (2.0).
PUR - Polyurethane	Elastic, resistant to abrasion, impact-resistant, oil- and grease-tolerant.
PVC - Polyvinylchloride	Good mechanical strength, viscosity to impact; resistant to acids, alkalis.
PVC, irradiated	Heat and chemical resistant, withstands short-term temperatures to 482° F.
PVDF - Polyvinylidene fluoride (Kynar®)	Resistant to high and low temperatures, good resistance to chemicals (similar to PTFE), high mechanical strength.
Silicon	For use at high or low ambient temperatures (-50...+180 °C), moderate mechanical strength, average resistance against alkalis, acids, oils, and solvents.
IRPA12 - Irradiated Polyamide (nylon)	Good mechanical strength, temp. resistant.
EPTR - Elastomer, Polymer Thermal Plastic	Good fluid resistance.
TROG - Trogamid T	Hard, rigid, good chemical resistance.

**Metals**

AG	<b>armorguard®</b>
SS - 306 Stainless Steel	Excellent atmospheric resistance.
CPB	Chrome Plated Brass
CuZn - Brass	Generally good resistance to industrial atmospheres.
GD - AlSi12 - Aluminum, die-cast	Low specific weight, long-life characteristics.
GD - ZnAl4Cu1 (Z410) - Zinc, die-cast	Long-life characteristics.
TC	Teflon Coated
WG	<b>weldguard®</b>
AL - Anodized Aluminum	Long-life characteristics
SF - Stoneface®	High abrasion resistance, excellent for MIG welding applications, high heat and weld flow immunity.
TS - Tool Steel	Excellent durability.



# TURCK

## Innovative Solutions for Automation

### Matrix of TURCK Sensor Materials \*

Housing Style	ABS	PA, Trog. T	PA	PBT	POM	PP	PUR	PVC	PVDF	PEI	306 SS	Al	Brass	Zinc	Thermoset Plastic
CA25, CA40												X	X	X	X
CK40				X									X	X	
CP40			X**	X											
CP80, K90SR		X	X	X											
DS20				X				X							
EG			X				X	X			X				
EM			X								X				
G, M (potted-in cable)			X				X	X					X		
G, M (connector)			X										X		
G..SK		X	X										X		
G47SR	X		X										X		
INR, INT			X				X						X		
K..SK, P..SK		X	X												
K40SR, P30SR	X		X												
KT34									X						
M..T			X					X					X		
PCS				X			X	X					X		
P, S (potted-in cable)			X				X	X							
P, S (connector)			X												
P.../S139			X		X		X								
PT30									X						
QF5.5						X									
Q06			X					X							
Q6.5 (World Clamp)				X			X						X		
Q6.5				X			X								
Q5.5, Q9.5, ISI			X				X								
Q08, Q8SE			X					X					X	X	
Q10				X											
Q10S			X				X	X							
Q11S, Q12				X				X							
Q14, Q20				X			X	X					X		
Q14, Q20 Ring				X	X			X					X		
Q18, Q25, Q30				X			X	X							
Q26			X	X				X							
Q34, Q80				X									X		
S185							X	X	X						
Cable Gland			X												
Wet Suit				X					X	X					

\* Does not apply to *picoprox*®.

\*\* Optional part, ie cable gland, connector, cable, bracket, etc.

## Matrix of TURCK Sensor Materials \*

Housing Style	ABS	PA, Trog. T	PA	PBT	POM	PUR	PVC	PVDF	PEI	306 SS	Al	Brass	Zinc	Thermoset Plastic
A23			X				X				X	X	X	
AKT			X				X			X	X		X	
CRS			X									X	X	
FST, NST, QST			X				X				X	X		
IKE, IKM, IKT			X				X				X	X	X	
KST			X				X			X		X	X	
PSM			X				X			X	X	X		
PST			X				X			X		X		

## Chemical Compatability

The information in this chart is derived from reputable industry sources and is to be used only as a guide in selecting materials suitable for your application. **TURCK** does not warrant in any fashion that the information in this chart is accurate or complete, or that any material is suitable for any purpose.

Most ratings listed here apply to a 48-hour exposure period.

Ratings: A - No effect

B - Minor effect

C - Moderate effect

D - Severe effect

φ - No specific data, but probable rating.

nd - no data

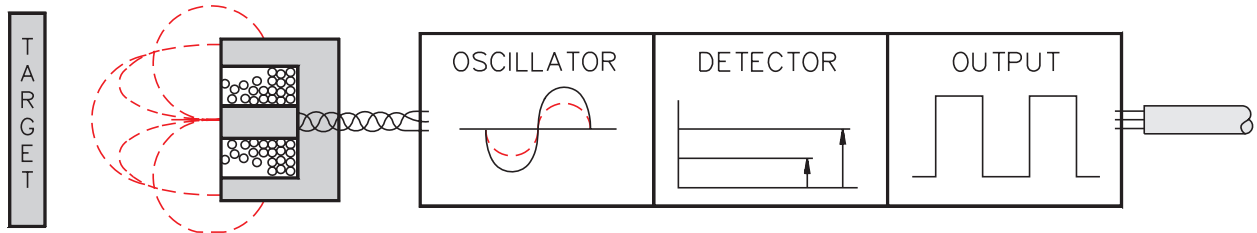
	ABS	Trog. T	PA 12	PBT	PEI	POM	PTFE	PUR	PVC	PVDF	306 SS	Al	Brass	Zinc
Ammonia, liquid	B	B	A	B	D	C/D	A	C	A	A	B	A	D	A
Chlorine anhydrous liquid	nd	nd	D	D	nd	C	A	C	D	A	C	D	D	nd
De-ionized water	nd	nd	A	nd	A	nd	A	nd	A	A	A	A	A	nd
Formic acid	D	D	D	A	nd	C	A	C	A	A	A/B	A	D	D
Gasoline	D	A	A	A	A	A	A	A	C	A	A	A	A	nd
Hydrochloric acid <40%	A	A/B	D	A	A	C	A	D	B	A	D	D	D	D
Hydrofluoric acid <50%	C	D	D	B	A	D	A	C	B	A	D	D	D	nd
Methanol	D	D	B	A	A	A	A	B	A	A	A	A	A	A
Phosphoric acid <40%	B(C)	D	B	A	A	D	A	D <sup>φ</sup>	B	B	D	C	D	D
Potassium hydroxide <15%	A	A	C	B	A	B	A	C	A	A	B	D	D	nd
Sodium hydroxide <55%	A	A	C	B	A	B	A	B	A	D	B	D	D	D
Sodium hypochlorite ≤13%	B	nd	B	A	nd	C	A	B	A	A	C	D	D	A
Sulfuric acid <75%	B	A	D	A	A	D	A	C	A	A	D	D	D	D
Toluene	D	A	A	A	A	A	A	C	D	A	A	A	A	nd

Specifications

**Notes:**

Operating Principle Ferrite Core

Figure 1



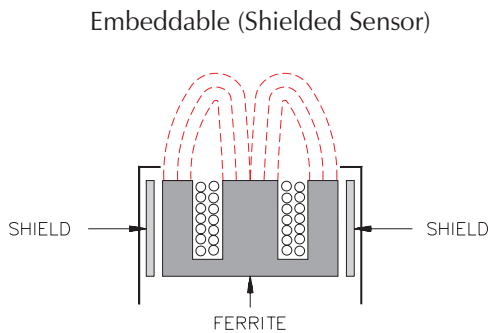
An inductive proximity sensor consists of a coil and ferrite core arrangement, an oscillator and detector circuit, and a solid-state output (Figure 1). The oscillator creates a high frequency field radiating from the coil in front of the sensor, centered around the axis of the coil. The ferrite core bundles and directs the electro-magnetic field to the front.

When a metal object enters the high-frequency field, eddy currents are induced on the surface of the target. This results in a loss of energy in the oscillator circuit and, consequently, a smaller amplitude of oscillation. The detector circuit recognizes a specific change in amplitude and generates a signal which will turn the solid-state output “ON” or “OFF”. When the metal object leaves the sensing area, the oscillator regenerates, allowing the sensor to return to its normal state.

Embeddable (Shielded) vs. Nonembeddable (Nonshielded)

See mounting characteristics at the front of each section.

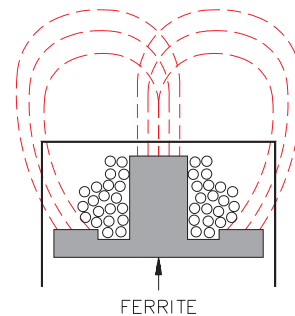
Figure 2



Embeddable construction includes a metal band that surrounds the ferrite core and coil arrangement. This helps to “bundle” or direct the electro- magnetic field to the front of the sensor.

Figure 3

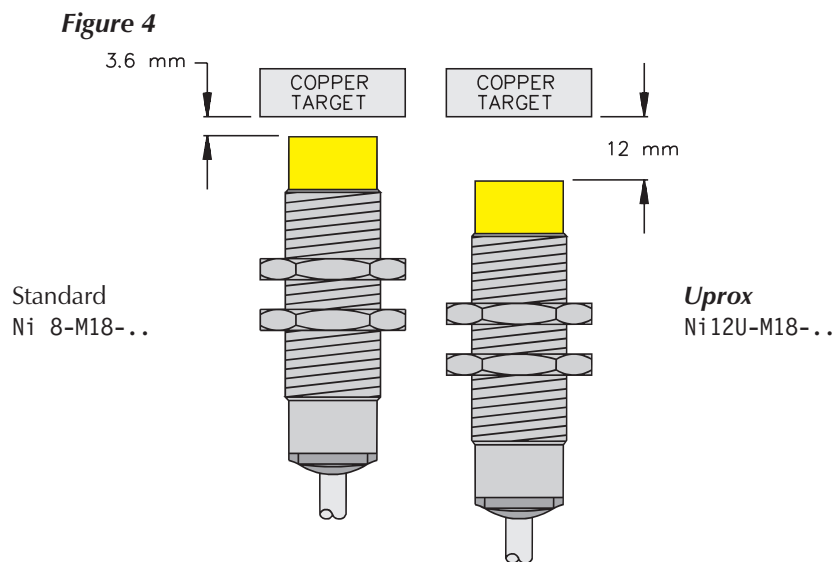
Nonembeddable (Nonshielded Sensor)



Nonembeddable sensors do not have this metal band; therefore, they have a longer operating distance and are side sensitive.

**Uprox<sup>®</sup> Characteristics**

- **No Correction Factor** - Same rated operating distance for all metals.
- **Extended Operating Distance** - Up to 400% greater than standard inductive sensors when using non-ferrous targets (Figure 4).
- **Weld Field Immunity** - *Uprox* is unaffected by strong electromagnetic AC or DC fields because of its unique patented design.
- **High Switching Frequencies** - Up to 10 times faster than standard inductive sensors.
- **Extended Temperature Range** - *Uprox* can withstand temperatures up to 85°C (+185°F) with a ±15% temperature drift.

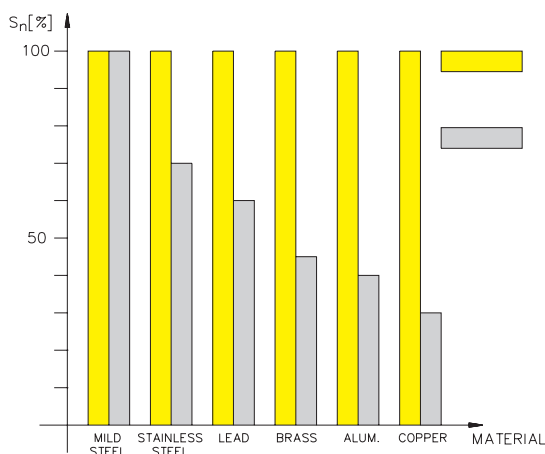


**Operating Principle Uprox<sup>®</sup>**

**TURCK Uprox** is a patented next generation development of inductive sensors that uses a three-coil system. One coil induces eddy currents on the metal target and the other two coils are affected by these eddy currents. Ferrous and nonferrous metals have the same effect on the two coils. Therefore, all metals, including galvanized metals, have the same rated operating distance.

**TURCK** standard inductive sensors use a single coil randomly wound around a ferrite core. The single coil both induces eddy currents on the metal target and is affected by these eddy currents. Ferrous and nonferrous metals affect the sensor differently, making it impossible to detect both types of metals at the same rated operating distance.

**Figure 5**



Operating distances comparison of *Uprox* sensors and standard inductive sensors.

**Operating Distance (Sensing Range) Considerations**

The operating distance (S) of the different models is basically a function of the diameter of the sensing coil. Maximum operating distance is achieved with the use of a standard or larger target. Rated operating distance (Sn) for each model is given in the manual. **When using a proximity sensor the target should be within the assured range (Sa).**

**Standard Target**

A square piece of mild steel having a thickness of 1 mm (0.04 in) is used as a standard target to determine the following operating tolerances. The length and width of the square is equal to either the diameter of the circle inscribed on the active surface of the sensing face or three times the rated operating distance Sn, whichever is greater.

**Operating Distance = S**

The operating distance is the distance at which the target approaching the sensing face along the reference axis causes the output signal to change.

**Rated Operating Distance = Sn**

The rated operating distance is a conventional quantity used to designate the nominal operating distance. It does not take into account either manufacturing tolerances or variations due to external conditions such as voltage and temperature.

**Effective Operating Distance = Sr     $0.9 S_n \leq S_r \leq 1.1 S_n$**

The effective operating distance is the operating distance of an individual proximity sensor at a constant rated voltage and 23°C (73°F). It allows for manufacturing tolerances.

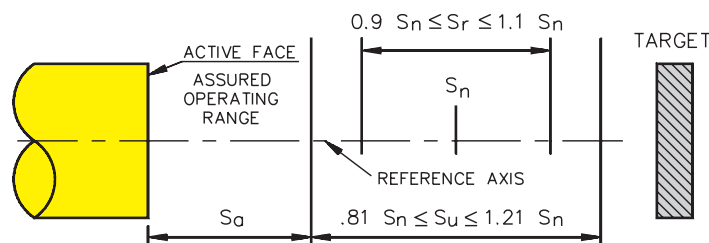
**Usable Operating Distance = Su     $0.81 S_n \leq S_u \leq 1.21 S_n$**

The usable operating distance is the operating distance of an individual proximity sensor measured over the operating temperature range at 85% to 110% of its rated voltage. It allows for external conditions and for manufacturing tolerances.

**Assured Operating Range = Sa     $0 \leq S_a \leq 0.81 S_n$**

The assured actuating range is between 0 and 81% of the rated operating distance. It is the range within which the correct operation of the proximity sensor under specified voltage and temperature ranges is assured.

**Figure 6**



## Operating Distance (Sensing Range) Considerations

These correction factors apply to standard inductive sensors when a nonferrous target is being detected. The correction factors are nominal values. Deviations may be due to variations in oscillator frequency, alloy composition, purity and target geometry.

Aluminum foil	1.00
Stainless steel	0.60 to 1.00
Mercury	0.65 to 0.85
Lead	0.50 to 0.75
Brass	0.35 to 0.50
Aluminum (massive)	0.35 to 0.50
Copper	0.25 to 0.45

- Correction factors do not apply to **TURCK Uprox**® sensors. These sensors see all metals at the same range.
- **TURCK** also manufactures “nonferrous only” sensors. These sensors will selectively detect nonferrous targets at the rated operating distance. They will not detect ferrous targets; however, ferrous targets positioned between them and a nonferrous target may mask the nonferrous target. The rated operating distance of these sensors is not subject to the correction factors that apply to standard inductive sensors.

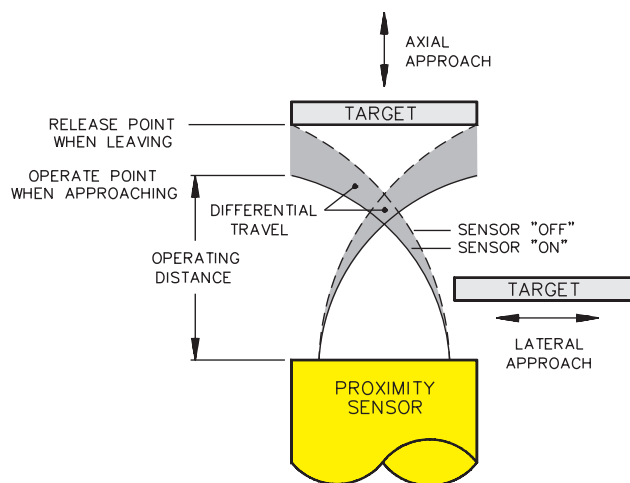
## Differential Travel (Hysteresis)

The difference between the “operate” and “release” points is called differential travel (See shaded area in Figure 7).

It is factory set at less than 15% of the effective operating distance.

Differential travel is needed to keep proximity sensors from “chattering” when subjected to shock and vibration, slow moving targets, or minor disturbances such as electrical noise and temperature drift.

**Figure 7**

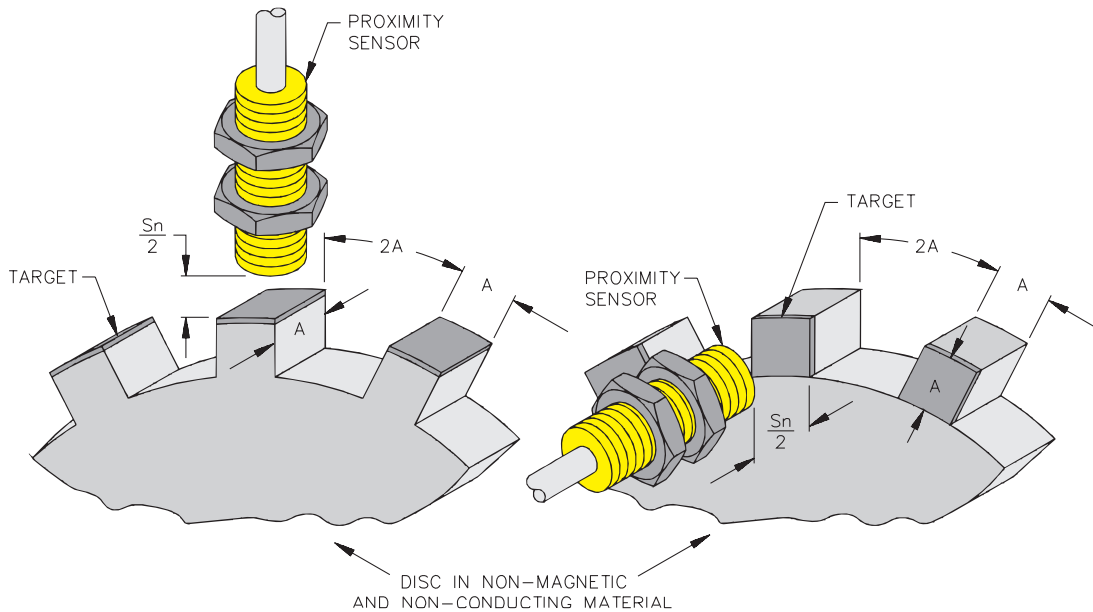


## Actuation Mode

Inductive sensors can be actuated in an axial or lateral approach (See Figure 7). It is important to maintain an air gap between the target and the sensing face to prevent physically damaging the sensors.

**Maximum Switching Frequency**

Minimum parameters for measuring at maximum switching frequency are shown in Figure 8. Using a smaller target or space may result in a reduction of a specific sensor's maximum switching frequency and decrease sensor to target air gap tolerance. See page A40 for determining dimension "A" of **standard target**.



**Weld Field Immunity**

Many critical applications for proximity sensors involve their use in weld field environments. AC and DC resistance welders used in assembly equipment and other construction machines often require in excess of 20 kA to perform their weld function. Magnetic fields generated by these currents can cause false outputs in standard sensors.

**TURCK** has pioneered the design and development of inductive proximity sensors that not only survive such environments, but remain fully operative in them.

The limit of the weld field immunity depends on the kind of field (AC or DC), the housing size of the sensor and its location in the field. For example, in an AC or DC weld field, the "/S34" inductive sensors can be positioned one inch from a 20 kA current carrying bus. See Section H for a list of weld field immune sensors.

**Reference values for magnetic induction:**

I [kA]	Distance [mm]			
	12.5	25	50	100
5	80 mT	40 mT	20 mT	10 mT
10	160 mT	80 mT	40 mT	20 mT
20	320 mT	160 mT	80 mT	40 mT
50	800 mT	400 mT	200 mT	100 mT
100	1600 mT	800 mT	400 mT	200 mT

Gauss = 10 x mT

Specifications



# Sensors

## General Specifications

### 2-Wire DC NAMUR

Differential Travel (Hysteresis)	1-10% (5% typical)
Nominal Voltage	8.2 VDC (EN60947-5-6)
Resistance Change from Nonactivated to Activated Condition	typical <1.0 to >8.0 k $\Omega$
Resulting Current Change	$\geq 2.2$ mA to $\leq 1.0$ mA
Recommended Switching Point for Remote Amplifier	>1.2 to <2.1 mA, typ. 1.55 mA ON/1.75 mA OFF
Power-On Effect	Realized in Amplifier
Reverse Polarity Protection	Incorporated
Wire-Break Protection	Realized in Amplifier
Transient Protection	Realized in Amplifier
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	$\leq 2\%$ of Rated Operating Distance

### 2-Wire DC

Ripple	$\leq 10\%$
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	Non-polarized (AD) <5.0 V Polarized (AG) <4.0 V
Trigger Current for Overload Protection	$\geq 120$ mA
Minimum Load Current	$\geq 3.0$ mA
Off-State (Leakage) Current	$\leq 0.8$ mA
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	$\leq 2\%$ of Rated Operating Distance

### REED (AC) and (DC)

Ripple	$\leq 10\%$
Differential Travel (Hysteresis)	$\leq 1$ mm (Depends on magnet)
Maximum Switching Capacity	10 W
No-Load Current	0 mA
Maximum Approach Velocity	$\leq 10$ m/s
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	$\geq \pm 0.1$ mm (constant temperature & voltage)
Temperature Drift	$\leq 0.1$ mm
Voltage Drop	$\leq 0.5$ Volts

### 3-Wire DC

Ripple . . . . .	≤10%
Differential Travel (Hysteresis) . . . . .	3-15% (5% typical)
Voltage Drop Across Conducting Sensor. . . . .	≤1.8 V
	- Si...K08/K10(AP71, AN7) . ≤0.7 V
	- Bi/Ni../S34 . . . . . ≤1.8 V
	- Bi 2-Q8SE-AP/AN.. . . . ≤2.5 V
Trigger Current for Overload Protection . . . . .	≥220 mA on 200 mA Load Current
	≥170 mA on 150 mA Load Current
	≥120 mA on 100 mA Load Current
Off-State (Leakage) Current . . . . .	<100 μA
No-Load Current . . . . .	<10 mA ( <b>Uprox</b> ≤15 mA)
Time Delay Before Availability . . . . .	≤8 ms
Power-On Effect . . . . .	Per IEC 947-5-2
Reverse Polarity Protection . . . . .	Incorporated
Wire-Break Protection . . . . .	Incorporated
Transient Protection. . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability . . . . .	≤2% of Rated Operating Distance
	Bi 2-Q8SE-AP/AN.. ≤5% of Rated Operating Distance

### 4-Wire DC

Ripple. . . . .	≤10%
Differential Travel (Hysteresis). . . . .	3-15% (5% typical)
Voltage Drop Across Conducting Sensor. . . . .	≤1.8 V at 200 mA
Trigger Current for Overload Protection . . . . .	≥220 mA on 200 mA Load Current
	≥170 mA on 150 mA Load Current
	≥120 mA on 100 mA Load Current
Off-State (Leakage) Current . . . . .	<100 μA
No-Load Current . . . . .	<10 mA (Uprox ≤15 mA)
Power-On Effect . . . . .	Per IEC 947-5-2
Reverse Polarity Protection . . . . .	Incorporated
Wire-Break Protection . . . . .	Incorporated
Transient Protection. . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability . . . . .	≤2% of Rated Operating Distance

# Sensors

## General Specifications

### 2-Wire AC w/o Short-Circuit Protection

Line Frequency . . . . .	40-60 Hz
Differential Travel (Hysteresis) . . . . .	3-15% (5% typical)
Voltage Drop Across Conducting Sensor . . . . .	≤6.0 V at 400 mA
	8 and 12 mm ≤6.0 V at 100 mA
Continuous Load Current . . . . .	≤400 mA
	8 and 12 mm ≤100 mA
Off-State (Leakage) Current . . . . .	≤1.7 mA
Minimum Load Current . . . . .	≥5.0 mA
Inrush Current . . . . .	≤8.0 A (≤10 ms, 5% Duty Cycle)
Power-On Effect . . . . .	Per IEC 947-5-2
Transient Protection . . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes

### 2-Wire DC AS-Interface

Ripple . . . . .	≤10%
Differential Travel (Hysteresis) . . . . .	3-15% (5% typical)
Voltage Drop Across Conducting Sensor . . . . .	≤1.8 V at 200 mA
Off-State (Leakage) Current . . . . .	<100 μA
No-Load Current . . . . .	<30 mA
Time Delay Before Availability . . . . .	≤8 ms
Power-On Effect . . . . .	Per IEC 947-5-2
Transient Protection . . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability . . . . .	±2% of Rated Operating Distance
	Bi 2-Q8SE-Ap/AN..±5% of Rated Operating Distance
E/A Configuration . . . . .	(HEX)/ID-Code (HEX) 1/1
I/O Matrix Input . . . . .	0=Switching Signal
	1-3= Not Used
	0-3-3= Not Used

### 2-Wire AC/DC w/Short-Circuit Protection

Line Frequency . . . . .	40-60 Hz
Differential Travel (Hysteresis) . . . . .	3-15% (5% typical)
Voltage Drop Across Conducting Sensor . . . . .	≤6.0 V at 400 mA
	8 and 12 mm ≤6.0 V at 100 mA
Trigger Current for Overload Protection . . . . .	AC: ≥440 mA; DC: ≥330 mA
	8 and 12 mm AC: ≥120 mA; DC: ≥120 mA
Continuous Load Current . . . . .	AC: ≤400 mA; DC: ≤300 mA
	8 and 12 mm AC: ≥100 mA; DC: ≥100 mA
Off-State (Leakage) Current . . . . .	≤1.7 mA (AC)
	≤1.5 mA (DC)
Minimum Load Current . . . . .	≥3.0 mA
Inrush Current . . . . .	4.0 A (≤20 ms, 10% Duty Cycle)
Power-On Effect . . . . .	Per IEC 947-5-2
Transient Protection . . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability . . . . .	≤2% of Rated Operating Distance

### 3-Wire DC Capacitive

Ripple . . . . .	≤10%
Differential Travel (Hysteresis). . . . .	2-20% (5% typical)
Voltage Drop Across Conducting Sensor. . . . .	≤1.8 V at 200 mA
Trigger Current for Overload Protection . . . . .	≥220 mA
Off-State (Leakage) Current . . . . .	<100 μA
No-Load Current . . . . .	≤15 mA
Power-On Effect . . . . .	Per IEC 947-5-2
Reverse Polarity Protection . . . . .	Yes
Wire-Break Protection . . . . .	Yes
Transient Protection. . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability . . . . .	≤2% of Rated Operating Distance
Temperature Drift. . . . .	<±20% of Rated Operating Distance

### 4-Wire DC Capacitive

Ripple . . . . .	≤10%
Differential Travel (Hysteresis). . . . .	2-20 (5% typical)
Voltage Drop Across Conducting Sensor. . . . .	≤1.8 V at 200 mA
Trigger Current for Overload Protection . . . . .	≥220 mA
Leakage (Off-State) Current . . . . .	<100 μA
No-Load Current . . . . .	≤15 mA
Power-On Effect . . . . .	Per IEC 947-5-2
Reverse Polarity Protection . . . . .	Incorporated
Wire-Break Protection . . . . .	Incorporated
Transient Protection. . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability . . . . .	≤2% of Rated Operating Distance
Temperature Drift. . . . .	<±20% of Rated Operating Distance

### 2-Wire AC Capacitive

Line Frequency . . . . .	50-60 Hz
Hysteresis (Differential Travel). . . . .	2-20% (5% typical)
Voltage Drop Across Conducting Sensor. . . . .	≤7.0 V at 500 mA
Off-State (Leakage) Current . . . . .	≤1.7 mA
Minimum Load Current. . . . .	≥5.0 mA
Inrush Current . . . . .	≤8.0 A (≤10 ms, 5% Duty Cycle)
Power-On Effect . . . . .	Per IEC 947-5-2
Transient Protection. . . . .	Per EN 60947-5-2
Shock . . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability . . . . .	≤2% of Rated Operating Distance
Temperature Drift. . . . .	<±20% of Rated Operating Distance

# Sensors

## General Specifications

### 4-Wire DC LIU Analog

Ripple . . . . .	≤10%	Wire-Break Protection . . . . .	Incorporated
No-Load Current . . . . .	≤8.0 mA	Transient Protection . . . . .	Per EN 60947-5-2
Voltage Output . . . . .	0-10 V/R <sub>L</sub> ≥4.7 kΩ	Shock . . . . .	30 g, 11 ms
Current Output . . . . .	0-20 mA/R <sub>L</sub> ≤500 Ω	Vibration . . . . .	55 Hz, 1 mm Amplitude, in all 3 planes
Linearity Tolerance . . . . .	±3% of full scale	Repeatability . . . . .	≤1% (0.5% after 30 min. warm up)
Temperature Tolerance . . . . .	±0.06% / °C		
Reverse Polarity Protection . . . . .	Incorporated		

### 3-Wire DC LI2 Analog

Ripple . . . . .	≤10%	Wire-Break Protection . . . . .	Incorporated
No-Load Current . . . . .	≤8.0 mA	Transient Protection . . . . .	Per EN 60947-5-2
Current Output . . . . .	4-20 mA/R <sub>L</sub> ≤500 Ω	Shock . . . . .	30 g, 11 ms
Linearity Tolerance . . . . .	±3% of full scale	Vibration . . . . .	55 Hz, 1 mm Amplitude, in all 3 planes
Temperature Drift . . . . .	±0.06% / °C	Repeatability . . . . .	≤1% (0.5% after 30 min. warm up)
Reverse Polarity Protection . . . . .	Incorporated		

LI = indicates current output only.  
2 = Indicates a variance to standard which is 0-20 mA.

### 3-Wire DC LF10 Analog

Ripple . . . . .	≤10%	Transient Protection . . . . .	Per EN 60947-5-2
No-Load Current . . . . .	≤8.0 mA	Shock . . . . .	30 g, 11 ms
Frequency Output . . . . .	1-10 kHz	Vibration . . . . .	55 Hz, 1 mm Amplitude, in all 3 planes
Linearity Tolerance . . . . .	±5% of full scale	Repeatability . . . . .	≤1% (0.5% after 30 min. warm up)
Temperature Tolerance . . . . .	±0.06% / °C		
Reverse Polarity Protection . . . . .	Incorporated		
Wire-Break Protection . . . . .	Incorporated		

LF = Linear frequency (1-10 kHz) output.

### 4-Wire DC LUAP6X Analog

Ripple . . . . .	≤10%	Voltage Drop Across Conducting Sensor . . . . .	≤1.8 V
No-Load Current . . . . .	≤8.0 mA	Trigger Current for	
Voltage Output . . . . .	0-10 V/R <sub>L</sub> ≥4.7 kΩ	Overload Protection . . . . .	≥220 mA on 200 mA load current
Linearity Tolerance . . . . .	±5% of full scale	No-Load Current . . . . .	<10 mA
Temperature Tolerance . . . . .	±0.06% / °C	Vibration . . . . .	55 Hz, 1 mm Amplitude, in all 3 planes
Reverse Polarity Protection . . . . .	Incorporated	Repeatability . . . . .	≤1% (0.5% after 30 min. warm up)
Wire-Break Protection . . . . .	Incorporated		
Transient Protection . . . . .	Per EN 60947-5-2		
Shock . . . . .	30 g, 11 ms		
Off-State (Leakage) Current . . . . .	<100 mA		

### 3-Wire DC LU Analog

Ripple . . . . .	≤10%	Transient Protection . . . . .	Per EN 60947-5-2
No-Load Current. . . . .	≤8.0 mA	Shock . . . . .	30 g, 11 ms
Voltage Output. . . . .	0-10 V/R <sub>L</sub> ≥4.7 kΩ	Vibration . . . . .	55 Hz, 1 mm Amplitude, in all 3 planes
Linearity Tolerance. . . . .	±3% of full scale	Repeatability . . . . .	≤1% (0.5% after 30 min. warm up)
Temperature Tolerance . . . . .	±0.06% / °C		
Reverse Polarity Protection . . . . .	Incorporated		
Wire-Break Protection . . . . .	Incorporated		

### 4-Wire DC LIU5 Analog

Ripple . . . . .	≤10%	Wire-Break Protection . . . . .	Incorporated
No-Load Current. . . . .	≤8.0 mA	Transient Protection . . . . .	Per EN 60947-5-2
Voltage Output. . . . .	0-10 V/R <sub>L</sub> ≥4.7 kΩ	Shock . . . . .	30 g, 11 ms
Current Output . . . . .	4-20 mA/R <sub>L</sub> ≤500 Ω	Vibration . . . . .	55 Hz, 1 mm Amplitude, in all 3 planes
Linearity Tolerance. . . . .	±3% of full scale	Repeatability . . . . .	≤1% (0.5% after 30 min. warm up)
Temperature Drift . . . . .	±0.06% / °C		
Reverse Polarity Protection . . . . .	Incorporated		

LIU = Linear voltage or current output.  
5 = Indicates 4-20 mA and 0-10 V output.

Variations:

No Load Current	
WIM 40-Q20L60 . . . . .	≤23.0 mA
WIM 70-Q20L100 . . . . .	≤23.0 mA
WIM 40-NTL/STL . . . . .	≤23.0 mA
Linearity Tolerance	
WIM 40-Q20L60 . . . . .	≤2%
WIM 70-Q20L100 . . . . .	≤8%
WIM 40-NTL/STL . . . . .	≤2%

Relative Temp. Drift

WIM 40-Q20L60 . . . . .	≤±0.06% °C
WIM 70-Q20L100 . . . . .	≤±0.06% °C
WIM 40-NTL/STL . . . . .	≤±0.06% °C

### 2-Wire DC NAMUR Analog

Linearity Tolerance. . . . .	≤5% of final value	Temperature Drift . . . . .	≤ ±0.06% per °C
Nominal Voltage . . . . .	8.2 VDC (EN 50227)	Shock . . . . .	30 g, 11 ms
Current Output . . . . .	4-20 mA	Vibration . . . . .	55 Hz, 1 mm Amplitude, in all 3 Planes
Power-On Effect . . . . .	Realized in Amplifier	Repeatability . . . . .	≤1% (0.5% after 30 min. warm up)
Reverse Polarity Protection . . . . .	Incorporated		
Wire-Break Protection . . . . .	Realized in Amplifier		
Transient Protection . . . . .	Realized in Amplifier		

# Sensors

## Index

### Index

1/2-14NPT . . . . . L25	BC 5-S185-AN4X-0.3M-RS 4T . . . . . E37	BC10-QF5.5-AP6X2/S932 . . . . . E19
ASB . . . . . G21	BC 5-S185-AP4X . . . . . E39	BC10-S30-AZ3X . . . . . E43
ASB-3 . . . . . G10	BC 5-S185-AP4X/S100 . . . . . E39	BC10-S30-AZ3X-B3131 . . . . . E41
ASB-4 . . . . . G10	BC 5-S185-AP4X-0.2M-RS 4T . . . . . E37	BC10-S30-VN4X . . . . . E43
ASB-5 . . . . . G10	BC 5-S18-AN4X . . . . . E39	BC10-S30-VN4X-H1141 . . . . . E41
ASB-6 . . . . . G10	BC 5-S18-AN4X-0.2M-RS 4T . . . . . E37	BC10-S30-VP4X . . . . . E43
ASB-7 . . . . . G10	BC 5-S18-AN4X-H1141/S250 . . . . . E37	BC10-S30-VP4X-H1141 . . . . . E41
ASB-9 . . . . . G10	BC 5-S18-AP4X . . . . . E39	BC10-S30-Y0X . . . . . E43
B 4131-0/13.5 . . . . . K20	BC 5-S18-AP4X-0.2M-RS 4T . . . . . E37	BC15-K34-AN4X-H1141 . . . . . E45
B 4131-0/9 . . . . . K20	BC 5-S18-AP4X-H1141/S250 . . . . . E37	BC15-K34-AP4X-H1141 . . . . . E45
B 4141-0/13.5 . . . . . K21	BC 5-S18-AZ3X . . . . . E39	BC15-K34-AZ3X . . . . . E45
B 4141-0/9 . . . . . K21	BC 5-S18-AZ3X-0.2M-SB 3T . . . . . E37	BC15-K34SR-FZ3X2 . . . . . E47
B 4151-0/13.5 . . . . . K21	BC 5-S18-Y0X . . . . . E39	BC15-K34SR-VN4X2 . . . . . E47
B 4151-0/16 . . . . . K21	BC 8-Q10-AN6X2/S250 . . . . . E21	BC15-K34SR-VP4X2 . . . . . E47
B 4151-0/9 . . . . . K21	BC 8-Q10-AN6X2-V1131/S250 . . . . . E21	BC15-K34-VN4X . . . . . E45
B 5131-0 . . . . . K16	BC 8-Q10-AP6X2/S250 . . . . . E21	BC15-K34-VP4X . . . . . E45
B 5141-0 . . . . . K16	BC 8-Q10-AP6X2-V1131/S250 . . . . . E21	BC20-CP40-FZ3X2 . . . . . E27
B 5231-0 . . . . . K16	BC10-M30-AN4X-H1141 . . . . . E33	BC20-CP40-VN4X2 . . . . . E27
B 5241-0 . . . . . K16	BC10-M30-AP4X-H1141 . . . . . E33	BC20-CP40-VP4X2 . . . . . E27
B 8141-0 . . . . . K13	BC10-M30-AZ3X . . . . . E35	BC20-K40SR-FZ3X2 . . . . . E47
B 8151-0 . . . . . K13	BC10-M30-AZ3X-B3131 . . . . . E33	BC20-K40SR-VN4X2 . . . . . E47
B 8241-0 . . . . . K13	BC10-M30-VN4X . . . . . E35	BC20-K40SR-VP4X2 . . . . . E47
B 8251-0 . . . . . K13	BC10-M30-VN4X-H1141 . . . . . E33	BC20-Q20-AN4X2 . . . . . E23
BC 3-M12-AN6X . . . . . E29	BC10-M30-VP4X . . . . . E35	BC20-Q20-AN4X2/S400 . . . . . E23
BC 3-M12-AN6X-0.2M-RS 4T . . . . . E29	BC10-M30-VP4X-H1141 . . . . . E33	BC20-Q20-AN4X2-H1141 . . . . . E25
BC 3-M12-AP6X . . . . . E29	BC10-P30SR-FZ3X2 . . . . . E43	BC20-Q20-AN4X2-H1141/S400 . . . . . E25
BC 3-M12-AP6X-0.2M-RS 4T . . . . . E29	BC10-P30SR-VN4X2 . . . . . E43	BC20-Q20-AP4X2 . . . . . E23
BC 3-S12-AN6X . . . . . E29	BC10-P30SR-VP4X2 . . . . . E43	BC20-Q20-AP4X2/S400 . . . . . E23
BC 3-S12-AN6X-0.2M-RS 4T . . . . . E29	BC10-P30SR-VP4X2/S359-2M . . . . . E43	BC20-Q20-AP4X2-H1141 . . . . . E25
BC 3-S12-AP6X . . . . . E29	BC10-PT30-AZ3X . . . . . E43	BC20-Q20-AP4X2-H1141/S400 . . . . . E25
BC 3-S12-AP6X/S100 . . . . . E29	BC10-PT30-VN4X2 . . . . . E43	BC20-Q20-AZ3X2 . . . . . E23
BC 3-S12-AP6X-0.2M-RS 4T . . . . . E29	BC10-PT30-VP4X2 . . . . . E43	BC20-Q20-AZ3X2/S400 . . . . . E23
BC 5-M18-AN4X . . . . . E31	BC10-PT30-Y0X . . . . . E43	BC20-Q20-VN4X2/S400 . . . . . E23
BC 5-M18-AN4X-0.2M-RS 4T . . . . . E31	BC10-Q14-AN4X2 . . . . . E21	BC20-Q20-VN4X2-H1141 . . . . . E25
BC 5-M18-AP4X . . . . . E31	BC10-Q14-AN4X2/S400 . . . . . E21	BC20-Q20-VN4X2-H1141/S400 . . . . . E25
BC 5-M18-AP4X-0.2M-RS 4T . . . . . E31	BC10-Q14-AN4X2-V1131 . . . . . E21	BC20-Q20-VP4X2/S400 . . . . . E23
BC 5-M18-AZ3X . . . . . E31	BC10-Q14-AN4X2-V1131/S400 . . . . . E21	BC20-Q20-VP4X2-H1141 . . . . . E25
BC 5-M18-AZ3X-0.2M-SB 3T . . . . . E31	BC10-Q14-AP4X2 . . . . . E21	BC20-Q20-VP4X2-H1141/S400 . . . . . E25
BC 5-Q08-AN6X2 . . . . . E19	BC10-Q14-AP4X2/S400 . . . . . E21	BCF 5-S18-AN4X . . . . . E39
BC 5-Q08-AN6X2-V1131 . . . . . E19	BC10-Q14-AP4X2-V1131 . . . . . E21	BCF 5-S18-AN4X-0.2M-RS 4T . . . . . E37
BC 5-Q08-AP6X2 . . . . . E19	BC10-Q14-AP4X2-V1131/S400 . . . . . E21	BCF 5-S18-AP4X . . . . . E39
BC 5-Q08-AP6X2-V1131 . . . . . E19	BC10-Q14-VN4X2 . . . . . E21	BCF 5-S18-AP4X/S90 . . . . . E39
BC 5-QF5.5-AN6X2/S250 . . . . . E19	BC10-Q14-VP4X2 . . . . . E21	BCF 5-S18-AP4X-0.2M-RS 4T . . . . . E37
BC 5-QF5.5-AP6X2/S250 . . . . . E19	BC10-QF5.5-AN6X2 . . . . . E19	BCF10-S30-AZ3X . . . . . E43
BC 5-QF5.5-Y0X/S250 . . . . . E19	BC10-QF5.5-AN6X2/S250 . . . . . E19	BCF10-S30-AZ3X-B3131 . . . . . E41
BC 5-QF5.5-Y1X/S250 . . . . . E19	BC10-QF5.5-AN6X2/S932 . . . . . E19	BCF10-S30-VN4X . . . . . E43
BC 5-S185-AN4X . . . . . E39	BC10-QF5.5-AP6X2 . . . . . E19	BCF10-S30-VN4X-H1141 . . . . . E41
BC 5-S185-AN4X/S100 . . . . . E39	BC10-QF5.5-AP6X2/S250 . . . . . E19	BCF10-S30-VP4X . . . . . E43

BCF10-S30-VP4X-H1141 . . . . .	E41	Bi 1.5-EG08WD-AP6X-H1341 . . . . .	D21	Bi 1.5U-EG08-AN6X-H1341 . . . . .	D21
BCF15-K34-AZ3X . . . . .	E45	Bi 1.5-EG08-Y1 . . . . .	D41	Bi 1.5U-EG08-AN6X-V1131 . . . . .	D17
Bi 1-EG05-AN6X . . . . .	D29	Bi 1.5-EG08-Y1-H1341 . . . . .	D21	Bi 1.5U-EG08-AP6X . . . . .	D41
BI 1-EG05-AN6X-V1331 . . . . .	D13	Bi 1.5-EG08-Y1-V1131 . . . . .	D17	Bi 1.5U-EG08-AP6X-H1341 . . . . .	D21
Bi 1-EG05-AP6X . . . . .	D29	Bi 1.5-EGT08-AP/S100 . . . . .	D41	Bi 1.5U-EG08-AP6X-H1341/S1589 . . . . .	D21
Bi 1-EG05-AP6X-V1331 . . . . .	D13	Bi 1.5-EH04-0.3M-M12-SIU-H1141 . . . . .	F15	Bi 1.5U-EG08-AP6X-V1131 . . . . .	D17
Bi 1-EG05-Y1 . . . . .	D29	Bi 1.5-EH6.5-AN6X . . . . .	D31	Bi 1.5U-EGT08-AN6X-H1341 . . . . .	D21
Bi 1-EG05-Y1-V1331 . . . . .	D13	Bi 1.5-EH6.5-AN6X-V1131 . . . . .	D13	Bi 1.5U-EGT08-AP6X-H1341 . . . . .	D21
Bi 1-EH03-AN7X . . . . .	D29	Bi 1.5-EH6.5-AP6X . . . . .	D31	Bi 1.5U-EH6.5-AN6X . . . . .	D31
Bi 1-EH03-AP7X . . . . .	D29	Bi 1.5-EH6.5-AP6X/S100 . . . . .	D31	Bi 1.5U-EH6.5-AN6X-V1131 . . . . .	D13
Bi 1-EH04-AN6X . . . . .	D29	Bi 1.5-EH6.5-AP6X-V1131 . . . . .	D13	Bi 1.5U-EH6.5-AP6X . . . . .	D31
Bi 1-EH04-AN6X-V1331 . . . . .	D13	Bi 1.5-EH6.5-AP6X-V1131/S100 . . . . .	D13	Bi 2.5-EG16CA-FDZ32X2 . . . . .	J23
Bi 1-EH04-AP6X . . . . .	D29	Bi 1.5-EH6.5K-AN6X . . . . .	D31	Bi 2-CRS1159-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1-EH04-AP6X-V1331 . . . . .	D13	Bi 1.5-EH6.5K-AN6X-V1131 . . . . .	D13	Bi 2-CRS1159-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1-EH04-Y0 . . . . .	D29	Bi 1.5-EH6.5K-AP6X . . . . .	D31	Bi 2-CRS1159-AN4X2-H1141/S34 . . . . .	G49
Bi 1-EH04-Y1 . . . . .	D29	Bi 1.5-EH6.5K-AP6X-V1131 . . . . .	D13	Bi 2-CRS1159-AP4X2-H1141/S34 . . . . .	G49
Bi 1-EH04-Y1-V1330 . . . . .	D13	Bi 1.5-EH6.5K-Y1 . . . . .	D31	Bi 2-CRS232-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1-HS540-AN6X . . . . .	D27	Bi 1.5-EH6.5-LU . . . . .	F15	Bi 2-CRS232-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1-HS540-AP6X . . . . .	D27	Bi 1.5-EH6.5-Y1-V1130 . . . . .	D13	Bi 2-CRS232-AN4X2-H1141/S34 . . . . .	G49
Bi 1-HS540-Y1 . . . . .	D27	Bi 1.5-G08-AN6X . . . . .	D43	Bi 2-CRS232-AP4X2-H1141/S34 . . . . .	G49
Bi 1-Q6.5-AN6 . . . . .	C13	Bi 1.5-G08-AN6X-H1341 . . . . .	D23	Bi 2-CRS260-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1-Q6.5-AP6 . . . . .	C13	Bi 1.5-G08-AN7X-H1341 . . . . .	D23	Bi 2-CRS260-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1-Q6.5-AP6/S34 . . . . .	C13	Bi 1.5-G08-AP6X . . . . .	D43	Bi 2-CRS260-AN4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG05-0.3M-M12-SIU-H1141 . . . . .	F15	Bi 1.5-G08-AP6X-H1341 . . . . .	D23	Bi 2-CRS260-AP4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08-AD6X-H1341 . . . . .	D21	Bi 1.5-G08-Y1 . . . . .	D43	Bi 2-CRS287-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1.5-EG08-AN6X . . . . .	D41	Bi 1.5-GS880-AN6X . . . . .	D39	Bi 2-CRS287-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1.5-EG08-AN6X-H1341 . . . . .	D21	Bi 1.5-GS880-AP6X . . . . .	D39	Bi 2-CRS287-AN4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08-AN6X-V1131 . . . . .	D17	Bi 1.5-GS880-Y0 . . . . .	D39	Bi 2-CRS287-AP4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08-AN7X . . . . .	D41	Bi 1.5-H08-AN6X . . . . .	D35	Bi 2-CRS317-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1.5-EG08-AN7X-H1341 . . . . .	D21	Bi 1.5-H08-AP6X . . . . .	D35	Bi 2-CRS317-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1.5-EG08-AP6X . . . . .	D41	Bi 1.5-H08K-AN6X . . . . .	D35	Bi 2-CRS317-AN4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08-AP6X-H1341 . . . . .	D21	BI 1.5-H08K-AN6X-V1131 . . . . .	D15	Bi 2-CRS317-AP4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08-AP6X-V1131 . . . . .	D17	Bi 1.5-H08K-AP6/S100 . . . . .	D35	Bi 2-CRS343-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1.5-EG08K-AN6X . . . . .	D39	Bi 1.5-H08K-AP6X . . . . .	D35	Bi 2-CRS343-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1.5-EG08K-AN6X-H1341 . . . . .	D21	BI 1.5-H08K-AP6X-V1131 . . . . .	D15	Bi 2-CRS343-AN4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08K-AN6X-V1131 . . . . .	D17	Bi 1.5-H08M-AP6X . . . . .	D35	Bi 2-CRS343-AP4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08K-AP6/S100 . . . . .	D39	Bi 1.5-H08-Y1 . . . . .	D35	Bi 2-CRS476-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1.5-EG08K-AP6X . . . . .	D39	Bi 1.5-H6.5M-AN7 . . . . .	D31	Bi 2-CRS476-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1.5-EG08K-AP6X-H1341 . . . . .	D21	Bi 1.5-H6.5-Y1X . . . . .	D31	Bi 2-CRS476-AN4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08K-AP6X-V1131 . . . . .	D17	Bi 1.5-HS865-AN6X . . . . .	D27	Bi 2-CRS476-AP4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08K-Y1 . . . . .	D39	Bi 1.5-HS865-Y1 . . . . .	D27	Bi 2-CRS524-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1.5-EG08K-Y1-H1341 . . . . .	D21	Bi 1.5-PCS-2ADZ32X2-.33M-RSM 50/S34 . . . . .	G57	Bi 2-CRS524-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1.5-EG08K-Y1-V1130 . . . . .	D17	Bi 1.5-PCS-2ADZ32X2-.33M-SB 5T/S34 . . . . .	G57	Bi 2-CRS524-AN4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08K-Y1-V1131 . . . . .	D17	Bi 1.5-PCS-2ADZ32X2-.33-RSM 50/S576 . . . . .	G57	Bi 2-CRS603-ADZ30X2-B1131/S34 . . . . .	G51
Bi 1.5-EG08K-Y1X-H1341 . . . . .	D21	Bi 1.5-PCS-2AP4X3-.33M-RS 4.43T/S34 . . . . .	G57	Bi 2-CRS603-ADZ30X2-B3131/S34 . . . . .	G51
Bi 1.5-EG08-LU . . . . .	F15	Bi 1.5-PCS-2AP4X3-.33-RS 4.43T/S576 . . . . .	G57	Bi 2-CRS603-AN4X2-H1141/S34 . . . . .	G49
Bi 1.5-EG08-LU-H1341 . . . . .	F15	Bi 1.5U-EG08-AN6X . . . . .	D41		
Bi 1.5-EG08WD-AN6X-H1341 . . . . .	D21				



# Sensors

## Index

### Index

Bi 2-CRS603-AP4X2-H1141/S34 . . . . .	G49	Bi 2-EG08-VN6X-H1341 . . . . .	D21	Bi 2-GT12-ADZ32X-B3131/S34 . . . . .	D67
Bi 2-CRS705-ADZ30X2-B1131/S34 . . . . .	G51	Bi 2-EG08-VP6X . . . . .	D41	Bi 2-GT12-AZ33X/S34 . . . . .	D73
Bi 2-CRS705-ADZ30X2-B3131/S34 . . . . .	G51	Bi 2-EG08-VP6X-H1341 . . . . .	D21	Bi 2-GT12-AZ33X-B3131/S34 . . . . .	D67
Bi 2-CRS705-AN4X2-H1141/S34 . . . . .	G49	Bi 2-EG12-AN6X . . . . .	D73	Bi 2-GT12H-ADZ32X-B3131/S34 . . . . .	D67
Bi 2-CRS705-AP4X2-H1141/S34 . . . . .	G49	Bi 2-EG12-AP6X . . . . .	D73	Bi 2-GT12H-ADZ32X-B3131/S34/S1589 . . . . .	D67
Bi 2-CRS730-ADZ30X2-B1131/S34 . . . . .	G51	Bi 2-EG12HK-AN6X/S1589 . . . . .	D73	Bi 2-K11-AN6 . . . . .	D49
Bi 2-CRS730-ADZ30X2-B3131/S34 . . . . .	G51	Bi 2-EG12-YOX . . . . .	D73	Bi 2-K11-AP6 . . . . .	D49
Bi 2-CRS730-AN4X2-H1141/S34 . . . . .	G49	Bi 2-EGT08-AG41X . . . . .	D41	Bi 2-K11-Y1 . . . . .	D49
Bi 2-CRS730-AP4X2-H1141/S34 . . . . .	G49	Bi 2-EH6.5-AN6X . . . . .	D31	Bi 2-M12-AD4X . . . . .	D69
Bi 2-CRS959-ADZ30X2-B1131/S34 . . . . .	G51	Bi 2-EH6.5-AN6X-V1131 . . . . .	D13	Bi 2-M12-AD4X-H1141 . . . . .	D51
Bi 2-CRS959-ADZ30X2-B3131/S34 . . . . .	G51	Bi 2-EH6.5-AP6X . . . . .	D31	Bi 2-M12-AN6X . . . . .	D69
Bi 2-CRS959-AN4X2-H1141/S34 . . . . .	G49	Bi 2-EH6.5-AP6X-V1131 . . . . .	D13	Bi 2-M12-AN6X-H1141 . . . . .	D51
Bi 2-CRS959-AP4X2-H1141/S34 . . . . .	G49	Bi 2-EH6.5K-AN6X . . . . .	D31	Bi 2-M12-AP6X . . . . .	D69
Bi 2-EG08-AG41X . . . . .	D41	Bi 2-EH6.5K-AN6X-V1131 . . . . .	D13	Bi 2-M12-AP6X/S100 . . . . .	D69
Bi 2-EG08-AG41X/S1589 . . . . .	D41	Bi 2-EH6.5K-AP6X . . . . .	D31	Bi 2-M12-AP6X-H1141 . . . . .	D51
Bi 2-EG08-AG41X-H1341 . . . . .	D21	Bi 2-EH6.5K-AP6X-V1131 . . . . .	D13	Bi 2-M12E-AD4X . . . . .	D71
Bi 2-EG08-AG41X-H1341/S1589 . . . . .	D21	Bi 2-EM12-ADZ32X . . . . .	D69	Bi 2-M12E-AD4X-H1141 . . . . .	D55
Bi 2-EG08-AN6X . . . . .	D41	Bi 2-EM12-AN6X-H1141 . . . . .	D51	Bi 2-M12E-AN6X-H1141 . . . . .	D55
Bi 2-EG08-AN6X/S1589 . . . . .	D41	Bi 2-EM12-AP6X-H1141 . . . . .	D51	Bi 2-M12E-AP6X-H1141 . . . . .	D55
Bi 2-EG08-AN6X-H1341 . . . . .	D21	Bi 2-EM12D-AP6/S120 . . . . .	D71	Bi 2-M12E-VN6X . . . . .	D71
Bi 2-EG08-AN6X-H1341/S1589 . . . . .	D21	Bi 2-EM12FE-AP6X-H1141 . . . . .	D55	Bi 2-M12E-VN6X-H1141 . . . . .	D55
Bi 2-EG08-AN6X-V1131 . . . . .	D17	Bi 2-EM12WD-AP6/S929 . . . . .	D69	Bi 2-M12E-VP6X-H1141 . . . . .	D55
Bi 2-EG08-AP6X . . . . .	D41	Bi 2-EM12-YOX-H1141 . . . . .	D51	Bi 2-M12E-YOX-H1141 . . . . .	D55
Bi 2-EG08-AP6X/S100 . . . . .	D41	Bi 2-G08-AN6X . . . . .	D43	Bi 2-M12K-VP6X-H1141 . . . . .	D51
Bi 2-EG08-AP6X/S1589 . . . . .	D41	Bi 2-G08-AN6X-H1341 . . . . .	D23	Bi 2-M12-LIU . . . . .	F21
Bi 2-EG08-AP6X/S1610 . . . . .	D41	Bi 2-G08-AP6X . . . . .	D43	Bi 2-M12-LIU-H1141 . . . . .	F17
Bi 2-EG08-AP6X/S957 . . . . .	D41	Bi 2-G08-AP6X-H1341 . . . . .	D23	Bi 2-M12T-AN6X . . . . .	D71
Bi 2-EG08-AP6X-H1341 . . . . .	D21	Bi 2-G08-AP6X-V1131 . . . . .	D17	Bi 2-M12T-AP6X . . . . .	D71
Bi 2-EG08-AP6X-H1341/S1589 . . . . .	D21	Bi 2-G08K-AP6X-V1131 . . . . .	D17	Bi 2-M12T-AP6X/S34 . . . . .	D71
Bi 2-EG08-AP6X-V1131 . . . . .	D17	Bi 2-G12-ADZ32X . . . . .	D73	Bi 2-M12-VN6X . . . . .	D69
Bi 2-EG08-AP6X-V1131/S1589 . . . . .	D17	Bi 2-G12-ADZ32X-B3131 . . . . .	D67	Bi 2-M12-VN6X-H1141 . . . . .	D51
Bi 2-EG08-AZ14X . . . . .	D41	Bi 2-G12-AN6X . . . . .	D73	Bi 2-M12-VP6X . . . . .	D69
Bi 2-EG08K-AG41X . . . . .	D39	Bi 2-G12-AN6X-H1141 . . . . .	D65	Bi 2-M12-VP6X-H1141 . . . . .	D51
Bi 2-EG08K-AG41X/S1589 . . . . .	D39	Bi 2-G12-AN6X-V1131 . . . . .	D65	Bi 2-M12-Y1X-H1141 . . . . .	D51
Bi 2-EG08K-AG41X/S1610 . . . . .	D39	Bi 2-G12-AN7X . . . . .	D73	Bi 2-MT12-AP6X-H1141/S34 . . . . .	D53
Bi 2-EG08K-AG41X-H1341 . . . . .	D21	Bi 2-G12-AP6X . . . . .	D73	Bi 2-MT12-YOX-H1141 . . . . .	D53
Bi 2-EG08K-AG41X-H1341/S1589 . . . . .	D21	Bi 2-G12-AP6X-H1141 . . . . .	D65	Bi 2-P12SK-AD4X . . . . .	D89
Bi 2-EG08K-AN6X . . . . .	D39	Bi 2-G12-AP6X-V1131 . . . . .	D65	Bi 2-P12SK-AN6X2 . . . . .	D89
Bi 2-EG08K-AN6X/S1589 . . . . .	D39	Bi 2-G12-AZ33X . . . . .	D73	Bi 2-P12SK-AP6X2 . . . . .	D89
Bi 2-EG08K-AN6X-H1341 . . . . .	D21	Bi 2-G12-AZ33X-B3131 . . . . .	D67	Bi 2-P12SK-AZ31X . . . . .	D89
Bi 2-EG08K-AN6X-V1131 . . . . .	D17	Bi 2-G12K-AN6X . . . . .	D73	Bi 2-P12SK-Y1X . . . . .	D89
Bi 2-EG08K-AP6X . . . . .	D39	Bi 2-G12K-AP6X . . . . .	D73	Bi 2-P12-Y0 . . . . .	D85
Bi 2-EG08K-AP6X/S957 . . . . .	D39	Bi 2-G12K-AP6X-H1141 . . . . .	D65	Bi 2-P12-Y0/S100 . . . . .	D85
Bi 2-EG08K-AP6X/S97 . . . . .	D39	Bi 2-G12SK-AN6X2 . . . . .	D81	Bi 2-P12-YOX . . . . .	D85
Bi 2-EG08K-AP6X-H1341 . . . . .	D21	Bi 2-G12SK-AP6X2 . . . . .	D81	Bi 2-P12-Y1X/S97 . . . . .	D85
Bi 2-EG08K-AP6X-H1341/S1589 . . . . .	D21	Bi 2-G12-Y0 . . . . .	D73	Bi 2-Q10S-AN6X . . . . .	C23
Bi 2-EG08K-AP6X-V1131 . . . . .	D17	Bi 2-G12-YOX . . . . .	D73	Bi 2-Q10S-AP6X . . . . .	C23
Bi 2-EG08K-AP6X-V1131/S957 . . . . .	D17	Bi 2-GT12-ADZ32X/S34 . . . . .	D73	Bi 2-Q10S-AZ31X . . . . .	C23

Bi 2-Q10S-VN6X . . . . .	C23	Bi 3-EM12WD-AN6X . . . . .	D69	Bi 3U-M12-AP6X . . . . .	D69
Bi 2-Q10S-VP6X . . . . .	C23	Bi 3-EM12WD-AN6X-H1141 . . . . .	D51	Bi 3U-M12-AP6X2-H1141 . . . . .	D51
Bi 2-Q10S-Y0X . . . . .	C23	Bi 3-EM12WD-AP6X . . . . .	D69	Bi 3U-M12-AP6X-H1141 . . . . .	D51
Bi 2-Q10S-Y1X . . . . .	C23	Bi 3-EM12WD-AP6X/S97 . . . . .	D69	Bi 3U-M12E-AN6X . . . . .	D71
Bi 2-Q11S-AD4X . . . . .	C23	Bi 3-EM12WD-AP6X-H1141 . . . . .	D51	Bi 3U-M12E-AN6X-H1141 . . . . .	D55
Bi 2-Q11S-AN4X . . . . .	C23	Bi 3-EM12WDK-AP6X/S97 . . . . .	D71	Bi 3U-M12E-AP6X . . . . .	D71
Bi 2-Q11S-AP4X . . . . .	C23	Bi 3FE-M12FEE-AP6X-H1141 . . . . .	D57	Bi 3U-M12E-AP6X-H1141 . . . . .	D55
Bi 2-Q12-AN6X . . . . .	C25	Bi 3-GT12K-AD4X/S1610 . . . . .	D73	Bi 3U-M12E-VN4X-H1141 . . . . .	D55
Bi 2-Q12-AN6X-H1141 . . . . .	C25	Bi 3-M12-AD4X . . . . .	D69	Bi 3U-M12E-VP4X-H1141 . . . . .	D55
Bi 2-Q12-AN7X . . . . .	C25	Bi 3-M12-AD4X-H1141 . . . . .	D51	Bi 3U-MT12-AN6X-H1141 . . . . .	D53
Bi 2-Q12-AP6X . . . . .	C25	Bi 3-M12E-AD4X-H1141 . . . . .	D55	Bi 3U-MT12-AP6X2-H1141 . . . . .	D53
Bi 2-Q12-AP6X-H1141 . . . . .	C25	Bi 3-M12WD-AN6X-H1141 . . . . .	D51	Bi 3U-MT12-AP6X-H1141 . . . . .	D53
Bi 2-Q12-AZ31X . . . . .	C25	Bi 3-M12WD-AP6X-H1141 . . . . .	D51	Bi 3U-MT12E-AP6X2-H1141 . . . . .	D57
Bi 2-Q5.5-AG61X . . . . .	C13	Bi 3-MT12E-AD4X-H1141 . . . . .	D57	Bi 3U-MT12H-AP6X2-H1141/S1589 . . . . .	D53
Bi 2-Q5.5-AG6X . . . . .	C13	Bi 3-MT12H-AD4X-H1141/S1589 . . . . .	D53	Bi 3U-MT12H-AP6X-H1141 . . . . .	D53
Bi 2-Q5.5-AN6X . . . . .	C13	Bi 3-MT12H-AD4X-H1144/S1589 . . . . .	D53	Bi 3U-MT12H-AP6X-H1141/S1589 . . . . .	D53
Bi 2-Q5.5-AN6X/S34 . . . . .	C13	Bi 3-MT12HE-AD4X-H1141 . . . . .	D57	Bi 3U-MT12HE-AN6X2-H1141 . . . . .	D57
Bi 2-Q5.5-AP6X . . . . .	C13	Bi 3-MT12HE-AD4X-H1141/S1589 . . . . .	D57	Bi 3U-MT12HE-AN6X2-H1141/S1589 . . . . .	D57
Bi 2-Q5.5-AP6X/S34 . . . . .	C13	Bi 3-MT12HE-AD4X-H1141/S1610 . . . . .	D57	Bi 3U-MT12HE-AN6X2-H1141/S1610 . . . . .	D57
Bi 2-Q5.5K-AN6X . . . . .	C13	Bi 3-MT12HE-AD4X-H1144 . . . . .	D57	Bi 3U-MT12HE-AP6X2-H1141 . . . . .	D57
Bi 2-Q5.5K-AP6X . . . . .	C13	Bi 3-MT12HE-AD4X-H1144/S1589 . . . . .	D57	Bi 3U-MT12HE-AP6X2-H1141/S1589 . . . . .	D57
Bi 2-Q5.5K-Y1X . . . . .	C13	Bi 3NF-EM12HE-AN6X2-H1141 . . . . .	D55	Bi 3U-P12SK-AN6X . . . . .	D89
Bi 2-S12-AD4X . . . . .	D87	Bi 3NF-EM12HE-AP6X2-H1141 . . . . .	D55	Bi 3U-P12SK-AP6X . . . . .	D89
Bi 2-S12-AD4X-H1141 . . . . .	D83	Bi 3-P12WD-AN6X . . . . .	D85	Bi 3U-S12-AN6X . . . . .	D87
Bi 2-S12-ADZ32X . . . . .	D87	Bi 3-P12WD-AN6X-H1141 . . . . .	D83	Bi 3U-S12-AN6X-H1141 . . . . .	D83
Bi 2-S12-AN6X . . . . .	D87	Bi 3-P12WD-AP6X . . . . .	D85	Bi 3U-S12-AP6X . . . . .	D87
Bi 2-S12-AN6X-H1141 . . . . .	D83	Bi 3-P12WD-AP6X-H1141 . . . . .	D83	Bi 3U-S12-AP6X-H1141 . . . . .	D83
Bi 2-S12-AN7X . . . . .	D87	Bi 3-Q06-AN6X2 . . . . .	C13	Bi 4-EG12-AP6X-H1141 . . . . .	D65
Bi 2-S12-AN7X/S100 . . . . .	D87	Bi 3-Q06-AP6X2 . . . . .	C13	Bi 4-EM12HE-AN6X-H1141/S1589 . . . . .	D55
Bi 2-S12-AP6X . . . . .	D87	Bi 3-Q08-ES/S1027-0.2 . . . . .	C19	Bi 4-EM12HE-AP6X-H1141/S1589 . . . . .	D55
Bi 2-S12-AP6X/S97 . . . . .	D87	Bi 3U-EG12SK-AN6X . . . . .	D81	Bi 4-EM12-VP6X-H1141 . . . . .	D51
Bi 2-S12-AP6X-H1141 . . . . .	D83	Bi 3U-EG12SK-AP6X . . . . .	D81	Bi 4-G12-ADZ32X . . . . .	D73
Bi 2-S12-AP7X/S100 . . . . .	D87	Bi 3U-EM12-AN6X . . . . .	D69	Bi 4-G12-ADZ32X-B3131 . . . . .	D67
Bi 2-S12-AZ31X . . . . .	D87	Bi 3U-EM12-AN6X-H1141 . . . . .	D51	Bi 4-G12-AN6X . . . . .	D73
Bi 2-S12-AZ31X/S100 . . . . .	D87	Bi 3U-EM12-AP6X . . . . .	D69	Bi 4-G12-AN6X-V1131 . . . . .	D65
Bi 2-S12-AZ31X/S97 . . . . .	D87	Bi 3U-EM12-AP6X-H1141 . . . . .	D51	Bi 4-G12-AP6X-V1131 . . . . .	D65
Bi 2-S12-Y0X-H1141 . . . . .	D83	Bi 3U-EM12E-AN6X . . . . .	D71	Bi 4-G12K-AN6X . . . . .	D73
Bi 2U-EG08-AN6X . . . . .	D41	Bi 3U-EM12E-AN6X-H1141 . . . . .	D55	Bi 4-G12K-AP6X . . . . .	D73
Bi 2U-EG08-AN6X-H1341 . . . . .	D21	Bi 3U-EM12E-AP6X . . . . .	D71	Bi 4-GT12H-ADZ32X-B3131 . . . . .	D67
Bi 2U-EG08-AN6X-V1131 . . . . .	D17	Bi 3U-EM12E-AP6X-H1141 . . . . .	D55	Bi 4-GT12H-ADZ32X-B3131/S1589 . . . . .	D67
Bi 2U-EG08-AP6X . . . . .	D41	Bi 3U-EM12H-AP6X-H1141 . . . . .	D51	Bi 4-M12-AN6X . . . . .	D69
Bi 2U-EG08-AP6X-H1341 . . . . .	D21	Bi 3U-EM12HE-AN6X2-H1141 . . . . .	D55	Bi 4-M12-AN6X-H1141 . . . . .	D51
Bi 2U-EH6.5-AN6X-V1131 . . . . .	D13	Bi 3U-EM12HE-AN6X2-H1141/S1589 . . . . .	D55	Bi 4-M12-AP6X . . . . .	D69
Bi 2U-EH6.5-AP6X . . . . .	D31	Bi 3U-EM12HE-AP6X2-H1141 . . . . .	D55	Bi 4-M12-AP6X-H1141 . . . . .	D51
Bi 2U-EH6.5-AP6X-V1131 . . . . .	D13	Bi 3U-EM12HE-AP6X2-H1141/S1589 . . . . .	D55	Bi 4-M12E-AN6X-H1141 . . . . .	D55
Bi 2U-G12-ADZ32X-B3131 . . . . .	D67	Bi 3U-M12-AN6X . . . . .	D69	Bi 4-M12E-AP6X-H1141 . . . . .	D55
Bi 2U-GT12-ADZ32X-B3131 . . . . .	D67	Bi 3U-M12-AN6X2-H1141 . . . . .	D51	Bi 4-M12E-VN6X . . . . .	D71
Bi 2U-MT12-ADZ32X . . . . .	D69	Bi 3U-M12-AN6X-H1141 . . . . .	D51	Bi 4-M12E-VN6X-H1141 . . . . .	D55

# Sensors

## Index

### Index

Bi 4-M12E-VP6X . . . . . D71	Bi 5FE-M18FE-AP6X-H1141 . . . . . D97	Bi 5-M18-AP6X/S120 . . . . . D121
Bi 4-M12E-VP6X-H1141 . . . . . D55	Bi 5-G18-ADZ30X2 . . . . . D123	Bi 5-M18-AP6X-H1141 . . . . . D91
Bi 4-M12K-AN6X-H1141 . . . . . D51	Bi 5-G18-ADZ30X2-B1331 . . . . . D111	Bi 5-M18E-AD4X . . . . . D119
Bi 4-M12K-AP6X-H1141 . . . . . D51	Bi 5-G18-ADZ30X2-B3331 . . . . . D105	Bi 5-M18E-AD4X-H1141 . . . . . D97
Bi 4-M12-LIU . . . . . F21	Bi 5-G18-AN6X 50MM . . . . . D123	Bi 5-M18E-AN6X-H1141 . . . . . D97
Bi 4-M12-LIU-H1141 . . . . . F17	Bi 5-G18-AN6X-B1341 . . . . . D111	Bi 5-M18E-AP6X-H1141 . . . . . D97
Bi 4-M12T-AN6X . . . . . D71	Bi 5-G18-AN6X-B1441 . . . . . D111	Bi 5-M18E-VN4X . . . . . D119
Bi 4-M12T-AP6X . . . . . D71	Bi 5-G18-AN7X . . . . . D123	Bi 5-M18E-VN4X-H1141 . . . . . D97
Bi 4-M12-VN6X . . . . . D69	Bi 5-G18-AP6X 50MM . . . . . D123	Bi 5-M18E-VP4X . . . . . D119
Bi 4-M12-VN6X-H1141 . . . . . D51	Bi 5-G18-AP6X-B1341 . . . . . D111	Bi 5-M18E-VP4X-H1141 . . . . . D97
Bi 4-M12-VP6X . . . . . D69	Bi 5-G18-AP6X-B1341/S34 . . . . . D111	Bi 5-M18-LI2-H1141 . . . . . F17
Bi 4-M12-VP6X-H1141 . . . . . D51	Bi 5-G18-AP6X-B1441 . . . . . D111	Bi 5-M18-LIU . . . . . F21
Bi 4-MT12E-AP6X-H1141 . . . . . D57	Bi 5-G18-AP6X-B1441/S34 . . . . . D111	Bi 5-M18-LIU-H1141 . . . . . F17
Bi 4-MT12H-AN6X-H1141 . . . . . D53	Bi 5-G18-AZ3X 60MM . . . . . D123	Bi 5-M18T-AN6X . . . . . D121
Bi 4-MT12H-AN6X-H1141/S1589 . . . . . D53	Bi 5-G18-AZ3X2 . . . . . D123	Bi 5-M18T-AP6X . . . . . D121
Bi 4-MT12H-AP6X-H1141 . . . . . D53	Bi 5-G18-AZ3X-B1331 . . . . . D111	Bi 5-M18T-AZ3X 60MM . . . . . D121
Bi 4-MT12H-AP6X-H1141/S1589 . . . . . D53	Bi 5-G18-AZ3X-B1431 . . . . . D113	Bi 5-M18-VN4X . . . . . D117
Bi 4-MT12HE-AN6X-H1141 . . . . . D57	Bi 5-G18-AZ3X-B3331 . . . . . D105	Bi 5-M18-VN4X-H1141 . . . . . D91
Bi 4-MT12HE-AN6X-H1141/S1589 . . . . . D57	Bi 5-G18-AZ3X-B3431 . . . . . D107	Bi 5-M18-VP4X . . . . . D117
Bi 4-MT12HE-AP6X-H1141 . . . . . D57	Bi 5-G18K-AN6X . . . . . D123	Bi 5-M18-VP4X-H1141 . . . . . D91
Bi 4-MT12HE-AP6X-H1141/S1589 . . . . . D57	Bi 5-G18K-AN7X . . . . . D123	Bi 5-M18-Y1X-H1141 . . . . . D91
Bi 4-MT12HE-AP6X-H1141/S1610 . . . . . D57	Bi 5-G18K-AP6X . . . . . D123	Bi 5-MT18-AD4X-H1141/S34 . . . . . D93
Bi 4U-EM12-AN6X-H1141 . . . . . B9	Bi 5-G18KK-AP6-H1141 . . . . . D103	Bi 5-MT18-AP6X2-H1141/S34 . . . . . D93
Bi 4U-EM12-AP6X-H1141 . . . . . B9	Bi 5-G18SK-AN6X2 . . . . . D133	Bi 5-MT18-AP6X2-H1141/S34/S1589 . . . . . D93
Bi 4U-EM12WD-AN6X . . . . . B9	Bi 5-G18SK-AP6X2 . . . . . D133	Bi 5-P18-AN6/S139-S90 . . . . . D141
Bi 4U-EM12WD-AN6X-H1141 . . . . . B9	Bi 5-G18SK-AZ3X2 . . . . . D133	Bi 5-P18-AN6X-B2341 . . . . . D137
Bi 4U-EM12WD-AP6X . . . . . B9	Bi 5-G18-Y0 . . . . . D123	Bi 5-P18-AN6X-B2341/S100 . . . . . D137
Bi 4U-EM12WD-AP6X-H1141 . . . . . B9	Bi 5-G18-Y0X . . . . . D123	Bi 5-P18-AP6/S139-S90 . . . . . D141
Bi 4U-M12-AN6X . . . . . B9	Bi 5-GT18-ADZ30X2 . . . . . D125	Bi 5-P18-AP6X-B2341 . . . . . D137
Bi 4U-M12-AN6X-H1141 . . . . . B9	Bi 5-GT18-ADZ30X2/S34 . . . . . D125	Bi 5-P18-AP6X-B2341/S100 . . . . . D137
Bi 4U-M12-AP6X . . . . . B9	Bi 5-GT18-ADZ30X2-B1331 . . . . . D111	Bi 5-P18-AZ3/S139-S90 . . . . . D141
Bi 4U-M12-AP6X-H1141 . . . . . B9	Bi 5-GT18-ADZ30X2-B1331/S34 . . . . . D111	Bi 5-P18-AZ3X-B2331 . . . . . D137
Bi 4U-M12-AP6X-V1131 . . . . . B9	Bi 5-GT18-ADZ30X2-B1431 . . . . . D113	Bi 5-P18-AZ3X-B2331/S100 . . . . . D137
Bi 4U-MT12-AN6X-H1141 . . . . . B9	Bi 5-GT18-ADZ30X2-B1431/S34 . . . . . D113	Bi 5-P18SK-AN6X2 . . . . . D143
Bi 4U-MT12-AP6X-H1141 . . . . . B9	Bi 5-GT18-ADZ30X2-B3331 . . . . . D105	Bi 5-P18SK-AP6X2 . . . . . D143
Bi 4U-MT12E-AP6X2-H1141 . . . . . B9	Bi 5-GT18-ADZ30X2-B3331/S34 . . . . . D105	Bi 5-P18SK-AZ3X2 . . . . . D143
Bi 5-EG18-AN6X . . . . . D123	Bi 5-GT18-ADZ30X2-B3431/S34 . . . . . D107	Bi 5-P18SK-Y1X . . . . . D143
Bi 5-EG18-AP6X . . . . . D123	Bi 5-GT18H-ADZ30X2-B1331/S34/S1589 . . . . . D111	Bi 5-P18-Y0 . . . . . D141
Bi 5-EG18-AZ3X . . . . . D123	Bi 5-GT18H-ADZ30X2-B1431/S34/S1589 . . . . . D113	Bi 5-P18-Y0/S100 . . . . . D141
Bi 5-EG18-Y0 . . . . . D123	Bi 5-GT18H-ADZ30X2-B3331/S34 . . . . . D105	Bi 5-P18-Y0X . . . . . D141
Bi 5-EM18-AN6X-H1141 . . . . . D91	Bi 5-GT18H-ADZ30X2-B3331/S34/S1589 . . . . . D105	Bi 5-Q08-AD4X/S34 . . . . . C15
Bi 5-EM18-AN6XLD . . . . . D119	Bi 5-GT18H-ADZ30X2-B3431/S34 . . . . . D107	Bi 5-Q08-AD4X-V1130 . . . . . C17
Bi 5-EM18-AP6/S907 . . . . . D121	Bi 5-GT18H-ADZ30X2-B3431/S34/S1589 . . . . . D107	Bi 5-Q08-AD4X-V2130 . . . . . C19
Bi 5-EM18-AP6X-H1141 . . . . . D91	Bi 5-M18-AD4X . . . . . D117	Bi 5-Q08-AN6X2/S34 . . . . . C15
Bi 5-EM18-AP6XLD . . . . . D119	Bi 5-M18-AD4X-H1141 . . . . . D91	Bi 5-Q08-AN6X2-V1131 . . . . . C17
Bi 5-EM18D-VP6X/S120 . . . . . D121	Bi 5-M18-AN6X . . . . . D117	Bi 5-Q08-AN6X2-V1131/S34 . . . . . C17
Bi 5-EM18FM-AP6X-H1141 . . . . . D91	Bi 5-M18-AN6X-H1141 . . . . . D91	Bi 5-Q08-AN6X2-V2131 . . . . . C19
Bi 5-EM18-VN4X-H1141 . . . . . D91	Bi 5-M18-AP6X/S100 . . . . . D117	Bi 5-Q08-AP6X2/S34 . . . . . C15

Bi 5-Q08-AP6X2-V1131 . . . . .	C17	Bi 5U-GT18-ADZ30X2-B3331 . . . . .	D105	Bi 5U-T18-AP6X2/S90 . . . . .	D145
Bi 5-Q08-AP6X2-V1131/S34 . . . . .	C17	Bi 5U-M18-AN6X . . . . .	D117	Bi 5U-T18-AP6X2-H1141 . . . . .	D145
Bi 5-Q08-AP6X2-V2131 . . . . .	C19	Bi 5U-M18-AN6X-H1141 . . . . .	D91	Bi 6R-Q14-AN6X2 . . . . .	J27
Bi 5-Q08-VN6X2 . . . . .	C15	Bi 5U-M18-AN6X-H1141/S395 . . . . .	D95	Bi 6R-Q14-AN6X2-H1141 . . . . .	J27
Bi 5-Q08-VN6X2/S34 . . . . .	C15	Bi 5U-M18-AP6X . . . . .	D117	Bi 6R-Q14-AP6X2 . . . . .	J27
Bi 5-Q08-VN6X2-V1141 . . . . .	C17	Bi 5U-M18-AP6X-H1141 . . . . .	D91	Bi 6R-Q14-AP6X2-H1141 . . . . .	J27
Bi 5-Q08-VP6X2 . . . . .	C15	Bi 5U-M18-AP6X-H1141/S395 . . . . .	D95	Bi 6R-W30-DAN6X-H1141 . . . . .	J27
Bi 5-Q08-VP6X2/S34 . . . . .	C15	Bi 5U-M18-ASIX-H1140 . . . . .	D91	Bi 6R-W30-DAP6X-H1141 . . . . .	J27
Bi 5-Q08-VP6X2-V1141 . . . . .	C17	Bi 5U-M18E-AN6X . . . . .	D119	Bi 7-EM18WD-AN6X . . . . .	D119
Bi 5-Q08-Y1X . . . . .	C15	Bi 5U-M18E-AN6X-H1141 . . . . .	D97	Bi 7-EM18WD-AN6X-H1141 . . . . .	D91
Bi 5-S18-AD4X . . . . .	D139	Bi 5U-M18E-AP6X . . . . .	D119	Bi 7-EM18WD-AP6X . . . . .	D119
Bi 5-S18-AD4X-H1141 . . . . .	D135	Bi 5U-M18E-AP6X-H1141 . . . . .	D97	Bi 7-EM18WD-AP6X-H1141 . . . . .	D91
Bi 5-S18-AN6X . . . . .	D139	Bi 5U-M18M-VN4X-H1141 . . . . .	D95	Bi 7-M18-AD4X . . . . .	D117
Bi 5-S18-AN6X-H1141 . . . . .	D135	Bi 5U-M18M-VP4X-H1141 . . . . .	D95	Bi 7-M18-AD4X-H1141 . . . . .	D91
Bi 5-S18-AN6X-H1141 . . . . .	D135	Bi 5U-MT18-ADZ30X2 . . . . .	D117	Bi 7-M18E-AD4X-H1141 . . . . .	D97
Bi 5-S18-AN7X . . . . .	D139	Bi 5U-MT18-AN6X2-H1141 . . . . .	D93	Bi 7-M18WD-AP6X-H1141 . . . . .	D91
Bi 5-S18-AN7X/S100 . . . . .	D139	Bi 5U-MT18-AN6X-H1141 . . . . .	D93	Bi 7-MT18H-AD4X-H1141 . . . . .	D93
Bi 5-S18-AP6X . . . . .	D139	Bi 5U-MT18-AN6X-H1141/S395 . . . . .	D95	Bi 7-MT18HE-AD4X/S1589 . . . . .	D119
Bi 5-S18-AP6X-H1141 . . . . .	D135	Bi 5U-MT18-AP6X2-H1141 . . . . .	D93	Bi 7-MT18HE-AD4X-H1141 . . . . .	D97
Bi 5-S18-AP7X/S100 . . . . .	D139	Bi 5U-MT18-AP6X-H1141 . . . . .	D93	Bi 7-MT18HE-AD4X-H1141/S1589 . . . . .	D97
Bi 5-S18-AZ3X . . . . .	D139	Bi 5U-MT18-AP6X-H1141/S395 . . . . .	D95	Bi 7-MT18HE-AD4X-H1144 . . . . .	D97
Bi 5-S18-AZ3X/S100 . . . . .	D139	Bi 5U-MT18E-AP6X2-H1141 . . . . .	D97	Bi 7-MT18HE-AD4X-H1144/S1589 . . . . .	D97
Bi 5-S18-VN4X . . . . .	D139	Bi 5U-MT18H-AN6X2-H1141/S395 . . . . .	D95	Bi 7-Q08-AN6X2 . . . . .	C15
Bi 5-S18-VP4X . . . . .	D139	Bi 5U-MT18H-AN6X2-H1141/S395/S1589 . . . . .	D95	Bi 7-Q08-AN6X2-V1131 . . . . .	C17
Bi 5-S18-VP4X/S100 . . . . .	D139	Bi 5U-MT18H-AP6X2-H1141/S395 . . . . .	D95	Bi 7-Q08-AN6X2-V2131 . . . . .	C19
Bi 5-S18-VP4X-H1141 . . . . .	D135	Bi 5U-MT18H-AP6X2-H1141/S395/S1589 . . . . .	D95	Bi 7-Q08-AP6X2 . . . . .	C15
Bi 5-S18-YOX-H1141 . . . . .	D135	Bi 5U-MT18H-AP6X2-H1141/S395/S1610 . . . . .	D95	Bi 7-Q08-AP6X2-V1131 . . . . .	C17
Bi 5NF-EM18HE-AN6X2-H1141 . . . . .	D97	Bi 5U-MT18M-AP6X2-H1141 . . . . .	D95	Bi 7-Q08-AP6X2-V2131 . . . . .	C19
Bi 5NF-EM18HE-AP6X2-H1141 . . . . .	D97	Bi 5U-P18SK-AN6X . . . . .	D143	Bi 7-Q08-LIU . . . . .	F7
Bi 5U-EG18SK-AN6X . . . . .	D133	Bi 5U-P18SK-AP6X . . . . .	D143	Bi 7-Q08-VN6X2 . . . . .	C15
Bi 5U-EG18SK-AP6X . . . . .	D133	Bi 5U-Q08-AN6X2 . . . . .	C15	Bi 7-Q08-VN6X2-V1141 . . . . .	C17
Bi 5U-EM18-AN6X . . . . .	D117	Bi 5U-Q08-AN6X2-V1131 . . . . .	C17	Bi 7-Q08-VP6X2 . . . . .	C15
Bi 5U-EM18-AN6X-H1141 . . . . .	D91	Bi 5U-Q08-AN6X2-V2131 . . . . .	C19	Bi 7-Q08-VP6X2-V1141 . . . . .	C17
Bi 5U-EM18-AN6X-H1141/S395 . . . . .	D95	Bi 5U-Q08-AP6X2 . . . . .	C15	Bi 8-EM18E-AP6X-H1141 . . . . .	D97
Bi 5U-EM18-AP6X . . . . .	D117	Bi 5U-Q08-AP6X2-V1131 . . . . .	C17	Bi 8-EM18H-AP6X-H1141 . . . . .	D91
Bi 5U-EM18-AP6X-H1141 . . . . .	D91	Bi 5U-Q08-AP6X2-V2131 . . . . .	C19	Bi 8-EM18H-AP6X-H1141/S1589 . . . . .	D91
Bi 5U-EM18-AP6X-H1141/S395 . . . . .	D95	Bi 5U-Q12-AN6X2 . . . . .	B5	Bi 8-EM18HE-AN6X-H1141 . . . . .	D97
Bi 5U-EM18E-AN6X . . . . .	D119	Bi 5U-Q12-AN6X2-H1141 . . . . .	B5	Bi 8-EM18HE-AN6X-H1141/S1589 . . . . .	D97
Bi 5U-EM18E-AP6X . . . . .	D119	Bi 5U-Q12-AN6X2-V1131 . . . . .	B5	Bi 8-EM18HE-AP6X-H1141 . . . . .	D97
Bi 5U-EM18H-AN6X2-H1141/S395 . . . . .	D95	Bi 5U-Q12-AP6X2 . . . . .	B5	Bi 8-EM18HE-AP6X-H1141/S1589 . . . . .	D97
Bi 5U-EM18H-AN6X2-H1141/S395/S1589 . . . . .	D95	Bi 5U-Q12-AP6X2-H1141 . . . . .	B5	Bi 8-EM18HE-AP6X-H1141/S1610 . . . . .	D97
Bi 5U-EM18H-AP6X2-H1141/S395 . . . . .	D95	Bi 5U-Q12-AP6X2-V1131 . . . . .	B5	Bi 8-G18-ADZ30X2 . . . . .	D123
Bi 5U-EM18H-AP6X2-H1141/S395/S1589 . . . . .	D95	Bi 5U-S18-AN6X . . . . .	D139	Bi 8-G18-ADZ30X2-B3331 . . . . .	D105
Bi 5U-EM18H-AP6X2-H1141/S395/S1610 . . . . .	D95	Bi 5U-S18-AN6X-H1141 . . . . .	D135	Bi 8-G18-AN6X . . . . .	D123
Bi 5U-EM18M-AP6X2-H1141 . . . . .	D95	Bi 5U-S18-AP6X . . . . .	D139	Bi 8-G18-AP6X . . . . .	D123
Bi 5U-G18-ADZ30X2-B1331 . . . . .	D111	Bi 5U-S18-AP6X-H1141 . . . . .	D135	Bi 8-M18-AN6X . . . . .	D117
Bi 5U-G18-ADZ30X2-B3331 . . . . .	D105	Bi 5U-T18-AN6X2/S90 . . . . .	D145	Bi 8-M18-AN6X-H1141 . . . . .	D91
Bi 5U-GT18-ADZ30X2-B1331 . . . . .	D111	Bi 5U-T18-AN6X2-H1141 . . . . .	D145	Bi 8-M18-AP6X . . . . .	D117

# Sensors

## Index

### Index

Bi 8-M18-AP6X-H1141 . . . . .	D91	Bi10-EM30-AP6/S907 . . . . .	D165	Bi10-M30-LIU-H1141 . . . . .	F19
Bi 8-M18E-AN6X-H1141 . . . . .	D97	Bi10-EM30-AP6XLD . . . . .	D163	Bi10-M30T-AN6X . . . . .	D165
Bi 8-M18E-AP6X-H1141 . . . . .	D97	Bi10-EM30D-VP6X/S120 . . . . .	D165	Bi10-M30T-AP6X . . . . .	D165
Bi 8-M18K-AP6X-H1141 . . . . .	D93	Bi 10-EM30F-AP6X-H1141 . . . . .	D149	Bi10-M30T-AZ3X . . . . .	D165
Bi 8-M18-LF10 . . . . .	F21	Bi10-G30-ADZ30X2 . . . . .	D171	Bi10-M30-VN4X . . . . .	D163
Bi 8-M18-LI-EXI . . . . .	F21	Bi10-G30-ADZ30X2-B1131 . . . . .	D157	Bi10-M30-VN4X-H1141 . . . . .	D149
Bi 8-M18-LIU . . . . .	F21	BI10-G30-ADZ30X2-B3131 . . . . .	D155	Bi10-M30-VP4X . . . . .	D163
Bi 8-M18-LIU-H1141 . . . . .	F17	Bi10-G30-AN6X . . . . .	D171	Bi10-M30-VP4X-H1141 . . . . .	D149
Bi 8-M18-LUAP6X . . . . .	F21	Bi10-G30-AN6X-B1141 . . . . .	D157	Bi10-M30-Y1X-H1141 . . . . .	D149
Bi 8-M18M-AP6X-H1141 . . . . .	D95	Bi10-G30-AN6X-B1441 . . . . .	D157	Bi10-MT30-AP6X2-H1141/S34 . . . . .	D151
Bi 8-M18T-AN6X . . . . .	D121	Bi10-G30-AN7X . . . . .	D171	Bi10-MT30-AP6X2-H1141/S34/S1589 . . . . .	D151
Bi 8-M18T-AP6X . . . . .	D121	Bi10-G30-AP6X . . . . .	D171	Bi10-MT30-AP6X-H1141/S34 . . . . .	D151
Bi 8-M18-VN4X . . . . .	D117	Bi10-G30-AP6X-B1141 . . . . .	D157	Bi10-P30-AN6X-B2141 . . . . .	D177
Bi 8-M18-VN4X-H1141 . . . . .	D91	Bi10-G30-AP6X-B1441 . . . . .	D157	Bi10-P30-AN6X-B2141/S100 . . . . .	D177
Bi 8-M18-VP4X . . . . .	D117	Bi10-G30-AZ3X . . . . .	D171	Bi10-P30-AP6X-B2141 . . . . .	D177
Bi 8-M18-VP4X-H1141 . . . . .	D91	Bi10-G30-AZ3X-B1131 . . . . .	D157	Bi10-P30-AP6X-B2141/S100 . . . . .	D177
Bi 8-Q10-VN6X2 . . . . .	C21	Bi10-G30-AZ3X-B1431 . . . . .	D159	Bi10-P30-AZ3X-B2131 . . . . .	D177
Bi 8-Q10-VP6X2 . . . . .	C21	Bi10-G30-AZ3X-B3131 . . . . .	D155	Bi10-P30-AZ3X-B2131/S100 . . . . .	D177
Bi 8-Q10-VP6X2-V1141 . . . . .	C21	Bi10-G30K-AD4X . . . . .	D171	Bi10-P30SK-AN6X2 . . . . .	D183
Bi 8U-EM18-AN6X-H1141 . . . . .	B11	Bi10-G30K-AN6X . . . . .	D171	Bi10-P30SK-AP6X2 . . . . .	D183
Bi 8U-EM18-AP6X-H1141 . . . . .	B11	Bi10-G30K-AP6X . . . . .	D171	Bi10-P30SK-AZ3X2 . . . . .	D183
Bi 8U-EM18E-AP6X-H1141 . . . . .	B11	Bi10-G30SK-AN6X2 . . . . .	D175	Bi10-P30SR-AP6X . . . . .	D183
Bi 8U-EM18WD-AN6X . . . . .	B13	Bi10-G30SK-AP6X2 . . . . .	D175	Bi10-P30SR-FZ3X2 . . . . .	D183
Bi 8U-EM18WD-AN6X-H1141 . . . . .	B11	Bi10-G30SK-AZ3X2 . . . . .	D175	Bi10-P30SR-VN4X2 . . . . .	D183
Bi 8U-EM18WD-AP6X . . . . .	B13	Bi10-G30-Y0 . . . . .	D171	Bi10-P30SR-VP4X2 . . . . .	D183
Bi 8U-EM18WD-AP6X-H1141 . . . . .	B11	Bi10-G30-Y0X . . . . .	D171	Bi10-P30-VR7X . . . . .	D179
Bi 8U-M18-AN6X . . . . .	B13	Bi10-G30-Y0X/S90 . . . . .	D171	Bi10-P30-Y0X . . . . .	D179
Bi 8U-M18-AN6X-H1141 . . . . .	B11	Bi10-GT30-ADZ30X2/S34 . . . . .	D171	Bi10-P30-Y1 . . . . .	D179
Bi 8U-M18-AP6X . . . . .	B13	Bi10-GT30-ADZ30X2-B1131 . . . . .	D159	Bi10-Q14-ADZ32X2 . . . . .	C27
Bi 8U-M18-AP6X-H1141 . . . . .	B11	Bi10-GT30-ADZ30X2-B1131/S34 . . . . .	D159	Bi10-Q14-ADZ32X2/S34 . . . . .	C27
Bi 8U-M18M-VP44X-H1141 . . . . .	B11	Bi10-GT30-ADZ30X2-B3131/S34 . . . . .	D155	Bi10-Q14-AN6X2 . . . . .	C27
Bi 8U-MT18-AN6X . . . . .	B13	Bi10-GT30H-ADZ30X2-B1131/S34/S1589 . . . . .	D159	Bi10-Q14-AN6X2-V1131 . . . . .	C27
Bi 8U-MT18-AN6X-H1141 . . . . .	B11	Bi10-GT30H-ADZ30X2-B1131/S34/S1610 . . . . .	D159	Bi10-Q14-AP6X2 . . . . .	C27
Bi 8U-MT18-AP6X . . . . .	B13	Bi10-GT30H-ADZ30X2-B3131/S34 . . . . .	D155	Bi10-Q14-AP6X2-V1131 . . . . .	C27
Bi 8U-MT18-AP6X-H1141 . . . . .	B11	Bi10-GT30H-ADZ30X2-B3131/S34/S1589 . . . . .	D155	Bi10-Q14-LIU . . . . .	F7
Bi 8U-MT18M-AP6X2-H1141 . . . . .	B11	Bi10-GT30H-ADZ30X2-B3131/S34/S1610 . . . . .	D155	Bi10-Q14-LIU-V1141 . . . . .	F7
Bi 8U-Q08-AN6X2 . . . . .	C15	Bi10-M30-AD4X . . . . .	D163	Bi10-Q14-Y0X . . . . .	C27
Bi 8U-Q08-AN6X2-V1131 . . . . .	C17	Bi10-M30-AD4X-H1141 . . . . .	D149	Bi10-S30-AD4X . . . . .	D181
Bi 8U-Q08-AP6X2 . . . . .	C15	Bi10-M30-AN6X . . . . .	D163	Bi10-S30-AD4X-H1141 . . . . .	D177
Bi 8U-Q08-AP6X2-V1131 . . . . .	C17	Bi10-M30-AN6X-H1141 . . . . .	D149	Bi10-S30-AN6X . . . . .	D181
Bi 8U-Q10-AN6X2 . . . . .	C21	Bi10-M30-AP6X/S100 . . . . .	D163	Bi10-S30-AN6X-H1141 . . . . .	D177
Bi 8U-Q10-AN6X2-V1131 . . . . .	C21	Bi10-M30-AP6X-H1141 . . . . .	D149	Bi10-S30-AN7X . . . . .	D181
Bi 8U-Q10-AP6X2 . . . . .	C21	Bi10-M30E-AD4X-H1141 . . . . .	D151	Bi10-S30-AN7X/S100 . . . . .	D181
Bi 8U-Q10-AP6X2-V1131 . . . . .	C21	Bi10-M30E-AP6X-H1141 . . . . .	D151	Bi10-S30-AP6X . . . . .	D181
Bi10-EG30-ADZ30X2 . . . . .	D171	Bi10-M30E-VN4X-H1141 . . . . .	D151	Bi10-S30-AP6X/S100 . . . . .	D181
Bi10-EG30-AZ3X . . . . .	D171	Bi10-M30E-VP4X-H1141 . . . . .	D151	Bi10-S30-AP6X/S97 . . . . .	D181
Bi10-EG30-AZ3X-B1131/S120 . . . . .	D157	Bi10-M30-LI2-H1141 . . . . .	F19	Bi10-S30-AP6X-H1141 . . . . .	D177
Bi10-EM30-AN6XLD . . . . .	D163	Bi10-M30-LIU . . . . .	F23	Bi10-S30-AZ3X . . . . .	D181

Bi10-S30-AZ3X/S100 . . . . .	D181	Bi10U-EM30H-AN6X2-H1141 . . . . .	D149	Bi12-P30WD-AP6X . . . . .	D183
Bi10-S30-VN4X . . . . .	D181	Bi10U-EM30H-AN6X2-H1141/S1589 . . . . .	D149	Bi12U-EH32H-ADZ32 . . . . .	J23
Bi10-S30-VP4X . . . . .	D181	Bi10U-EM30H-AP6X2-H1141 . . . . .	D149	Bi12U-EH32H-AP6 . . . . .	J23
Bi10-S30-VP4X/S100 . . . . .	D181	Bi10U-EM30H-AP6X2-H1141/S1589 . . . . .	D149	Bi15-CK40-AD4X-H1141 W/BS2.1 . . . . .	C47
Bi10F-Q26-AD4X/S34 . . . . .	C37	Bi10U-EM30HE-AP6X2-H1141 . . . . .	D151	Bi15-CK40-ADZ30X2-B1131/S34 W/BS 2.1 . . . . .	C49
Bi10F-Q26-AD4X-H1141/S34 . . . . .	C37	Bi10U-G30-ADZ30X2-B1131 . . . . .	D157	Bi15-CK40-ADZ30X2-B3131/S34 W/BS 2.1 . . . . .	C49
Bi10F-Q26-Y0X-H1141 . . . . .	C37	Bi10U-G30-ADZ30X2-B3131 . . . . .	D155	Bi15-CK40-AN6X2-H1141 W/BS 2.1 . . . . .	C47
Bi10F-Q34-ADZ30X2/S34 . . . . .	C39	Bi10U-GT30-ADZ30X2-B1131 . . . . .	D159	Bi15-CK40-AP6X2-H1141 W/BS 2.1 . . . . .	C47
Bi10F-Q34-ADZ30X2-B1131/S34 . . . . .	C39	Bi10U-GT30-ADZ30X2-B3131 . . . . .	D155	Bi15-CK40-AZ3X2-B1131 W/BS 2.1 . . . . .	C49
Bi10F-Q34-ADZ30X2-B3131/S34 . . . . .	C39	Bi10U-M30-AN6X . . . . .	D163	Bi15-CK40-AZ3X2-B3131 W/BS 2.1 . . . . .	C49
Bi10F-Q34-AN6X2-B1141 . . . . .	C39	Bi10U-M30-AN6X2-H1141 . . . . .	D149	Bi15-CK40-LIU-H1141 . . . . .	F13
Bi10F-Q34-AN6X2-H1141 . . . . .	C39	Bi10U-M30-AN6X-H1141 . . . . .	D149	Bi15-CK40-VN4X2-H1141 W/BS 2.1 . . . . .	C47
Bi10F-Q34-AP6X2-B1141 . . . . .	C39	Bi10U-M30-AP6X . . . . .	D163	Bi15-CK40-VP4X2-H1141 W/BS 2.1 . . . . .	C47
Bi10F-Q34-AP6X2-H1141 . . . . .	C39	Bi10U-M30-AP6X2-H1141 . . . . .	D149	Bi15-CK40-Y1X-H1141 . . . . .	C47
Bi10F-Q34-AZ3X2-B1131 . . . . .	C39	Bi10U-M30-AP6X-H1141 . . . . .	D149	Bi15-CP40-AD4X . . . . .	C51
Bi10F-Q34-AZ3X2-B3131 . . . . .	C39	Bi10U-M30-VN4X-H1141 . . . . .	D149	Bi15-CP40-AN6X2 . . . . .	C51
Bi10NF-EM30HE-AN6X2-H1141 . . . . .	D151	Bi10U-M30-VP4X-H1141 . . . . .	D149	Bi15-CP40-AN6X2/S97 . . . . .	C51
Bi10NF-EM30HE-AP6X2-H1141 . . . . .	D151	Bi10U-MT30-ADZ30X2 . . . . .	D163	Bi15-CP40-AP6X2 . . . . .	C51
Bi10NF-M30-AN6X . . . . .	D163	Bi10U-MT30-AN6X-H1141 . . . . .	D151	Bi15-CP40-FDZ30X2 . . . . .	C53
Bi10NF-M30-AP6X . . . . .	D163	Bi10U-MT30-AP6X2-H1141 . . . . .	D151	Bi15-CP40-FDZ30X2/S34 . . . . .	C53
Bi10NF-S30-AN6X . . . . .	D183	Bi10U-MT30-AP6X-H1141 . . . . .	D151	Bi15-CP40-FDZ30X2/S97 . . . . .	C53
Bi10NF-S30-AP6X . . . . .	D183	Bi10U-MT30H-AN6X2-H1141 . . . . .	D151	Bi15-CP40-FZ3X2 . . . . .	C53
Bi10R-Q14-AN6X2 . . . . .	J27	Bi10U-MT30H-AN6X2-H1141/S1589 . . . . .	D151	Bi15-CP40-FZ3X2/S100 . . . . .	C53
Bi10R-Q14-AN6X2-H1141 . . . . .	J27	Bi10U-MT30H-AP6X2-H1141 . . . . .	D151	Bi15-CP40-FZ3X2/S109 . . . . .	C53
Bi10R-Q14-AP6X2 . . . . .	J27	Bi10U-MT30H-AP6X2-H1141/S1589 . . . . .	D151	Bi15-CP40-FZ3X2/S110 . . . . .	C53
Bi10R-Q14-AP6X2-H1141 . . . . .	J27	Bi10U-MT30H-AP6X2-H1141/S1610 . . . . .	D151	Bi15-CP40-FZ3X2/S97 . . . . .	C53
Bi10R-W30-DAN6X-H1141 . . . . .	J27	Bi10U-P30SK-AN6X . . . . .	D183	Bi15-CP40-LIU . . . . .	F13
Bi10R-W30-DAP6X-H1141 . . . . .	J27	Bi10U-P30SK-AP6X . . . . .	D183	Bi15-CP40-VDZ3X2 . . . . .	C53
Bi10S-Q26-AD4X/S34 . . . . .	C37	Bi10U-Q14-AN6X2 . . . . .	C27	Bi15-CP40-VN4X2 . . . . .	C51
Bi10S-Q26-AD4X-H1141/S34 . . . . .	C37	Bi10U-Q14-AN6X2-V1131 . . . . .	C27	Bi15-CP40-VN4X2/S100 . . . . .	C51
Bi10T-Q34-ADZ30X2/S34 . . . . .	C39	Bi10U-Q14-AP6X2 . . . . .	C27	Bi15-CP40-VN4X2/S109 . . . . .	C53
Bi10T-Q34-ADZ30X2-B1131/S34 . . . . .	C39	Bi10U-Q14-AP6X2-V1131 . . . . .	C27	Bi15-CP40-VN4X2/S110 . . . . .	C53
Bi10T-Q34-ADZ30X2-B3131/S34 . . . . .	C39	Bi10U-S30-AN6X . . . . .	D181	Bi15-CP40-VP4X2 . . . . .	C51
Bi10T-Q34-AN6X2-B1141 . . . . .	C39	Bi10U-S30-AN6X-H1141 . . . . .	D177	Bi15-CP40-VP4X2/S100 . . . . .	C51
Bi10T-Q34-AN6X2-H1141 . . . . .	C39	Bi10U-S30-AP6X . . . . .	D181	Bi15-CP40-VP4X2/S109 . . . . .	C53
Bi10T-Q34-AP6X2-B1141 . . . . .	C39	Bi10U-S30-AP6X-H1141 . . . . .	D177	Bi15-CP40-VP4X2/S110 . . . . .	C53
Bi10T-Q34-AP6X2-H1141 . . . . .	C39	Bi12-EM30EWD-AP6X-H1141 . . . . .	D151	Bi15-CP40-Y1X . . . . .	C53
Bi10T-Q34-AZ3X2-B1131 . . . . .	C39	Bi12-EM30WD-AN6X . . . . .	D163	Bi15-EG30H-ADZ30X2-B1131 . . . . .	D157
Bi10T-Q34-AZ3X2-B3131 . . . . .	C39	Bi12-EM30WD-AN6X-H1141 . . . . .	D149	Bi15-EG30H-ADZ30X2-B3131 . . . . .	D155
Bi10U-CA25-AP6X2-H1141 . . . . .	C35	Bi12-EM30WD-AP6X . . . . .	D163	Bi15-EM30H-AN6X-H1141 . . . . .	D149
Bi10U-CA25-AP6X2-V1131 . . . . .	C35	Bi12-EM30WD-AP6X-H1141 . . . . .	D149	Bi15-EM30H-AN6X-H1141/S1589 . . . . .	D149
Bi10U-EG30SK-AN6X . . . . .	D175	Bi12-M30-AD4X . . . . .	D163	Bi15-EM30H-AP6X-H1141 . . . . .	D149
Bi10U-EG30SK-AP6X . . . . .	D175	Bi12-M30-AD4X-H1141 . . . . .	D149	Bi15-EM30H-AP6X-H1141/S1589 . . . . .	D149
Bi10U-EM30-AN6X . . . . .	D163	Bi12-MT30H-AD4X-H1141 . . . . .	D151	Bi15-EM30H-AP6X-H1141/S1610 . . . . .	D149
Bi10U-EM30-AN6X-H1141 . . . . .	D149	Bi12-MT30H-AD4X-H1141/S1589 . . . . .	D151	Bi15-EM30HE-AP6X-H1141/S1610 . . . . .	D151
Bi10U-EM30-AP6X . . . . .	D163	Bi12-MT30H-AD4X-H1144 . . . . .	D151	Bi15-G30-ADZ30X2 . . . . .	D171
Bi10U-EM30-AP6X-H1141 . . . . .	D149	Bi12-MT30H-AD4X-H1144/S1589 . . . . .	D151	Bi15-G30-ADZ30X2-B1131 . . . . .	D157
Bi10U-EM30E-AP6X-H1141 . . . . .	D151	Bi12-P30WD-AN6X . . . . .	D183	Bi15-G30-ADZ30X2-B3131 . . . . .	D155

# Sensors

## Index

### Index

Bi15-G30K-AP6X . . . . .	D171	Bi15U-EM30-AN6X-H1141 . . . . .	B15	Bi20R-W30-DAN6X-H1141 . . . . .	J27
Bi15-K40SR-FZ3X2 . . . . .	D187	Bi15U-EM30-AP6X . . . . .	B15	Bi20R-W30-DAP6X-H1141 . . . . .	J27
Bi15-K40SR-VN4X2 . . . . .	D187	Bi15U-EM30-AP6X-H1141 . . . . .	B15	Bi20R-W30S-AP6X-H1141 . . . . .	J29
Bi15-K40SR-VP4X2 . . . . .	D187	Bi15U-EM30WD-AN6X . . . . .	B15	Bi20U-CA40-ADZ30X2-B1131 . . . . .	C41
Bi15-M30-AN6X . . . . .	D163	Bi15U-EM30WD-AN6X-H1141 . . . . .	B15	Bi20U-CA40-ADZ30X2-B1131 W/BS2.1 . . . . .	C41
Bi15-M30-AN6X-H1141 . . . . .	D149	Bi15U-EM30WD-AP6X . . . . .	B15	Bi20U-CA40-ADZ30X2-B1131/S1669 . . . . .	C41
Bi15-M30-AP6X . . . . .	D163	Bi15U-EM30WD-AP6X-H1141 . . . . .	B15	Bi20U-CA40-ADZ30X2-B3131 . . . . .	C41
Bi15-M30-AP6X-H1141 . . . . .	D149	Bi15U-M30-AN6X . . . . .	B15	Bi20U-CA40-ADZ30X2-B3131 W/BS2.1 . . . . .	C41
Bi15-M30E-AN6X-H1141 . . . . .	D151	Bi15U-M30-AN6X-H1141 . . . . .	B15	Bi20U-CA40-AN6X2-H1141 W/BS2.1 . . . . .	C41
Bi15-M30E-AP6X-H1141 . . . . .	D151	Bi15U-M30-AP6X . . . . .	B15	Bi20U-CA40-AP6X2-H1141 . . . . .	C41
Bi15-M30-LI-EXI . . . . .	F23	Bi15U-M30-AP6X-H1141 . . . . .	B15	Bi20U-CA40-AP6X2-H1141 W/BS2.1 . . . . .	C41
Bi15-M30-LIU . . . . .	F23	Bi15U-MT30-AN6X-H1141 . . . . .	B15	Bi20U-CA40-AP6X2-H1141/S1590 W/BS2.0 . . . . .	C41
Bi15-M30-LIU-H1141 . . . . .	F19	Bi15U-MT30-AP6X2-H1141 . . . . .	B15	Bi20U-CA40-AP6X2-H1141/S1591 W/BS2.0 . . . . .	C41
Bi15-M30-LUAP6X . . . . .	F23	Bi15U-MT30-AP6X-H1141 . . . . .	B15	Bi20U-CA40-AP6X2-H1141/S1591 W/BS2.1 . . . . .	C41
Bi15-M30T-AN6X . . . . .	D165	Bi15U-Q20-AN6X2 . . . . .	C31	Bi20U-CK40-AN6X2-H1141 W/BS 2.1 . . . . .	B17
Bi15-M30T-AP6X . . . . .	D165	Bi15U-Q20-AN6X2-H1141 . . . . .	C33	Bi20U-CK40-AP6X2-H1141 W/BS 2.1 . . . . .	B17
Bi15-M30-VN4X . . . . .	D163	Bi15U-Q20-AP6X2 . . . . .	C31	Bi20U-CP40-AN6X2 . . . . .	B17
Bi15-M30-VN4X-H1141 . . . . .	D149	Bi15U-Q20-AP6X2-H1141 . . . . .	C33	Bi20U-CP40-AP6X2 . . . . .	B17
Bi15-M30-VP4X . . . . .	D163	Bi15U-Q20-VP6X2 . . . . .	C31	Bi25-G47SR-FZ3X2 . . . . .	D191
Bi15-M30-VP4X-H1141 . . . . .	D149	Bi15U-Q20-VP6X2 4M . . . . .	C31	Bi25-G47SR-VN4X2 . . . . .	D191
Bi15-Q20-ADZ32X2 . . . . .	C31	Bi20-CA40130-ADZ30X2-B1131 . . . . .	C43	Bi25-G47SR-VP4X2 . . . . .	D191
Bi15-Q20-ADZ32X2-B3131 . . . . .	C33	Bi20-CA40130-VP4X2-H1141 . . . . .	C43	Bi25-G47-VN4X-B2141 . . . . .	D189
Bi15-Q20-AN6X2 . . . . .	C31	Bi20-CA4080-ADZ30X2-B1131 . . . . .	C43	Bi25-G47-VP4X-B2141 . . . . .	D189
Bi15-Q20-AN6X2-H1141 . . . . .	C33	Bi20-CA4080-VP4X2-H1141 . . . . .	C43	Bi30R-Q20-AN6X2-H1141 . . . . .	J27
Bi15-Q20-AP6X2 . . . . .	C31	Bi20-CA40-ADZ30X2-B1131/S1590 . . . . .	C41	Bi30R-Q20-AP6X2-H1141 . . . . .	J27
Bi15-Q20-AP6X2-H1141 . . . . .	C33	Bi20-CA40-ADZ30X2-B1131/S1591 . . . . .	C41	Bi30R-W30-DAN6X-H1141 . . . . .	J27
Bi15-Q20-LIU . . . . .	F9	Bi20-CA40-ADZ30X2-B1131/S34/S1590 . . . . .	C41	Bi30R-W30-DAP6X-H1141 . . . . .	J27
Bi15-Q20-LIU-H1141 . . . . .	F9	Bi20-CA40-ADZ30X2-B1131/S34/S1591 W/BS2.1 . . . . .	C41	Bi30U-CK40-AN6X2-H1141 W/BS 4 . . . . .	B17
Bi15-Q20-Y0X . . . . .	C31	Bi20-CA40-ADZ30X2-B3131/S34 W/BS2.1 . . . . .	C41	Bi30U-CK40-AP6X2-H1141 W/BS 4 . . . . .	B17
Bi15-Q20-Y0X-H1141 . . . . .	C33	Bi20-CA40-ADZ30X2-B3131/S34/S1591 W/BS2.1 . . . . .	C41	Bi30U-CP40-AN6X2 . . . . .	B17
Bi15R-Q14-AN6X2 . . . . .	J27	Bi20-CK40130-ADZ30X2-B1131 . . . . .	C45	Bi30U-CP40-AP6X2 . . . . .	B17
Bi15R-Q14-AN6X2-H1141 . . . . .	J27	Bi20-CK40130-VP4X2-H1141 . . . . .	C45	Bi40-CP80-FDZ30X2 . . . . .	C57
Bi15R-W30-DAN6X-H1141 . . . . .	J27	Bi20-CK4080-ADZ30X2-B1131 . . . . .	C45	Bi40-CP80-FZ3X2 . . . . .	C57
Bi15R-W30-DAP6X-H1141 . . . . .	J27	Bi20-CK4080-VP4X2-H1141 . . . . .	C45	Bi40-CP80-VN4X2 . . . . .	C57
Bi15R-W30S-AP6X-H1141 . . . . .	J29	Bi20-CP40-VN4X2 . . . . .	C51	Bi40-CP80-VP4X2 . . . . .	C57
Bi15U-CK40-ADZ30X2-B1131 W/BS 2.1 . . . . .	C49	Bi20-CP40-VP4X2 . . . . .	C51	Bi50-Q80-ADZ30X2-B1131 . . . . .	C59
Bi15U-CK40-ADZ30X2-B3131 W/BS 2.1 . . . . .	C49	Bi20-G47-AN4X . . . . .	D189	Bi50-Q80-ADZ30X2-B3131 . . . . .	C59
Bi15U-CK40-AN6X2-H1141 W/BS 2.1 . . . . .	C47	Bi20-G47-AP4X . . . . .	D189	Bi50R-Q80-AP6X2-H1141 . . . . .	J31
Bi15U-CK40-AP6X2-H1141 W/BS 2.1 . . . . .	C47	Bi20-G47-AZ3X . . . . .	D189	Bi50U-Q80-AN6X2-H1141 . . . . .	B17
Bi15U-CK40-ASIX2-H1140 W/BS 2.1 . . . . .	C47	Bi20-G47-AZ3X-B2131 . . . . .	D189	Bi50U-Q80-AN6X2-H1141 . . . . .	C59
Bi15U-CP40-AN6X2 . . . . .	C51	Bi20-K35/S200 . . . . .	J21	Bi50U-Q80-AP6X2-H1141 . . . . .	B17
Bi15U-CP40-AP6X2 . . . . .	C51	Bi20R-Q14-AN6X2 . . . . .	J27	Bi50U-Q80-AP6X2-H1141 . . . . .	C59
Bi15U-CP40-ASIX2 . . . . .	C51	Bi20R-Q14-AN6X2-H1141 . . . . .	J27	Bi50U-Q80-VP4X2-H1141 . . . . .	C59
Bi15U-CP40-FDZ30X2 . . . . .	C53	Bi20R-Q14-AP6X2 . . . . .	J27	Bi65R-Q80-AP6X2-H1141 . . . . .	J31
Bi15U-CP40-VN4X2 . . . . .	C51	Bi20R-Q14-AP6X2-H1141 . . . . .	J27	BID2-G180-AP6/S220 . . . . .	D125
Bi15U-CP40-VP4X2 . . . . .	C51	Bi20R-Q14-LU . . . . .	F25	BID2-G180-AP6-H1141/S212 . . . . .	D103

BID2-G180-Y1/S212 . . . . .	D125	BIM-IKT-AN6X . . . . .	G35	BIM-PSM-AP6X-V1131 . . . . .	G31
BIM-A23-ADZ30X2-B1131/S34 . . . . .	G41	BIM-IKT-AN6X-H1141 . . . . .	G37	BIM-PST-AN6X . . . . .	G31
BIM-A23-AN6X-B1141/S34 . . . . .	G41	BIM-IKT-AN6X-V1131 . . . . .	G37	BIM-PST-AN6X-V1131 . . . . .	G31
BIM-A23-AN6X-H1141/S34 . . . . .	G39	BIM-IKT-AP6X . . . . .	G35	BIM-PST-AP6X . . . . .	G31
BIM-A23-AP6X2-H1141/S34 . . . . .	G39	BIM-IKT-AP6X-H1141 . . . . .	G37	BIM-PST-AP6X-V1131 . . . . .	G31
BIM-A23-AP6X-B1141/S34 . . . . .	G41	BIM-IKT-AP6X-V1131 . . . . .	G37	BIM-PST-Y1X . . . . .	G31
BIM-A23-AZ3X/S34 . . . . .	G41	BIM-IKT-Y1X-H1141 . . . . .	G37	BIM-QST-AN6X . . . . .	G33
BIM-A23-AZ3X-B1131/S34 . . . . .	G41	BIM-INR-AN6X . . . . .	G23	BIM-QST-AN6X-V1131 . . . . .	G33
BIM-A23-AZ3X-B3131/S34 . . . . .	G41	BIM-INR-AN6X-0.3M-PSG 3S . . . . .	G23	BIM-QST-AP6X . . . . .	G33
BIM-AKT-AD4X . . . . .	G35	BIM-INR-AP6X . . . . .	G23	BIM-QST-AP6X-V1131 . . . . .	G33
BIM-AKT-AD4X-H1141 . . . . .	G35	BIM-INR-AP6X-0.3M-PSG 3S . . . . .	G23	BIM-QST-Y1X . . . . .	G33
BIM-AKT-AN6X . . . . .	G35	BIM-INT-AG41X . . . . .	G27	BR-INR-AR7X . . . . .	G23
BIM-AKT-AN6X-H1141 . . . . .	G35	BIM-INT-AG41X/S924 . . . . .	G29	BR-INR-AR7X-V1131 . . . . .	G23
BIM-AKT-AP6X . . . . .	G35	BIM-INT-AN6X . . . . .	G27	BR-INT-ADZ71X . . . . .	G27
BIM-AKT-AP6X-H1141 . . . . .	G35	BIM-INT-AN6X/S924 . . . . .	G29	BR-INT-AR7X . . . . .	G27
BIM-AKT-AP6X-H1141/S34 . . . . .	G35	BIM-INT-AN6X-V1131 . . . . .	G25	BR-INT-AR7X-V1131 . . . . .	G25
BIM-AKT-Y1X . . . . .	G35	BIM-INT-AP6X . . . . .	G27	BR-INTS-AR7X-V1131 . . . . .	G29
BIM-AKT-Y1X-H1141 . . . . .	G35	BIM-INT-AP6X/S924 . . . . .	G29	BS 4131-0/13.5 . . . . .	K20
BIM-EG08-AN6X . . . . .	G45	BIM-INT-AP6X-V1131 . . . . .	G25	BS 4131-0/9 . . . . .	K20
BIM-EG08-AN6X-H1341 . . . . .	G45	BIM-INTF-AN6X . . . . .	G29	BS 4141-0/13.5 . . . . .	K21
BIM-EG08-AN6X-V1131 . . . . .	G45	BIM-INTF-AP6X . . . . .	G29	BS 4141-0/9 . . . . .	K21
BIM-EG08-AP6X . . . . .	G45	BIM-INTS-AN6X-V1131 . . . . .	G29	BS 4151-0/13.5 . . . . .	K21
BIM-EG08-AP6X-H1341 . . . . .	G45	BIM-INTS-AP6X-V1131 . . . . .	G29	BS 4151-0/16 . . . . .	K21
BIM-EG08-AP6X-V1131 . . . . .	G45	BIM-INT-Y1X . . . . .	G27	BS 4151-0/9 . . . . .	K21
BIM-EG08-Y1X . . . . .	G45	BIM-KST-AN6X . . . . .	G33	BS 5131-0 . . . . .	K16
BIM-EG08-Y1X-H1341 . . . . .	G45	BIM-KST-AN6X-V1131 . . . . .	G33	BS 5132-0 . . . . .	K17
BIM-EM12E-AN4X . . . . .	G47	BIM-KST-AP6X . . . . .	G33	BS 5141-0 . . . . .	K16
BIM-EM12E-AP4X . . . . .	G47	BIM-KST-AP6X-V1131 . . . . .	G33	BS 5231-0 . . . . .	K16
BIM-EM12E-AP4X-H1141 . . . . .	G47	BIM-M12E-AG4X . . . . .	G47	BS 5241-0 . . . . .	K16
BIM-EM12E-Y1X . . . . .	G47	BIM-M12E-AG4X-H1141/S235 . . . . .	G47	BS 8141-0 . . . . .	K13
BIM-IKE-AD4X . . . . .	G35	BIM-M12E-AN4X . . . . .	G47	BS 8151-0 . . . . .	K13
BIM-IKE-AD4X-H1141 . . . . .	G37	BIM-M12E-AN4X-H1141 . . . . .	G47	BS 8241-0 . . . . .	K13
BIM-IKE-AN6X . . . . .	G35	BIM-M12E-AP4X/S90 . . . . .	G47	BS 8251-0 . . . . .	K13
BIM-IKE-AN6X-H1141 . . . . .	G37	BIM-M12E-AP4X-H1141 . . . . .	G47	BS-11 . . . . .	L13
BIM-IKE-AN6X-V1131 . . . . .	G37	BIM-M12E-Y1X . . . . .	G47	BS-12 . . . . .	L13
BIM-IKE-AP6X . . . . .	G35	BIM-M12E-Y1X-H1141 . . . . .	G47	BS-18 . . . . .	L13
BIM-IKE-AP6X-H1141 . . . . .	G37	BIM-NST-AN6X . . . . .	G43	BS-20 . . . . .	L13
BIM-IKE-AP6X-V1131 . . . . .	G37	BIM-NST-AN6X-H1141 . . . . .	G43	BS-40 . . . . .	L13
BIM-IKE-Y1X . . . . .	G35	BIM-NST-AN6X-H1141/S34 . . . . .	G43	BS-540 . . . . .	L14
BIM-IKE-Y1X-H1141 . . . . .	G37	BIM-NST-AN6X-V1131 . . . . .	G43	BS-865 . . . . .	L14
BIM-IKM-AN6X2/S100 . . . . .	G39	BIM-NST-AP6X . . . . .	G43	BST-12N . . . . .	L14
BIM-IKM-AN6X2-H1141/S34 . . . . .	G39	BIM-NST-AP6X-H1141 . . . . .	G43	BST-18B . . . . .	L14
BIM-IKM-AP6X2-H1141/S34 . . . . .	G39	BIM-NST-AP6X-H1141/S34 . . . . .	G43	BST-30B . . . . .	L14
BIM-IKM-AZ3X2 . . . . .	G39	BIM-NST-AP6X-V1131 . . . . .	G43	BTS-DS20-KEY . . . . .	J18
BIM-IKM-AZ3X2-B3131 . . . . .	G39	BIM-NST-Y1X . . . . .	G43	BTS-DS20-TK1 . . . . .	J19
BIM-IKT-AD4X . . . . .	G35	BIM-PSM-AN6X . . . . .	G31	BTS-DS20-TP1 . . . . .	J19
BIM-IKT-AD4X-H1141 . . . . .	G37	BIM-PSM-AN6X-V1131 . . . . .	G31	BTS-DSU35-EB1 . . . . .	J19
		BIM-PSM-AP6X . . . . .	G31	BTS-DSU35-EBE1 . . . . .	J19



# Sensors

## Index

### Index

BTS-DSU35-EU1 . . . . .	J19	KB 5T-* . . . . .	K23	KST-SB335 . . . . .	G21
BTS-DSU35-Z01 . . . . .	J19	KBE 3T-* . . . . .	K24	LN 1/2-14 . . . . .	L26
BTS-DSU35-Z02 . . . . .	J19	KBE 3T-*/S600 . . . . .	K24	LN 1/4-18 . . . . .	L26
BTS-DSU35-Z03 . . . . .	J18	KBE 5T-* . . . . .	K24	LN-M05 . . . . .	L26
BTS-DSU35-Z04 . . . . .	J19	KBE 5T-*/S600 . . . . .	K24	LN-M08 . . . . .	L26
BTS-DSU35-Z05 . . . . .	J19	KL2MA1-INT . . . . .	G20	LN-M12 . . . . .	L26
BTS-DSU35-Z06 . . . . .	J19	KL2MA2-INT . . . . .	G20	LN-M18 . . . . .	L26
BTS-DSU35-Z07 . . . . .	J18	KLA-1 . . . . .	G21	LN-M30 . . . . .	L26
Cable Gland PG 13.5 . . . . .	L25	KLA-2 . . . . .	G21	LN-MT12 . . . . .	L26
Cable Gland PG 9 . . . . .	L25	KLA-3 . . . . .	G13	LN-MT18 . . . . .	L26
CAP 12-CER . . . . .	L18	KLA-3M . . . . .	G21	LN-MT30 . . . . .	L26
CAP 12-PTFE . . . . .	L18	KLDT-1 . . . . .	G19	LN-P05 . . . . .	L26
CAP 18-CER . . . . .	L18	KLDT-2 . . . . .	G19	LN-P12 . . . . .	L26
CAP 18N-PTFE . . . . .	L18	KLDT-3 . . . . .	G19	LN-P18 . . . . .	L26
CAP 18-PTFE . . . . .	L18	KLDT-4 . . . . .	G19	LN-P30 . . . . .	L26
CAP 30-CER . . . . .	L18	KLDT-5 . . . . .	G19	LN-PG36 . . . . .	L26
CAP 30N-PTFE . . . . .	L18	KLDT-8 . . . . .	G19	LN-SS12 . . . . .	L26
CAP 30-PTFE . . . . .	L18	KLDT-9 . . . . .	G19	LN-SS18 . . . . .	L26
CAP 47-PTFE . . . . .	L18	KLFA-1 . . . . .	G20	LN-SS30 . . . . .	L26
CM-08 . . . . .	L5	KLI-1 . . . . .	G21	LSAP-2 . . . . .	L7
CM-08N . . . . .	L5	KLI-2 . . . . .	G21	LW-12 . . . . .	L27
CM-12 . . . . .	L5	KLI-3 . . . . .	G21	LW-18 . . . . .	L27
CM-12N . . . . .	L5	KLI-5 . . . . .	G21	LW-30 . . . . .	L27
CM-18 . . . . .	L5	KLI-5Z . . . . .	G21	MB- 8 . . . . .	L11
CM-18N . . . . .	L5	KLI-6 . . . . .	G21	MB-12 . . . . .	L11
CM-30 . . . . .	L5	KLI-6Z . . . . .	G21	MB-18 . . . . .	L11
CM-30N . . . . .	L5	KLI-CB . . . . .	G21	MB-30 . . . . .	L11
CP80-P-CONE . . . . .	L23	KLI-CB124 . . . . .	G15	MB-47 . . . . .	L11
DBi 5U-M18E-AP4X3 . . . . .	J25	KLI-CB64 . . . . .	G15	MB-Q08/Q10 . . . . .	L8
DBi10U-M30-AP4X2 . . . . .	J25	KLN-1 . . . . .	G18	MB-Q130 . . . . .	L7
DMR15-6-3 . . . . .	L9	KLN-3 . . . . .	G22	MB-Q14/20 . . . . .	L9
DMR20-10-4 . . . . .	L9	KLP200-VA . . . . .	G22	MB-Q50/CK40 . . . . .	L10
DMR31-15-5 . . . . .	L9	KLP80-VA . . . . .	G22	MB-Q80 . . . . .	L10
DP-08-25-08 . . . . .	L3	KLQ-1 . . . . .	G22	MB-S12 . . . . .	L6
DP-12-25-12 . . . . .	L3	KLQ-1Z . . . . .	G22	MB-S18 . . . . .	L6
DP-12-50-12 . . . . .	L3	KLQ-2 . . . . .	G22	MBS-40 . . . . .	L6
DP-18-25-18 . . . . .	L3	KLQ-2Z . . . . .	G22	MBS-65 . . . . .	L6
EM30-AP6X2-H1141/S1102 . . . . .	J21	KLR-1 . . . . .	G22	MBS-80 . . . . .	L6
FF 1/2INCH . . . . .	L17	KLR-2 . . . . .	G22	MBSS-08 . . . . .	L8
FF 1/2INCH BLACK 50 FOOT ROLL . . . . .	L17	KLR-2M . . . . .	G22	MBSS-12 . . . . .	L8
FF 3/4INCH . . . . .	L17	KLT-1 . . . . .	G19	MBSS-18 . . . . .	L8
FF 3/4INCH BLACK 50 FOOT ROLL . . . . .	L17	KLU-1 . . . . .	G21	MBSS-30 . . . . .	L8
IS Labels . . . . .	L28	KLU-2 . . . . .	G21	MBSS-47 . . . . .	L8
K90-P-CONE . . . . .	L23	KLZ1A-INT . . . . .	G20	MF 3131-0 . . . . .	K25
KB 3T-* . . . . .	K22	KLZ1-INT . . . . .	G20	MF 3231-0 . . . . .	K25
KB 3T-*/S90 . . . . .	K22	KLZ2-INT . . . . .	G20	MFS 3131-0 . . . . .	K25
KB 4T-* . . . . .	K23	KLZ3-INT . . . . .	G20	MFS 3231-0 . . . . .	K25
KB 4T-*/S90 . . . . .	K23	KST-SB170 . . . . .	G21	MK96-11VP/24VDC . . . . .	J21

NC20-KT34-VN4X2 . . . . .	E45	Ni 3-EG08-AP6X-H1341/S1589 . . . . .	D25	Ni 4-DSU35-2AP4X2-H1141 . . . . .	J7
NC20-KT34-VP4X2 . . . . .	E45	Ni 3-EG08-AP6X-V1131 . . . . .	D19	Ni 4-DSU35-2ASIX4-H1140 . . . . .	J7
NC50-CP80-FZ3X2 . . . . .	E27	Ni 3-EG08K-AN6X . . . . .	D45	Ni 4-DSU35-2DNETX5-H1150 . . . . .	J7
NC50-CP80-VN4X2 . . . . .	E27	Ni 3-EG08K-AN6X-H1341 . . . . .	D25	Ni 4-DSU35-2Y0X2 . . . . .	J5
NC50-CP80-VP4X2 . . . . .	E27	Ni 3-EG08K-AN6X-V1131 . . . . .	D19	Ni 4-DSU35-2Y0X2-H1140 . . . . .	J7
Ni 2-G08-AN6X . . . . .	D47	Ni 3-EG08K-AP6X . . . . .	D45	Ni 4-DSU35TC-2ADZ30X2 . . . . .	J5
Ni 2-G08-AN6X-H1341 . . . . .	D25	Ni 3-EG08K-AP6X-H1341 . . . . .	D25	Ni 4-DSU35TC-2AP4X2 . . . . .	J5
Ni 2-G08-AP6X . . . . .	D47	Ni 3-EG08K-AP6X-V1131 . . . . .	D19	Ni 4-DSU35TC-2Y0X2 . . . . .	J5
Ni 2-G08-AP6X-H1341 . . . . .	D25	Ni 3-EG08K-Y1 . . . . .	D45	Ni 4-EG08-AG41X . . . . .	D45
Ni 2-G08-Y1 . . . . .	D47	Ni 3-EG08K-Y1-H1341 . . . . .	D25	Ni 4-EG08-AG41X-H1341 . . . . .	D25
Ni 2-G12K-AP6X-H1141 . . . . .	D65	Ni 3-EG08K-Y1-V1130 . . . . .	D19	Ni 4-EG08-AG41X-H1341/S1589 . . . . .	D25
Ni 2-H08K-AN6X . . . . .	D37	Ni 3-EG08K-Y1X-H1341 . . . . .	D25	Ni 4-EG08K-AG41X . . . . .	D45
NI 2-H08K-AN6X-V1131 . . . . .	D15	Ni 3-EG08-Y1-H1341 . . . . .	D25	Ni 4-EG08K-AG41X-H1341 . . . . .	D25
Ni 2-H08K-AP6X . . . . .	D37	Ni 3-EG08-Y1-V1130 . . . . .	D19	Ni 4-EG08K-AG41X-H1341/S1589 . . . . .	D25
NI 2-H08K-AP6X-V1131 . . . . .	D15	Ni 3-EH6.5-AN6X . . . . .	D33	Ni 4-EM12-AN7X-H1141 . . . . .	D59
Ni 2-H08M-AN7 . . . . .	D37	Ni 3-EH6.5-AN6X-V1131 . . . . .	D15	Ni 4-EM12D-AP6/S120 . . . . .	D79
Ni 2-H08-Y1 . . . . .	D37	Ni 3-EH6.5-AP6X . . . . .	D33	Ni 4-EM12E-VP6X-H1141 . . . . .	D63
Ni 2-ISI-0.1-BDS-2AP6X3-H1141/S34 . . . . .	G55	Ni 3-EH6.5-AP6X-V1131 . . . . .	D15	Ni 4-EM12-VP6X-H1141 . . . . .	D59
Ni 2-Q6.5-0.16-BDS-2AP6X3-H1141/S34 . . . . .	G53	Ni 3-EH6.5K-AN6X . . . . .	D33	Ni 4-G12-ADZ32X . . . . .	D81
Ni 2-Q6.5-0.1M-BDS-2AP6X3-H1141/S34 . . . . .	G53	Ni 3-EH6.5K-AN6X-V1131 . . . . .	D15	Ni 4-G12-ADZ32X-B3131 . . . . .	D67
Ni 2-Q6.5-0.20-BDS-2AP6X3-H1141/S34 . . . . .	G53	Ni 3-EH6.5K-AP6X . . . . .	D33	Ni 4-G12-AZ33X . . . . .	D81
Ni 2-Q6.5-ADZ32-0.16-FSB 5.4X4/S304 . . . . .	G53	Ni 3-EH6.5K-AP6X-V1131 . . . . .	D15	Ni 4-G12-AZ33X-B3131 . . . . .	D67
Ni 2-Q6.5-ADZ32-0.1M-FSB 5.4X4/S304 . . . . .	G53	Ni 3-EH6.5K-Y1 . . . . .	D33	Ni 4-GT12-ADZ32X/S34 . . . . .	D81
Ni 2-Q6.5-ADZ32-0.2M-FSB 5.4X4/S304 . . . . .	G53	Ni 3-G08-AN6X . . . . .	D47	Ni 4-GT12-ADZ32X-B3131/S34 . . . . .	D67
Ni 2-Q6.5-AN6 . . . . .	C13	Ni 3-G08-AN6X-H1341 . . . . .	D25	Ni 4-GT12-AZ33X/S34 . . . . .	D81
Ni 2-Q6.5-AN6-0.16M-FS 4.4X3/S304 . . . . .	G53	Ni 3-G08-AP6X . . . . .	D47	Ni 4-GT12-AZ33X-B3131/S34 . . . . .	D67
Ni 2-Q6.5-AN6-0.1M-FS 4.4X3/S304 . . . . .	G53	Ni 3-G08-AP6X-H1341 . . . . .	D25	Ni 4-GT12H-ADZ32X-B3131/S34/S1589 . . . . .	D67
Ni 2-Q6.5-AN6-0.2M-FS 4.4X3/S304 . . . . .	G53	Ni 3-H08-AN6X . . . . .	D37	Ni 4-M12-AD4X . . . . .	D75
Ni 2-Q6.5-AP6 . . . . .	C13	Ni 3-H08-AP6X . . . . .	D37	Ni 4-M12-AD4X-H1141 . . . . .	D59
Ni 2-Q6.5-AP6/S34 . . . . .	C13	Ni 3-Q5.5-AN6X . . . . .	C13	Ni 4-M12-AD4X-H1144 . . . . .	D59
Ni 2-Q6.5-AP6-0.16M-FS 4.4X3/S304 . . . . .	G53	Ni 4-DS20-2AP6X2 . . . . .	J13	Ni 4-M12-AN6X . . . . .	D75
Ni 2-Q6.5-AP6-0.1M-FS 4.4X3/S304 . . . . .	G53	Ni 4-DS20-2AP6X2-H1141 . . . . .	J13	Ni 4-M12-AN6X-H1141 . . . . .	D59
Ni 2-Q6.5-AP6-0.2M-FS 4.4X3/S304 . . . . .	G53	Ni 4-DS20-2AP6X2-H1141/S578 . . . . .	J15	Ni 4-M12-AP6X . . . . .	D75
Ni 2-Q9.5-0.1M-BDS-2AP6X3-H1141/S34 . . . . .	G55	Ni 4-DS20-2AP6X2-H1141/S579 . . . . .	J15	Ni 4-M12-AP6X/S100 . . . . .	D75
Ni 2-Q9.5-ADZ32-0.1M-FSB 5.4X4/S304 . . . . .	G55	Ni 4-DS20-2AZ31X2-B3151 . . . . .	J13	Ni 4-M12-AP6X-H1141 . . . . .	D59
Ni 2-Q9.5-AP6/S34 . . . . .	C21	Ni 4-DS20-2Y1X2 . . . . .	J13	Ni 4-M12E-AD4X . . . . .	D77
Ni 2-Q9.5-AP6-0.1M-FS 4.4X3/S304 . . . . .	G55	Ni 4-DS20-2Y1X2-H1140 . . . . .	J13	Ni 4-M12E-AD4X-H1141 . . . . .	D63
Ni 3.5-Q5.5-AP6X . . . . .	C13	Ni 4-DSC26-2AP6X2-H1141 . . . . .	J9	Ni 4-M12E-AD4X-H1144 . . . . .	D63
Ni 3-EG08-AN6X . . . . .	D45	Ni 4-DSU26-2ADZ30X2 . . . . .	J11	Ni 4-M12E-VN6X . . . . .	D77
Ni 3-EG08-AN6X/S1589 . . . . .	D45	Ni 4-DSU26-2AP4X2-H1141 . . . . .	J9	Ni 4-M12E-VN6X-H1141 . . . . .	D63
Ni 3-EG08-AN6X-H1341 . . . . .	D25	Ni 4-DSU26-2ASIX4-H1140 . . . . .	J9	Ni 4-M12E-VP6X . . . . .	D77
Ni 3-EG08-AN6X-H1341/S1589 . . . . .	D25	Ni 4-DSU26-2Y0X2-H1140 . . . . .	J9	Ni 4-M12E-VP6X-H1141 . . . . .	D63
Ni 3-EG08-AN6X-V1131 . . . . .	D19	Ni 4-DSU26TC-2ADZ30X2 . . . . .	J11	Ni 4-M12T-AN6X . . . . .	D79
Ni 3-EG08-AN7X . . . . .	D45	Ni 4-DSU35-2ADZ30X2 . . . . .	J5	Ni 4-M12T-AP6X . . . . .	D79
Ni 3-EG08-AN7X-H1341 . . . . .	D25	Ni 4-DSU35-2ADZ30X2-B1151 . . . . .	J7	Ni 4-M12-VN6X . . . . .	D75
Ni 3-EG08-AP6X . . . . .	D45	Ni 4-DSU35-2AN4X2 . . . . .	J5	Ni 4-M12-VN6X-H1141 . . . . .	D59
Ni 3-EG08-AP6X/S1589 . . . . .	D45	Ni 4-DSU35-2AN4X2-H1141 . . . . .	J7	Ni 4-M12-VP6X . . . . .	D75
Ni 3-EG08-AP6X-H1341 . . . . .	D25	Ni 4-DSU35-2AP4X2 . . . . .	J5	Ni 4-M12-VP6X-H1141 . . . . .	D59

# Sensors Index

## Index

Ni 4-Q11S-AP4X . . . . .	C23	Ni 5-G12-AP6X-V1131 . . . . .	D65	Ni 8-GT12H-ADZ32X-B3131/S1589 . . . . .	D67
Ni 4-Q11S-AZ31X . . . . .	C23	Ni 5-G12K-AN6X . . . . .	D79	Ni 8-GT18-ADZ30X2-B1331/S34 . . . . .	D115
Ni 4-Q12-AD4X . . . . .	C25	Ni 5-G12K-AP6X . . . . .	D79	Ni 8-GT18-ADZ30X2-B1431/S34 . . . . .	D115
Ni 4-Q12-AN6X . . . . .	C25	Ni 5-G12SK-AN6X2 . . . . .	D81	Ni 8-GT18-ADZ30X2-B3331/S34 . . . . .	D109
Ni 4-Q12-AN6X-H1141 . . . . .	C25	Ni 5-G12SK-AP6X2 . . . . .	D81	Ni 8-GT18-ADZ30X2-B3431/S34 . . . . .	D109
Ni 4-Q12-AP6X . . . . .	C25	Ni 5-G12-Y0 . . . . .	D79	Ni 8-GT18H-ADZ30X2-B1331/S34/S1589 . . . . .	D115
Ni 4-Q12-AP6X-H1141 . . . . .	C25	Ni 5-G12-Y0-H1141 . . . . .	D65	Ni 8-GT18H-ADZ30X2-B1431/S34/S1589 . . . . .	D115
Ni 4-Q12-AZ31X . . . . .	C25	Ni 5-G12-Y0X . . . . .	D79	Ni 8-M12-AD4X . . . . .	D75
Ni 4-S12-AD4X . . . . .	D87	Ni 5-K11-AN6 . . . . .	D49	Ni 8-M12-AD4X/S90 . . . . .	D75
Ni 4-S12-ADZ32X . . . . .	D87	Ni 5-K11-AN6X . . . . .	D49	Ni 8-M12-AD4X-H1141 . . . . .	D59
Ni 4-S12-AN6X . . . . .	D87	Ni 5-K11-AP6 . . . . .	D49	Ni 8-M12-AD4X-H1144 . . . . .	D59
Ni 4-S12-AN6X-H1141 . . . . .	D83	Ni 5-K11-AP6X . . . . .	D49	Ni 8-M12-AN6X . . . . .	D75
Ni 4-S12-AN7X . . . . .	D87	Ni 5-K11-Y0 . . . . .	D49	Ni 8-M12-AN6X-H1141 . . . . .	D59
Ni 4-S12-AN7X/S100 . . . . .	D87	Ni 5-M12-AN6X-H1141 . . . . .	D59	Ni 8-M12-AP6X . . . . .	D75
Ni 4-S12-AP6X . . . . .	D87	Ni 5-M12-AP6X-H1141 . . . . .	D59	Ni 8-M12-AP6X-H1141 . . . . .	D59
Ni 4-S12-AP6X/S97 . . . . .	D87	Ni 5-M12-LIU . . . . .	F21	Ni 8-M12E-AN6X . . . . .	D77
Ni 4-S12-AP6X-H1141 . . . . .	D83	Ni 5-M12-LIU-H1141 . . . . .	F17	Ni 8-M12E-AN6X-H1141 . . . . .	D63
Ni 4-S12-AP7X/S100 . . . . .	D87	Ni 5-M12-Y1X-H1141 . . . . .	D59	Ni 8-M12E-AP6X-H1141 . . . . .	D63
Ni 4-S12-AZ31X . . . . .	D87	Ni 5-P12SK-AN6X2 . . . . .	D89	Ni 8-M12E-VP6X-H1141 . . . . .	D63
Ni 4-S12-AZ31X/S100 . . . . .	D87	Ni 5-P12SK-AP6X2 . . . . .	D89	Ni 8-M12-VN6X . . . . .	D75
Ni 4-S12-AZ31X/S97 . . . . .	D87	Ni 5-P12SK-Y0X . . . . .	D89	Ni 8-M12-VN6X-H1141 . . . . .	D59
Ni 4U-EG08-AN6X . . . . .	D45	Ni 5-P12WD-AN6X-H1141 . . . . .	D83	Ni 8-M12-VP6X . . . . .	D75
Ni 4U-EG08-AN6X-H1341 . . . . .	D25	Ni 5-P12WD-AP6X . . . . .	D85	Ni 8-M12-VP6X-H1141 . . . . .	D59
Ni 4U-EG08-AN6X-V1131 . . . . .	D19	Ni 5-P12WD-AP6X-H1141 . . . . .	D83	Ni 8-M18-AD4X . . . . .	D127
Ni 4U-EG08-AP6X . . . . .	D45	Ni 5-P12-Y0/S100 . . . . .	D85	Ni 8-M18-AD4X-H1141 . . . . .	D99
Ni 4U-EG08-AP6X-H1341 . . . . .	D25	Ni 5-P12-Y0X . . . . .	D85	Ni 8-M18-AD4X-H1144 . . . . .	D99
Ni 4U-EG08-AP6X-H1341/S1589 . . . . .	D25	Ni 5-P12-Y1 . . . . .	D85	Ni 8-M18-AN6X . . . . .	D127
Ni 4U-EG08-AP6X-V1131 . . . . .	D19	Ni 5-Q18-AN6X . . . . .	C29	Ni 8-M18-AN6X-H1141 . . . . .	D99
Ni 4U-EH6.5-AN6X . . . . .	D33	Ni 5-Q18-AP6X . . . . .	C29	Ni 8-M18-AP6X . . . . .	D127
Ni 4U-EH6.5-AN6X-V1131 . . . . .	D15	Ni 5-S12-Y0X-H1141 . . . . .	D83	Ni 8-M18-AP6X/S100 . . . . .	D127
Ni 4U-EH6.5-AP6X . . . . .	D33	Ni 6U-EG08-AN6X . . . . .	B7	Ni 8-M18-AP6X-H1141 . . . . .	D99
Ni 4U-EH6.5-AP6X-V1131 . . . . .	D15	Ni 6U-EG08-AN6X-H1341 . . . . .	B7	Ni 8-M18E-AD4X . . . . .	D129
Ni 4U-Q8SE-AN6X . . . . .	C19	Ni 6U-EG08-AN6X-V1131 . . . . .	B7	Ni 8-M18E-AD4X-H1141 . . . . .	D101
Ni 4U-Q8SE-AN6X-V1131 . . . . .	C19	Ni 6U-EG08-AP6X . . . . .	B7	Ni 8-M18E-AP6X-H1141 . . . . .	D101
Ni 4U-Q8SE-AP6X . . . . .	C19	Ni 6U-EG08-AP6X-H1341 . . . . .	B7	Ni 8-M18E-VN4X . . . . .	D129
Ni 4U-Q8SE-AP6X-V1131 . . . . .	C19	Ni 6U-EG08-AP6X-V1131 . . . . .	B7	Ni 8-M18E-VN4X-H1141 . . . . .	D101
Ni 5-EM12WD-AN6X . . . . .	D77	Ni 6U-EH6.5-AP6X-V1131 . . . . .	B5	Ni 8-M18E-VP4X . . . . .	D129
Ni 5-EM12WD-AN6X-H1141 . . . . .	D59	Ni 7-EM18D-VP6X/S120 . . . . .	D131	Ni 8-M18E-VP4X-H1141 . . . . .	D101
Ni 5-EM12WD-AP6/S100 . . . . .	D77	Ni 8-EM12HE-AN6X-H1141/S1589 . . . . .	D63	Ni 8-M18-LIU . . . . .	F21
Ni 5-EM12WD-AP6X . . . . .	D77	Ni 8-EM12HE-AP6X-H1141/S1589 . . . . .	D63	Ni 8-M18-LIU-H1141 . . . . .	F17
Ni 5-EM12WD-AP6X-H1141 . . . . .	D59	Ni 8-G12-ADZ32X . . . . .	D81	Ni 8-M18T-AN6X . . . . .	D129
Ni 5-G12-AN6X . . . . .	D79	Ni 8-G12-ADZ32X-B3131 . . . . .	D67	Ni 8-M18T-AP6X . . . . .	D129
Ni 5-G12-AN6X-H1141 . . . . .	D65	Ni 8-G12-AN6X . . . . .	D79	Ni 8-M18T-AZ3X . . . . .	D129
Ni 5-G12-AN6X-V1131 . . . . .	D65	Ni 8-G12-AN6X-H1141 . . . . .	D65	Ni 8-M18-VN4X . . . . .	D127
Ni 5-G12-AN7X . . . . .	D79	Ni 8-G12K-AD4X . . . . .	D79	Ni 8-M18-VN4X-H1141 . . . . .	D99
Ni 5-G12-AN7X-H1141 . . . . .	D65	Ni 8-G18-ADZ30X2-B3331/S34 . . . . .	D109	Ni 8-M18-VP4X . . . . .	D127
Ni 5-G12-AP6X . . . . .	D79	Ni 8-G18-AZ3X-B3331 . . . . .	D109	Ni 8-M18-VP4X-H1141 . . . . .	D99
Ni 5-G12-AP6X-H1141 . . . . .	D65	Ni 8-G18SK-AD4X . . . . .	D133	Ni 8-MT12H-AD4X-H1141/S1589 . . . . .	D61

Ni 8-MT12HE-AN6X-H1141/S1589 . . . . .	D63	Ni 8U-MT12-AP6X2-H1141 . . . . .	D61	Ni10-M18-LIU . . . . .	F21
Ni 8-MT12HE-AP6X-H1141/S1589 . . . . .	D63	Ni 8U-MT12-AP6X-H1141 . . . . .	D61	Ni10-M18-LIU-H1141 . . . . .	F17
Ni 8-P18-AZ3/S139-S90 . . . . .	D141	Ni 8U-MT12E-AN6X2-H1141 . . . . .	D63	Ni10-M18WD-AN6X-H1141 . . . . .	D99
Ni 8-P18-AZ3/S139-S90 10M . . . . .	D141	Ni 8U-MT12E-AN6X-H1141 . . . . .	D63	Ni10-M18-Y1X-H1141 . . . . .	D99
Ni 8-S12-AP6X . . . . .	D87	Ni 8U-MT12E-AP6X2-H1141 . . . . .	D63	Ni10-P18-AN6X-B2341 . . . . .	D137
Ni 8-S18-AD4X . . . . .	D139	Ni 8U-MT12H-AP6X2-H1141/S1589 . . . . .	D61	Ni10-P18-AP6X-B2341 . . . . .	D137
Ni 8-S18-AD4X-H1141 . . . . .	D135	Ni 8U-MT12HE-AN6X2-H1141/S1589 . . . . .	D63	Ni10-P18-AZ3X-B2331 . . . . .	D137
Ni 8-S18-AN6X . . . . .	D139	Ni 8U-MT12HE-AP6X2-H1141/S1589 . . . . .	D63	Ni10-P18-AZ3X-B2331/S100 . . . . .	D137
Ni 8-S18-AN6X-H1141 . . . . .	D135	Ni 8U-P12SK-AN6X . . . . .	D89	Ni10-P18SK-AN6X2 . . . . .	D143
Ni 8-S18-AN7X . . . . .	D139	Ni 8U-P12SK-AP6X . . . . .	D89	Ni10-P18SK-AP6X2 . . . . .	D143
Ni 8-S18-AN7X/S100 . . . . .	D139	Ni 8U-S12-AN6X . . . . .	D87	Ni10-P18SK-AZ3X2 . . . . .	D143
Ni 8-S18-AP6X . . . . .	D139	Ni 8U-S12-AN6X-H1141 . . . . .	D83	Ni10-P18SK-Y1X . . . . .	D143
Ni 8-S18-AP6X-H1141 . . . . .	D135	Ni 8U-S12-AP6X . . . . .	D87	Ni10-P18WD-AN6X . . . . .	D141
Ni 8-S18-AP7X/S100 . . . . .	D139	Ni 8U-S12-AP6X-H1141 . . . . .	D83	Ni10-P18WD-AN6X-H1141 . . . . .	D137
Ni 8-S18-AZ3X . . . . .	D139	Ni10-EM18WD-AN6X . . . . .	D129	Ni10-P18WD-AP6X . . . . .	D141
Ni 8-S18-AZ3X/S100 . . . . .	D139	Ni10-EM18WD-AN6X-H1141 . . . . .	D99	Ni10-P18WD-AP6X-H1141 . . . . .	D137
Ni 8-S18-VN4X . . . . .	D139	Ni10-EM18WD-AP6X . . . . .	D129	Ni10-P18-Y0/S100 . . . . .	D141
Ni 8-S18-VP4X . . . . .	D139	Ni10-EM18WD-AP6X-H1141 . . . . .	D99	Ni10-P18-YOX . . . . .	D141
Ni 8U-EG12SK-AN6X . . . . .	D81	Ni10-G18-AN6X . . . . .	D131	Ni10-P18-Y1 . . . . .	D141
Ni 8U-EG12SK-AP6X . . . . .	D81	Ni10-G18-AN6X-B1341 . . . . .	D113	Ni10-Q18-AP6X . . . . .	C29
Ni 8U-EM12-AN6X . . . . .	D75	Ni10-G18-AN6X-B1441 . . . . .	D113	Ni10-Q25-AN6X . . . . .	C35
Ni 8U-EM12-AN6X-H1141 . . . . .	D59	Ni10-G18-AN7X . . . . .	D131	Ni10-Q25-AP6X . . . . .	C35
Ni 8U-EM12-AP6X . . . . .	D75	Ni10-G18-AP6X . . . . .	D131	Ni10U-EM12-AN6X-H1141 . . . . .	B9
Ni 8U-EM12-AP6X-H1141 . . . . .	D59	Ni10-G18-AP6X-B1341 . . . . .	D113	Ni10U-EM12-AP6X-H1141 . . . . .	B9
Ni 8U-EM12E-AN6X . . . . .	D77	Ni10-G18-AP6X-B1441 . . . . .	D113	Ni10U-EM12WD-AN6X . . . . .	B9
Ni 8U-EM12E-AN6X2-H1141 . . . . .	D63	Ni10-G18-AZ3X . . . . .	D131	Ni10U-EM12WD-AN6X-H1141 . . . . .	B9
Ni 8U-EM12E-AN6X-H1141 . . . . .	D63	Ni10-G18-AZ3X-B1331 . . . . .	D115	Ni10U-EM12WD-AP6X . . . . .	B9
Ni 8U-EM12E-AP6X . . . . .	D77	Ni10-G18-AZ3X-B3331 50MM . . . . .	D109	Ni10U-EM12WD-AP6X-H1141 . . . . .	B9
Ni 8U-EM12E-AP6X2-H1141 . . . . .	D63	Ni10-G18K-AN6X . . . . .	D131	Ni10U-M12-AN6X . . . . .	B9
Ni 8U-EM12E-AP6X-H1141 . . . . .	D63	Ni10-G18K-AP6X . . . . .	D131	Ni10U-M12-AN6X-H1141 . . . . .	B9
Ni 8U-EM12E-VP4X-H1141 . . . . .	D63	Ni10-G18SK-AN6X2 . . . . .	D133	Ni10U-M12-AP6X . . . . .	B9
Ni 8U-EM12HE-AN6X2-H1141/S1589 . . . . .	D63	Ni10-G18SK-AP6X2 . . . . .	D133	Ni10U-M12-AP6X-H1141 . . . . .	B9
Ni 8U-EM12HE-AP6X2-H1141/S1589 . . . . .	D63	Ni10-G18SK-AZ3X2 . . . . .	D133	Ni10U-MT12-AN6X-H1141 . . . . .	B9
Ni 8U-G12-ADZ32X-B3131 . . . . .	D67	Ni10-G18-VN6X-B1441 . . . . .	D113	Ni10U-MT12-AP6X-H1141 . . . . .	B9
Ni 8U-GT12-ADZ32X-B3131 . . . . .	D67	Ni10-G18-VP6X-B1441 . . . . .	D113	Ni10U-MT12E-AP6X2-H1141 . . . . .	B9
Ni 8U-M12-AN6X . . . . .	D75	Ni10-G18-Y0 . . . . .	D131	Ni12U-EG18SK-AN6X . . . . .	D133
Ni 8U-M12-AN6X2-H1141 . . . . .	D59	Ni10-G18-YOX . . . . .	D131	Ni12U-EG18SK-AP6X . . . . .	D133
Ni 8U-M12-AN6X-H1141 . . . . .	D59	Ni10-K20-AN6X . . . . .	D147	Ni12U-EM18-AN6X . . . . .	D127
Ni 8U-M12-AP6X . . . . .	D75	Ni10-K20-AP6X . . . . .	D147	Ni12U-EM18-AN6X2-H1141 . . . . .	D99
Ni 8U-M12-AP6X2-H1141 . . . . .	D59	Ni10-K20-AZ3X . . . . .	D147	Ni12U-EM18-AN6X-H1141 . . . . .	D99
Ni 8U-M12-AP6X-H1141 . . . . .	D59	Ni10-K20SK-AN6X2 . . . . .	D147	Ni12U-EM18-AN6X-H1141/S395 . . . . .	D101
Ni 8U-M12E-AN6X . . . . .	D77	Ni10-K20SK-AP6X2 . . . . .	D147	Ni12U-EM18-AP6X . . . . .	D127
Ni 8U-M12E-AN6X-H1141 . . . . .	D63	Ni10-K20SK-AZ3X2 . . . . .	D147	Ni12U-EM18-AP6X2-H1141 . . . . .	D99
Ni 8U-M12E-AP6X . . . . .	D77	Ni10-K20-Y1 . . . . .	D147	Ni12U-EM18-AP6X2-H1141/S395 . . . . .	D101
Ni 8U-M12E-AP6X-H1141 . . . . .	D63	Ni10-M18-AN6X-H1141 . . . . .	D99	Ni12U-EM18-AP6X-H1141 . . . . .	D99
Ni 8U-M12E-VN4X-H1141 . . . . .	D63	Ni10-M18-AP6X-H1141 . . . . .	D99	Ni12U-EM18-AP6X-H1141/S395 . . . . .	D101
Ni 8U-M12E-VP4X-H1141 . . . . .	D63	Ni10-M18E-AN6X-H1141 . . . . .	D101	Ni12U-EM18E-AN6X . . . . .	D129
Ni 8U-MT12-AN6X-H1141 . . . . .	D61	Ni10-M18E-AP6X-H1141 . . . . .	D101	Ni12U-EM18E-AP6X . . . . .	D129

# Sensors Index

## Index

Ni12U-EM18H-AN6X2-H1141/S395/S1589 . . . . .	D101	Ni14-M18-AD4X-H1144 . . . . .	D99	Ni15-M30T-AZ3X . . . . .	D169
Ni12U-EM18H-AP6X2-H1141/S395/S1589 . . . . .	D101	Ni14-M18-AN6X . . . . .	D127	Ni15-M30-VN4X . . . . .	D167
Ni12U-G18-ADZ30X2-B1331 . . . . .	D115	Ni14-M18-AN6X-H1141 . . . . .	D99	Ni15-M30-VN4X-H1141 . . . . .	D153
Ni12U-G18-ADZ30X2-B3331 . . . . .	D109	Ni14-M18-AP6X . . . . .	D127	Ni15-M30-VP4X . . . . .	D167
Ni12U-GT18-ADZ30X2-B1331 . . . . .	D115	Ni14-M18-AP6X-H1141 . . . . .	D99	Ni15-M30-VP4X-H1141 . . . . .	D153
Ni12U-GT18-ADZ30X2-B3331 . . . . .	D109	Ni14-M18E-AD4X-H1141 . . . . .	D101	Ni15-P30-AN6X-B2141 . . . . .	D177
Ni12U-M18-ADZ30X2 . . . . .	D127	Ni14-M18E-AN6X-H1141 . . . . .	D101	Ni15-P30-AP6X-B2141 . . . . .	D177
Ni12U-M18-AN6X . . . . .	D127	Ni14-M18E-AP6X-H1141 . . . . .	D101	Ni15-P30-AZ3X-B2131 . . . . .	D177
Ni12U-M18-AN6X2-H1141 . . . . .	D99	Ni14-M18-VN4X . . . . .	D127	Ni15-P30SK-AN6X2 . . . . .	D183
Ni12U-M18-AN6X-H1141 . . . . .	D99	Ni14-M18-VN4X-H1141 . . . . .	D99	Ni15-P30SK-AP6X2 . . . . .	D183
Ni12U-M18-AN6X-H1141/S395 . . . . .	D101	Ni14-M18-VP4X . . . . .	D127	Ni15-P30SK-AZ3X2 . . . . .	D183
Ni12U-M18-AP6X . . . . .	D127	Ni14-M18-VP4X-H1141 . . . . .	D99	Ni15-P30SR-FZ3X2 . . . . .	D183
Ni12U-M18-AP6X2-H1141 . . . . .	D99	Ni14-MT18HE-AN6X-H1141/S1589 . . . . .	D101	Ni15-P30SR-VN4X2 . . . . .	D183
Ni12U-M18-AP6X-H1141 . . . . .	D99	Ni14-MT18HE-AP6X-H1141/S1589 . . . . .	D101	Ni15-P30SR-VP4X2 . . . . .	D183
Ni12U-M18-AP6X-H1141/S395 . . . . .	D101	Ni15-EM30D-VP6X/S120 . . . . .	D167	Ni15-P30-VR7X . . . . .	D179
Ni12U-M18-ASIX-H1140 . . . . .	D99	Ni15-G30-AN6X . . . . .	D173	Ni15-P30-Y0X . . . . .	D179
Ni12U-M18E-AN6X . . . . .	D129	Ni15-G30-AN6X-B1141 . . . . .	D159	Ni15-P30-Y1 . . . . .	D179
Ni12U-M18E-AP6X . . . . .	D129	Ni15-G30-AN6X-B1441 . . . . .	D161	Ni15-Q30-AN6X . . . . .	C37
Ni12U-M18E-AP6X-H1141 . . . . .	D101	Ni15-G30-AN7X . . . . .	D173	Ni15-Q30-AP6X . . . . .	C37
Ni12U-M18M-VN4X-H1141 . . . . .	D101	Ni15-G30-AP6X . . . . .	D173	Ni15-S30-AD4X . . . . .	D181
Ni12U-M18M-VP4X-H1141 . . . . .	D101	Ni15-G30-AP6X-B1141 . . . . .	D159	Ni15-S30-AD4X-H1141 . . . . .	D177
Ni12U-MT18-ADZ30X2 . . . . .	D127	Ni15-G30-AP6X-B1441 . . . . .	D161	Ni15-S30-AN6X . . . . .	D181
Ni12U-MT18-AN6X-H1141 . . . . .	D99	Ni15-G30-AZ3X . . . . .	D173	Ni15-S30-AN6X/S100 . . . . .	D181
Ni12U-MT18-AN6X-H1141/S395 . . . . .	D101	Ni15-G30-AZ3X-B1131 . . . . .	D159	Ni15-S30-AN6X/S97 . . . . .	D181
Ni12U-MT18-AP6X2-H1141 . . . . .	D99	Ni15-G30-AZ3X-B1431 . . . . .	D161	Ni15-S30-AN6X-H1141 . . . . .	D177
Ni12U-MT18-AP6X2-H1141/S395 . . . . .	D101	Ni15-G30-AZ3X-B3131 . . . . .	D155	Ni15-S30-AN7X . . . . .	D181
Ni12U-MT18-AP6X-H1141 . . . . .	D99	Ni15-G30K-AN6X . . . . .	D173	Ni15-S30-AN7X/S100 . . . . .	D181
Ni12U-MT18-AP6X-H1141/S395 . . . . .	D101	Ni15-G30K-AP6X . . . . .	D173	Ni15-S30-AP6X . . . . .	D181
Ni12U-MT18H-AN6X2-H1141/S395/S1589 . . . . .	D101	Ni15-G30SK-AN6X2 . . . . .	D175	Ni15-S30-AP6X-H1141 . . . . .	D177
Ni12U-MT18H-AP6X2-H1141/S1589 . . . . .	D99	Ni15-G30SK-AP6X2 . . . . .	D175	Ni15-S30-AP6X-H1141/S97 . . . . .	D177
Ni12U-MT18H-AP6X2-H1141/S395/S1589 . . . . .	D101	Ni15-G30SK-AZ3X2 . . . . .	D175	Ni15-S30-AZ3X . . . . .	D181
Ni12U-MT18H-AP6X-H1141/S1589 . . . . .	D99	Ni15-G30-VN4X-B1141 . . . . .	D159	Ni15-S30-AZ3X/S100 . . . . .	D181
Ni12U-P18-AP6/S139-S90 . . . . .	D141	Ni15-G30-Y0 . . . . .	D173	Ni15-S30-VN4X . . . . .	D181
Ni12U-P18-AP6/S139-S90 30M . . . . .	D141	Ni15-G30-Y0X . . . . .	D173	Ni15-S30-VP4X . . . . .	D181
Ni12U-P18SK-AN6X . . . . .	D143	Ni15-M30-AD4X . . . . .	D167	Ni15U-EM18-AN6X-H1141 . . . . .	B11
Ni12U-P18SK-AP6X . . . . .	D143	Ni15-M30-AD4X-H1141 . . . . .	D153	Ni15U-EM18-AP6X-H1141 . . . . .	B11
Ni12U-S18-AN6X . . . . .	D139	Ni15-M30-AN6X-H1141 . . . . .	D153	Ni15U-EM18WD-AN6X . . . . .	B13
Ni12U-S18-AN6X-H1141 . . . . .	D135	Ni15-M30-AP6X/S100 . . . . .	D167	Ni15U-EM18WD-AN6X-H1141 . . . . .	B11
Ni12U-S18-AP6X . . . . .	D139	Ni15-M30-AP6X-H1141 . . . . .	D153	Ni15U-EM18WD-AN6X-H1141 . . . . .	D99
Ni12U-S18-AP6X-H1141 . . . . .	D135	Ni15-M30-AP6X-H1141/S34 . . . . .	D153	Ni15U-EM18WD-AP6X . . . . .	B13
Ni14-EM18HE-AN6X-H1141/S1589 . . . . .	D101	Ni15-M30E-AD4X-H1141 . . . . .	D155	Ni15U-EM18WD-AP6X-H1141 . . . . .	B11
Ni14-EM18HE-AP6X-H1141/S1589 . . . . .	D101	Ni15-M30E-AP6X-H1141 . . . . .	D155	Ni15U-M18-AN6X . . . . .	B13
Ni14-G18-ADZ30X2 . . . . .	D131	Ni15-M30E-VN4X-H1141 . . . . .	D155	Ni15U-M18-AN6X-H1141 . . . . .	B11
Ni14-G18-ADZ30X2-B1331 . . . . .	D115	Ni15-M30E-VP4X-H1141 . . . . .	D155	Ni15U-M18-AP6X . . . . .	B13
Ni14-G18-ADZ30X2-B3331 . . . . .	D109	Ni15-M30-LIU . . . . .	F23	Ni15U-M18-AP6X-H1141 . . . . .	B11
Ni14-GT18H-ADZ30X2-B1331/S1589 . . . . .	D115	Ni15-M30-LIU-H1141 . . . . .	F19	Ni15U-MT18-AN6X-H1141 . . . . .	B11
Ni14-M18-AD4X . . . . .	D127	Ni15-M30T-AN6X . . . . .	D169	Ni15U-MT18-AP6X-H1141 . . . . .	B11
Ni14-M18-AD4X-H1141 . . . . .	D99	Ni15-M30T-AP6X . . . . .	D169	Ni15U-MT18M-AP6X2-H1141 . . . . .	B11

Ni20-CK40-AD4X-H1141 . . . . .	C47	Ni20-M30-VP4X . . . . .	D167	Ni20U-S30-AP6X . . . . .	D181
Ni20-CK40-AN6X2-H1141 W/BS 2.1 . . . .	C47	Ni20-M30-VP4X-H1141 . . . . .	D153	Ni20U-S30-AP6X-H1141 . . . . .	D177
Ni20-CK40-AP6X2-H1141 W/BS 2.1 . . . .	C47	Ni20-MT30H-AN6X-H1141/S1589 . . . . .	D153	Ni20U-TS12-AN6X2-V1131 . . . . .	B7
Ni20-CK40-AZ3X2-B1131 W/BS 2.1 . . . .	C49	Ni20-MT30H-AP6X-H1141/S1589 . . . . .	D153	Ni20U-TS12-AP6X2-V1131 . . . . .	B7
Ni20-CK40-AZ3X2-B3131 W/BS 2.1 . . . .	C49	Ni20NF-CP40-FZ3X2 . . . . .	C53	Ni25-CK40-LIU2-H1141 . . . . .	F13
Ni20-CK40-VN4X2-H1141 W/BS 2.1 . . . .	C47	Ni20NF-CP40-VN4X2 . . . . .	C51	Ni25-CK40-LIU-H1141 . . . . .	F13
Ni20-CK40-VP4X2-H1141 W/BS 2.1 . . . .	C47	Ni20NF-CP40-VP4X2 . . . . .	C51	Ni25-CP40-LIU . . . . .	F13
Ni20-CP40-AD4X . . . . .	C51	Ni20-P30WD-AN6X . . . . .	D183	Ni25-CQ40/S1102 5M . . . . .	J21
Ni20-CP40-AN6X2 . . . . .	C51	Ni20-Q14-AD4X . . . . .	C27	Ni25-G47-AN4X . . . . .	D189
Ni20-CP40-AP6X2 . . . . .	C51	Ni20-Q14-ADZ32X2 . . . . .	C27	Ni25-G47-AP4X . . . . .	D189
Ni20-CP40-FDZ30X2 . . . . .	C53	Ni20-Q14-AN6X2 . . . . .	C27	Ni25-G47-AZ3X . . . . .	D189
Ni20-CP40-FZ3X2 . . . . .	C53	Ni20-Q14-AN6X2-V1131 . . . . .	C27	Ni25-Q20-AN6X2 . . . . .	C31
Ni20-CP40-FZ3X2/S100 . . . . .	C53	Ni20-Q14-AP6X2 . . . . .	C27	Ni25-Q20-AN6X2-H1141 . . . . .	C33
Ni20-CP40-FZ3X2/S109 . . . . .	C53	Ni20-Q14-AP6X2-V1131 . . . . .	C27	Ni25-Q20-AP6X2 . . . . .	C31
Ni20-CP40-FZ3X2/S110 . . . . .	C53	Ni20-Q50-ADZ30X2-B1131/S34 . . . . .	C55	Ni25-Q20-AP6X2-H1141 . . . . .	C33
Ni20-CP40-VN4X2 . . . . .	C51	Ni20-Q50-ADZ30X2-B3131/S34 . . . . .	C55	Ni25U-CK40-ADZ30X2-B1131 W/BS 2.1 . . . .	C49
Ni20-CP40-VN4X2/S100 . . . . .	C51	Ni20R-S32SR-VP44X . . . . .	J29	Ni25U-CK40-ADZ30X2-B3131 W/BS 2.1 . . . .	C49
Ni20-CP40-VN4X2/S109 . . . . .	C53	Ni20U-EG30SK-AN6X . . . . .	D175	Ni25U-CK40-AN6X2-H1141 W/BS 2.1 . . . .	C47
Ni20-CP40-VN4X2/S110 . . . . .	C53	Ni20U-EG30SK-AP6X . . . . .	D175	Ni25U-CK40-AP6X2-H1141 W/BS 2.1 . . . .	C47
Ni20-CP40-VP4X2 . . . . .	C51	Ni20U-EM30-AN6X . . . . .	D167	Ni25U-CK40-ASIX2-H1140 W/BS 2.1 . . . .	C47
Ni20-CP40-VP4X2/S100 . . . . .	C51	Ni20U-EM30-AN6X-H1141 . . . . .	D153	Ni25U-CP40-AN6X2 . . . . .	C51
Ni20-CP40-VP4X2/S110 . . . . .	C53	Ni20U-EM30-AP6X . . . . .	D167	Ni25U-CP40-AP6X2 . . . . .	C51
Ni20-CP40-Y1X . . . . .	C53	Ni20U-EM30-AP6X2-H1141 . . . . .	D153	Ni30-CP40-FZ3X2/S109 . . . . .	C53
Ni20-EM30H-AN6X-H1141/S1589 . . . . .	D153	Ni20U-EM30-AP6X-H1141 . . . . .	D153	Ni30-CP40-FZ3X2/S110 . . . . .	C53
Ni20-EM30H-AP6X-H1141/S1589 . . . . .	D153	Ni20U-EM30H-AN6X2-H1141/S1589 . . . . .	D153	Ni30-CP40-VP4X2/S109 . . . . .	C53
Ni20-EM30WD-AN6X . . . . .	D167	Ni20U-EM30H-AP6X2-H1141/S1589 . . . . .	D153	Ni30-K40-AZ3X-B2131 . . . . .	D185
Ni20-EM30WD-AN6X-H1141 . . . . .	D153	Ni20U-G30-ADZ30X2-B1131 . . . . .	D159	Ni30-K40SR-FZ3X2 . . . . .	D187
Ni20-EM30WD-AP6X . . . . .	D167	Ni20U-G30-ADZ30X2-B3131 . . . . .	D155	Ni30-K40SR-VN4X2 . . . . .	D187
Ni20-EM30WD-AP6X-H1141 . . . . .	D153	Ni20U-GT30-ADZ30X2-B1131 . . . . .	D161	Ni30-K40SR-VP4X2 . . . . .	D187
Ni20-G30-ADZ30X2 . . . . .	D173	Ni20U-GT30-ADZ30X2-B3131 . . . . .	D155	Ni30-K40-VN4X-B2141 . . . . .	D185
Ni20-G30-ADZ30X2-B1131 . . . . .	D159	Ni20U-M30-AN6X . . . . .	D167	Ni30-K40-VP4X-B2141 . . . . .	D185
Ni20-G30-ADZ30X2-B3131 . . . . .	D155	Ni20U-M30-AN6X2-H1141 . . . . .	D153	Ni30-Q130-ADZ30X2 . . . . .	C65
Ni20-K40-AN6X . . . . .	D185	Ni20U-M30-AN6X-H1141 . . . . .	D153	Ni30-Q130-ADZ30X2-B1131 . . . . .	C65
Ni20-K40-AP6X . . . . .	D185	Ni20U-M30-AP6X . . . . .	D167	Ni30-Q130-VN4X2 . . . . .	C65
Ni20-K40-AZ3X . . . . .	D185	Ni20U-M30-AP6X2-H1141 . . . . .	D153	Ni30-Q130-VN4X2-B2141 . . . . .	C65
Ni20-K40SR-FZ3X2 . . . . .	D187	Ni20U-M30-AP6X-H1141 . . . . .	D153	Ni30-Q130-VP4X2 . . . . .	C65
Ni20-K40SR-VN4X2 . . . . .	D187	Ni20U-M30-VN4X-H1141 . . . . .	D153	Ni30-Q130-VP4X2-B2141 . . . . .	C65
Ni20-K40SR-VP4X2 . . . . .	D187	Ni20U-M30-VP4X-H1141 . . . . .	D153	Ni30U-EM30-AN6X-H1141 . . . . .	B15
Ni20-K40-Y1 . . . . .	D185	Ni20U-MT30-AN6X2-H1141 . . . . .	D153	Ni30U-EM30-AP6X-H1141 . . . . .	B15
Ni20-M30-AD4X . . . . .	D167	Ni20U-MT30-AN6X-H1141 . . . . .	D153	Ni30U-EM30WD-AN6X . . . . .	B15
Ni20-M30-AD4X-H1141 . . . . .	D153	Ni20U-MT30-AP6X2-H1141 . . . . .	D153	Ni30U-EM30WD-AN6X-H1141 . . . . .	B15
Ni20-M30-AD4X-H1144 . . . . .	D153	Ni20U-MT30-AP6X-H1141 . . . . .	D153	Ni30U-EM30WD-AP6X . . . . .	B15
Ni20-M30-AN6X . . . . .	D167	Ni20U-MT30H-AN6X2-H1141/S1589 . . . . .	D153	Ni30U-EM30WD-AP6X-H1141 . . . . .	B15
Ni20-M30-AN6X-H1141 . . . . .	D153	Ni20U-MT30H-AP6X2-H1141/S1589 . . . . .	D153	Ni30U-M30-AN6X . . . . .	B15
Ni20-M30-AP6X . . . . .	D167	Ni20U-P30SK-AN6X . . . . .	D183	Ni30U-M30-AN6X-H1141 . . . . .	B15
Ni20-M30-AP6X-H1141 . . . . .	D153	Ni20U-P30SK-AP6X . . . . .	D183	Ni30U-M30-AP6X . . . . .	B15
Ni20-M30-VN4X . . . . .	D167	Ni20U-S30-AN6X . . . . .	D181	Ni30U-M30-AP6X-H1141 . . . . .	B15
Ni20-M30-VN4X-H1141 . . . . .	D153	Ni20U-S30-AN6X-H1141 . . . . .	D177	Ni30U-MT30-AN6X-H1141 . . . . .	B15

# Sensors

## Index

### Index

Ni30U-MT30-AP6X2-H1141 . . . . .	B15	Ni60-K90SR-FZ3X2 . . . . .	C63	RK 4.41T-*/S529 . . . . .	K9
Ni30U-MT30-AP6X-H1141 . . . . .	B15	Ni60-K90SR-FZ3X2/M20 . . . . .	C63	RK 4.43T-* . . . . .	K9
Ni35-CP40-FDZ30X2 . . . . .	C53	Ni60-K90SR-VN4X2 . . . . .	C63	RK 4.43T-*/S90 . . . . .	K9
Ni35-CP40-FZ3X2 . . . . .	C53	Ni60-K90SR-VN4X2/M20 . . . . .	C63	RK 4.4T-* . . . . .	K9
Ni35-CP40-VN4X2 . . . . .	C51	Ni60-K90SR-VP4X2 . . . . .	C63	RK 4.4T-*/S101 . . . . .	K9
Ni35-CP40-VP4X2 . . . . .	C51	Ni60-K90SR-VP4X2/M20 . . . . .	C63	RK 4.4T-*/S90 . . . . .	K9
Ni35U-CK40-ADZ30X2-B1131 W/BS 4 . . . .	C49	Ni60-K90-VN4X-B2141 . . . . .	C61	RK 4.5T-* . . . . .	K10
Ni35U-CK40-ADZ30X2-B3131 W/BS 4 . . . .	C49	Ni60-K90-VP4X-B2141 . . . . .	C61	RK 4.5T-*/S101 . . . . .	K10
Ni35U-CK40-AN6X2-H1141 W/BS 4 . . . .	C47	Ni60-Q80-Y0X . . . . .	C59	RK 4.5T-*/S618 . . . . .	K10
Ni35U-CK40-AP6X2-H1141 W/BS 4 . . . .	C47	Ni60-Q80-Y1X . . . . .	C59	RK 4.5T-*/S653 . . . . .	K10
Ni35U-CK40-VP6X2-H1141 . . . . .	C47	Ni65R-S32SR-VP44X . . . . .	J29	RK 4.5T-*/S715 . . . . .	K10
Ni40-CP40-FZ3X2/S100 . . . . .	C53	Ni70U-Q80-VN4X2-H1141 . . . . .	B17	RK 4.5T-*/S90 . . . . .	K10
Ni40-CP80-FZ3X2 . . . . .	C57	Ni70U-Q80-VN4X2-H1141 . . . . .	C59	RK 4T-* . . . . .	K8
Ni40-CP80-FZ3X2/S100 . . . . .	C57	Ni70U-Q80-VP4X2-H1141 . . . . .	B17	RK 4T-*/S101 . . . . .	K8
Ni40-CP80-VN4X2 . . . . .	C57	Ni70U-Q80-VP4X2-H1141 . . . . .	C59	RK 4T-*/S529 . . . . .	K8
Ni40-CP80-VP4X2 . . . . .	C57	Ni75U-CP80-AN6X2 . . . . .	C57	RK 4T-*/S618 . . . . .	K8
Ni40-CP80-Y1 . . . . .	C57	Ni75U-CP80-AP6X2 . . . . .	C57	RK 4T-*/S715 . . . . .	K8
Ni40-G47SR-FZ3X2 . . . . .	D191	Ni75U-CP80-ASIX2 . . . . .	C57	RK 4T-*/S90 . . . . .	K8
Ni40-G47SR-VN4X2 . . . . .	D191	Ni75U-CP80-FDZ30X2 . . . . .	C57	RKG 4.4T-* . . . . .	K12
Ni40-G47SR-VP4X2 . . . . .	D191	Ni75U-CP80-VN4X2 . . . . .	C57	RKG 4.4T-*/S600 . . . . .	K12
Ni40R-S32SR-VP44X . . . . .	J29	Ni75U-CP80-VP4X2 . . . . .	C57	RKG 4.4T-*/S90 . . . . .	K12
Ni40U-CP40-AN6X2 . . . . .	C51	Ni100R-S32XL-VP44X-H1141 . . . . .	J31	RKG 4T-*/S600 . . . . .	K12
Ni40U-CP40-AP6X2 . . . . .	C51	Ni100U-K90SR-VP4X2 . . . . .	C63	RKM 20-* . . . . .	K18
Ni40U-CP40-ASIX2 . . . . .	C51	PKG 3M-* . . . . .	K14	RKM 30-*M . . . . .	K18
Ni40U-CP40-FDZ30X2 . . . . .	C53	PKG 3M-*/S90 . . . . .	K14	RKM 30-*M/S90 . . . . .	K18
Ni40U-CP40-VN4X2 . . . . .	C51	PKG 3Z-* . . . . .	K14	RKM 31-*M . . . . .	K18
Ni40U-CP40-VP4X2 . . . . .	C51	PKG 3Z-*/S90 . . . . .	K14	RKM 40-*M . . . . .	K19
Ni50-CP80-FDZ30X2 . . . . .	C57	PKG 4M-* . . . . .	K15	RKM 40-*M/S90 . . . . .	K19
Ni50-CP80-FDZ30X2/S100 . . . . .	C57	PKG 4M-*/S90 . . . . .	K15	RKM 50-*M . . . . .	K19
Ni50-CP80-FZ3X2 . . . . .	C57	PKG 4Z-* . . . . .	K15	RKM 50-*M/S90 . . . . .	K19
Ni50-CP80-VN4X2 . . . . .	C57	PKG 4Z-*/S90 . . . . .	K15	RU100-CP40-AP6X2 W/ESD . . . . .	H15
Ni50-CP80-VP4X2 . . . . .	C57	PT-M05 . . . . .	L27	RU100-CP40-LIUX W/ESD . . . . .	H15
Ni50-CP80-Y1 . . . . .	C57	PT-M08 . . . . .	L27	RU100-M18-AP8X-H1141 . . . . .	H11
Ni50-K90SR-Y1 . . . . .	C63	PT-M12 . . . . .	L27	RU100-M18-LIX-H1141 . . . . .	H11
Ni50-K90SR-Y1/M20 . . . . .	C63	PT-M18 . . . . .	L27	RU100-M30-AP8X-H1141 . . . . .	H11
Ni50-Q80-LIU-H1141 . . . . .	F13	PT-M30 . . . . .	L27	RU100-Q30-AP8X-H1141 . . . . .	H15
Ni50U-CK40-AN6X2-H1141 W/BS 4 . . . .	B17	PT-PG 13.5 . . . . .	L27	RU100-Q30-LUX-H1141 . . . . .	H15
Ni50U-CK40-AP6X2-H1141 W/BS 4 . . . .	B17	PT-PG 21 . . . . .	L27	RU20-M18K-LFX-H1141 . . . . .	H9
Ni50U-CK40-VN4X2-H1141 W/BS 4 . . . .	B17	PT-PG 36 . . . . .	L27	RU20-M18KS-LFX-H1141 . . . . .	H9
Ni50U-CK40-VP4X2-H1141 W/BS 4 . . . .	B17	PT-PG 9 . . . . .	L27	RU30-M18-AP8X-H1141 . . . . .	H11
Ni50U-CP40-AN6X2 . . . . .	B17	QM-08 . . . . .	L5	RU30-M18-LIX-H1141 . . . . .	H11
Ni50U-CP40-AP6X2 . . . . .	B17	QM-08L . . . . .	L5	RU30-M30-AP8X-H1141 . . . . .	H11
Ni50U-CP40-AP6X2 . . . . .	C51	RK 4.21T-* . . . . .	K7	RU30-Q30-AP8X-H1141 . . . . .	H15
Ni50U-CP40-VN4X2 . . . . .	C51	RK 4.21T-*/S90 . . . . .	K7	RU30-Q30-LUX-H1141 . . . . .	H15
Ni50U-CP40-VP4X2 . . . . .	C51	RK 4.2T-* . . . . .	K7	RU600-M3065-AP8X-H1141 . . . . .	H13
Ni60-K90-AZ3X-B2131 . . . . .	C61	RK 4.2T-*/S674 . . . . .	K7	RU70-M18K-LFX-H1141 . . . . .	H9
Ni60-K90SR-FDZ30X2 . . . . .	C63	RK 4.2T-*/S90 . . . . .	K7	RU70-M18KS-LFX-H1141 . . . . .	H9
Ni60-K90SR-FDZ30X2/M20 . . . . .	C63	RK 4.41T-* . . . . .	K9	RUC130-M30-2AP8X-H1151 . . . . .	H11

RUC130-M30-LIAP8X-H1151 . . . . .	H11	Si15-K30-AN6 . . . . .	J35	T-Q50-D . . . . .	L20
RUC300-M3047-2AP8X-H1151 . . . . .	H13	Si15-K30-AN6X . . . . .	J35	T-Q50-T . . . . .	L20
RUC300-M3047-AP8X-H1141 . . . . .	H13	Si15-K30-AN6X-H1141 . . . . .	J35	TSG-12 . . . . .	L15
RUC30-M30-2AP8X-H1151 . . . . .	H11	Si15-K30-AP6 . . . . .	J35	TSG-18 . . . . .	L15
RUC30-M30-AN8X-H1141 . . . . .	H11	Si15-K30-AP6X . . . . .	J35	TSG-30 . . . . .	L15
RUC600-M3065-2AP8X-H1151 . . . . .	H13	Si15-K30-AP6X-H1141 . . . . .	J35	TWD-12S . . . . .	L21
RUC600-M3065-AP8X-H1141 . . . . .	H13	Si15-K30-AZ3 . . . . .	J35	TWD-18S . . . . .	L21
RUN20-M18K-AP8X-H1141 . . . . .	H9	Si15-K30-VN6 . . . . .	J35	TWD-18S-1 . . . . .	L21
RUN20-M18KS-AP8X-H1141 . . . . .	H9	Si15-K30-VP6 . . . . .	J35	TWD-30S . . . . .	L22
RUN70-M18K-AP8X-H1141 . . . . .	H9	Si15-K30-Y1 . . . . .	J35	TWD-40S . . . . .	L22
RUN70-M18KS-AP8X-H1141 . . . . .	H9	Si30-K33-AZ3 . . . . .	J35	TWT-18S . . . . .	L21
RUR20-M18K-AP8X-H1141 . . . . .	H9	Si30-K33-VN6 . . . . .	J35	TWT-18S-1 . . . . .	L21
RUR20-M18KS-AP8X-H1141 . . . . .	H9	Si30-K33-VN6X . . . . .	J35	TWT-30S . . . . .	L22
RUR70-M18K-AP8X-H1141 . . . . .	H9	Si30-K33-VP6X . . . . .	J35	TWT-30S-SHORT . . . . .	L22
RUR70-M18KS-AP8X-H1141 . . . . .	H9	Si30-K33-Y1X . . . . .	J35	TWT-40S . . . . .	L22
SG40/2 . . . . .	L15	SMC-325 . . . . .	G22	TWTS-1.5-30 . . . . .	L21
SG-Bi 0.8-0.64 . . . . .	L16	SP-__-C . . . . .	L17	TWTS-2-30 . . . . .	L21
SG-Bi 1-0.81 . . . . .	L16	TB 1-B . . . . .	L28	TWU-30B . . . . .	L23
SG-Bi 2-1.62 . . . . .	L16	TBZE-L . . . . .	L12	TWU-40B . . . . .	L23
SG-Bi 5-4.05 . . . . .	L16	TBZE-R . . . . .	L12	Wi40-M18-LIU5 . . . . .	F25
SG-Bi10-8.1 . . . . .	L16	T-CK40-D-FC . . . . .	L19	Wi70-M18-LIU5 . . . . .	F25
SG-Bi15-12.15 . . . . .	L16	T-CK40-T-FC . . . . .	L19	WIM40-NTL68-LIU5X-V1141 . . . . .	F11
SG-Ni 2-1.62 . . . . .	L16	T-CK40-T-MCB . . . . .	L19	WIM40-Q20L60-LIU5-H1141 . . . . .	F11
SG-Ni 4-MG12-3.24 . . . . .	L16	T-CK40-T-MCC . . . . .	L19	WIM40-Q20L60-LIU5-H1141/S400 . . . . .	F11
SG-Ni 4-S12-3.24 . . . . .	L16	T-CP40-T-C . . . . .	L19	WIM40-STL68-LIU5X-V1141 . . . . .	F11
SG-Ni 5-4.05 . . . . .	L16	T-CP80-T . . . . .	L19	WIM70-Q20L100-LIU5-H1141 . . . . .	F11
SG-Ni 8-6.48 . . . . .	L16	TMF 12-G . . . . .	L24	WP-08-50-03 . . . . .	L4
SG-Ni10-MG18-8.1 . . . . .	L16	TMF 13.5-14 . . . . .	L24	WP-12-100-06 . . . . .	L4
SG-Ni10-P18-8.1 . . . . .	L16	TMF 18-G . . . . .	L24	WP-12-50-03 . . . . .	L4
SG-Ni15-MG30-12.15 . . . . .	L16	TMF 18-MS . . . . .	L24	WP-12-50-06 . . . . .	L4
Si 2-K08-Y1 . . . . .	J33	TMF 30-G . . . . .	L24		
Si 3.5-K10-AN7 . . . . .	J33	TMF 30-MS . . . . .	L24		
Si 3.5-K10-AP6X . . . . .	J33	TMF 47-G . . . . .	L24		
Si 3.5-K10-Y1 . . . . .	J33	TMF 9-14 . . . . .	L24		
Si 5-K09-Y1 . . . . .	J33	T-Q08-T-MCC . . . . .	L20		
Si 5-K09-Y1 0.5M . . . . .	J33	T-Q34-D-FC . . . . .	L20		



**REGISTRATION INSTRUCTIONS**

(TO BE COMPLETED BY THE END USER OF THE SENSORS)  
THIS INFORMATION WILL BE KEPT IN STRICT CONFIDENCE

- STEP 1: Please make a Photocopy of this form.  
STEP 2: Fill in all information below.  
STEP 3: Line 13 (to put this warranty into effect, it must be validated by the signature of the End-User and an authorized **TURCK** Distributor or Representative.  
STEP 4: Return this Registration to **TURCK** (keep a copy for your records).

Date: \_\_\_\_\_  
**LIFETIME WARRANTY REGISTRATION**  
(INDUCTIVE, INDUCTIVE MAGNET & CAPACITIVE SENSORS ONLY)

Please Print  
End User

1. Company Name: \_\_\_\_\_
2. Division: \_\_\_\_\_ Dept: \_\_\_\_\_
3. Address: \_\_\_\_\_
4. City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
5. Phone: ( ) \_\_\_\_\_ Your Name: \_\_\_\_\_  
Your Title: \_\_\_\_\_
6. Industry (Type of Product Manufactured or Service Performed at this Location): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Approx. Date Purchased: \_\_\_\_\_
8. Approx. Date Installed: \_\_\_\_\_
9. What is the General Application for this Product? \_\_\_\_\_  
\_\_\_\_\_
10. Which OEM Supplied the Mechanical Equipment on which the Sensors are Installed?  
Name: \_\_\_\_\_ Location: \_\_\_\_\_
11. **TURCK** Sensors Installed: \_\_\_\_\_ Approx. Quantity  
Catalog Number \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
12. Why were **TURCK** Sensors Specified for this Application?  
\_\_\_\_\_  
\_\_\_\_\_
13. Distributor or Representative Signature: \_\_\_\_\_  
Company Name: \_\_\_\_\_ Date: \_\_\_\_\_  
End User Signature: \_\_\_\_\_ Date: \_\_\_\_\_

14. **Return to USA:**  
**TURCK Inc.**  
3000 Campus Drive  
Minneapolis, MN. 55441  
Attn: Warranty Department  
Phone: (763) 553-7300  
Fax: (763) 553-0708

**Return to Canada:**  
**CHARTWELL ELECTRONICS, INC.**  
140 Duffield Drive  
Markham, Ontario  
Canada, L6G 1B5  
Phone: (905) 513-7100  
Fax: (905) 513-7101

## Warranty Terms and Conditions

### RISK OF LOSS

Delivery of the equipment to a common carrier shall constitute delivery to the Purchaser and the risk of loss shall transfer at that time to Purchaser. Should delivery be delayed due to an act or omission on the part of the Purchaser, risk of loss shall transfer to the Purchaser upon notification by **TURCK Inc.** that the order is complete and ready for shipment.

### WARRANTIES

**TURCK INC.** (hereinafter “**TURCK**”) offers five (5) **WARRANTIES** to cover all products sold. They are as follows:

- 1) The **12-MONTH WARRANTY** is available for the products listed - generally those not covered by **LIFETIME, 5-YEAR, 24-MONTH** or **18-MONTH** warranty. No registration required.
- 2) The **18-MONTH WARRANTY** is available for the products listed - generally those not covered by **LIFETIME** or **5-YEAR WARRANTY**. No registration is required.
- 3) The **24-MONTH WARRANTY** is available for the products listed - generally those not covered by **LIFETIME, 5-YEAR** or **18-MONTH**. No registration is required.
- 4) The **5-YEAR WARRANTY** is available generally for the products listed. No registration is required.
- 5) A **LIFETIME WARRANTY** is available for the products listed. It becomes effective when the accompanying **TURCK LIFETIME WARRANTY REGISTRATION** is completed and returned to **TURCK**.

### GENERAL TERMS AND CONDITIONS FOR ALL WARRANTIES

- **12-MONTH STANDARD WARRANTY**
- **18-MONTH STANDARD WARRANTY**
- **24-MONTH STANDARD WARRANTY**
- **5-YEAR WARRANTY**
- **LIFETIME WARRANTY**

**TURCK** warrants the Products covered by the respective **WARRANTY AGREEMENTS** to be free from defects in material and workmanship under normal and proper usage for the respective time periods listed above from the date of shipment from **TURCK**. In addition, certain specific terms apply to the various **WARRANTIES**.

**THESE EXPRESS WARRANTIES ARE IN LIEU OF AND EXCLUDE ALL OTHER REPRESENTATIONS MADE - BOTH EXPRESSED AND IMPLIED. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE FOR PRODUCTS COVERED BY THESE TERMS AND CONDITIONS.**

**TURCK** warrants that the goods sold are as described, but no promise, description, affirmation of fact, sample model or representation, oral or written shall be part of an order, unless set forth in these terms and conditions, or are in writing and signed by an authorized representative of **TURCK**. These **WARRANTIES** do not apply to any Product which has been subject to misuse, negligence, or accident - or to any Product which has been modified or repaired, improperly installed, altered, or disassembled -except according to **TURCK's** written instructions.

These **WARRANTIES** are subject to the following conditions:

- 1) These **WARRANTIES** are limited to the electronic and mechanical performance only, as expressly detailed in the Product specifications and **NOT** to cosmetic performance.
- 2) These **WARRANTIES** shall not apply to any cables attached to, or integrated with the Product. However, the **18-MONTH WARRANTY** shall apply to cables sold separately by **TURCK**.
- 3) These **WARRANTIES** shall not apply to any Products which are stored, or utilized, in harsh environmental or electrical conditions outside **TURCK's** written specifications.
- 4) The **WARRANTIES** are applicable only to Products shipped from **TURCK** subsequent to January 1, 1988.

### ADDITIONAL SPECIFIC TERMS FOR -

(**12-MONTH STANDARD WARRANTY**) for Linear Displacement Transducers and RFID products.

(**18-MONTH STANDARD WARRANTY**) FOR ULTRASONIC SENSORS, CABLES AND ALL NON-SENSING PRODUCTS SOLD BY **TURCK INC.** INCLUDING MULTI-SAFE, MULTI-MODUL, MULTI-CART AND RELATED AMPLIFIER PRODUCTS, RELAYS AND TIMERS.

(**24-MONTH STANDARD WARRANTY**) FOR ENCODERS.

**5-YEAR WARRANTY FOR INDUCTIVE AND CAPACITIVE PROXIMITY SENSORS: The periods covered for the above WARRANTIES and Products shall be 12 MONTHS, 18-MONTHS, 24-MONTHS and 5-YEARS, respectively, from the date of shipment from TURCK.**

**Warranty Terms and Conditions**

**ADDITIONAL SPECIFIC TERMS FOR - (continued)**

**LIFETIME WARRANTY (OPTIONAL - REGISTRATION REQUIRED) FOR INDUCTIVE, INDUCTIVE MAGNET OPERATED AND CAPACITIVE PROXIMITY SENSORS SOLD TO THE ORIGINAL PURCHASER FOR THE LIFETIME OF THE ORIGINAL APPLICATION.**

**The following terms apply to the LIFETIME WARRANTY in addition to the General Terms:**

- 1) This WARRANTY shall be effective only when the LIFETIME WARRANTY REGISTRATION has been completed, signed by the End User and an authorized **TURCK** Representative or Distributor and has been received by **TURCK** no later than six (6) months after installation in the End User's Plant, or two (2) years from the date product was shipped from **TURCK**, whichever is sooner.
- 2) This warranty is available only to **TURCK's** authorized Representatives, Distributors and to the Original User. (The term "Original User" means that person, firm, or corporation which first uses the Product on a continuous basis in connection with the operation of a production line, piece of machinery, equipment, or similar device.) In the event the ownership of the product is transferred to a person, firm or corporation other than the Original User, this WARRANTY shall terminate.
- 3) This WARRANTY is applicable only to the Original Application. In the event the machinery, equipment, or production line to which the Product is connected, or on which it is installed, is substituted, changed, moved or replaced, the WARRANTY shall terminate.
- 4) This WARRANTY shall be valid only if the Product was purchased by the Original User from **TURCK**, or from an authorized **TURCK** Distributor, or was an integral part of a piece of machinery and equipment obtained by the Original user from an Original Equipment Manufacturer, which itself, was purchased directly from **TURCK** or from an authorized Distributor.

**PURCHASER'S REMEDIES**

This Remedy shall apply to all WARRANTIES. If a **TURCK** Distributor desires to make a WARRANTY Claim, the Distributor shall, if requested by **TURCK**, ship the Product to **TURCK's** factory in Minneapolis, Minnesota, postage or freight prepaid. If the User desires to make a WARRANTY Claim, they shall notify the authorized **TURCK** Distributor from whom it was purchased or, if such Distributor is unknown, shall notify **TURCK**. **TURCK** shall, at its option, take any of the following two courses of action for any products which **TURCK** determines are defective in materials or workmanship.

- 1) Repair or replace the Product and ship the Product to the Original Purchaser or to the authorized **TURCK** Distributor, postage or freight prepaid; or
- 2) Repay to the Original Purchaser that price paid by the Original Purchaser; provided that if the claim is made under the LIFETIME WARRANTY, and such Product is not then being manufactured by **TURCK**, then the amount to be repaid by **TURCK** to the Original Purchaser shall be reduced according to the following schedule:

<b><u>Number of Years Since Date of Purchase by Original Purchaser</u></b>	<b><u>Percent of Original Purchase Price To Be Paid by TURCK</u></b>
<b>10</b>	<b>50%</b>
<b>15</b>	<b>25%</b>
<b>20</b>	<b>10%</b>
<b>More than 20</b>	<b>5%</b>

**PURCHASER'S REMEDIES SHALL BE LIMITED EXCLUSIVELY TO THE RIGHT OF REPLACEMENT, REPAIR OR REPAYMENT AS PROVIDED AND DOES NOT INCLUDE ANY LABOR COST OR REPLACEMENT AT ORIGINAL PURCHASER'S SITE. TURCK SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF ANY WARRANTY, EXPRESSED OR IMPLIED, APPLICABLE TO THE PRODUCT, INCLUDING WITHOUT LIMITATION, ANY DAMAGES RESULTING FROM PROPERTY DAMAGE, PERSONAL INJURY OR BUSINESS INTERRUPTION.**

**CONSIDER SAFETY AND PROTECTION PRECAUTIONS**

**TURCK** takes great care to design and build reliable and dependable products, however, some products can fail eventually. You must take precautions to design your equipment to prevent property damage and personal injury in the unlikely event of failure. As a matter of policy, **TURCK** does NOT recommend the installation of electronic controls as the sole device FOR THE PROTECTION OF PERSONNEL in connection with power driven presses, brakes, shears and similar equipment and, therefore, the customer should build in redundancy or dual control using approved safety devices for these applications.

**GOVERNING LAW**

The sale and purchase of Products covered hereby and all terms and conditions hereof shall be governed by the law of the State of Minnesota.

**Notes:**

# SIGN UP FOR TURCK'S E-NEWSLETTER TODAY!



Industrial  
Automation

**...Sense It!...Connect It!...Bus It!**

**TURCK TIMES** [www.turck.com](http://www.turck.com)

Issue 4 | Feb. 2007

**WHAT'S NEW**

**TURCK's NEW Proximity Sensors for High Temperatures**

TURCK's high temperature proximity sensors operate at up to 250°C (482°F), and are perfect for drying and curing ovens found in automotive painting systems.



Sensors of this type can be replaced as often as once per year in the auto industry. TURCK sensors are unique in that the more vulnerable sensing head is separate from the electronic amplifier. This means only the sensing head, not the electronic amplifier, needs replacement upon failure, resulting in a huge cost savings. Take, for example, 10 sensors in an installation:

Competitor's high temp. sensor	= \$1,000 x 10 sensors per year	= \$10,000
TURCK's high temp. sensor	= \$899* x 10 sensors per year	= \$8,990
<b>Savings incurred by using TURCK in the first year</b>		<b>= \$1,010</b>

\* \$242 for TURCK's electronic module + \$657 for the sensing head

Competitor's high temp. sensor year 2	= \$10,000
TURCK's high temp. sensor year 2	= \$6,570 (will only need new sensing heads)
<b>Saving incurred in year 2</b>	<b>= \$3,430</b>

Using TURCK sensors for two years essentially results in 6 free sensing heads! Your third year purchasing TURCK sensors is essentially cut in half.

**TIPS FROM TURCK**

Retractable cables function for more than just robotic applications. A great place to use retractable cables is on conveyors. When the conveyor needs to be moved for maintenance and other reasons, cables connected to the assembly must be disconnected and reconnected later on.

The much easier option: retractable cables that simply extend and retract with the conveyor.



**Next issue...**

Alternative methods for SCADA.

Connectivity questions to ask before your next install.

**NEW PRODUCTS**

- \* Intelligent temperature sensors
- \* IP 67 power supply
- \* Low-cost I/O management

## Register to receive the TURCK TIMES...

Our interactive e-newsletter full of exclusive insights, tips and tools to help make your manufacturing processes run smoothly. The TURCK Times is your source for news about TURCK products and industry updates.

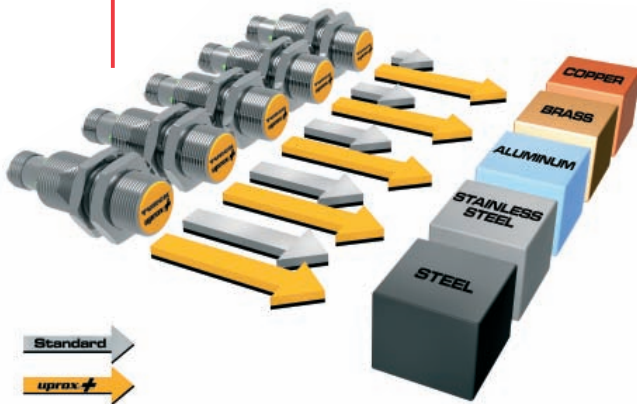
Registering is easy and only requires your e-mail address. You are not obligated for future contact or purchase, and you may opt-in or out of the e-mail list at any time! We value your time and privacy, and will not share your information with another party.

Sign up today at [www.turck.com/elist](http://www.turck.com/elist)!

proven tips for ...

# SENSOR SUCCESS

In a perfect automation world, sensors never need to be replaced. They never die, never get hit, and never suffer the effects of their environment. But in the real world this sort of thing happens all too often, and increases the amount of sensors needed on hand at any given point in time. Stocking replacement sensors for your applications can be a headache. There's the time it takes to find the right replacement, the confusion that goes along with finding the correct shape with the correct sensing range, the space it takes to stock all this inventory and, of course, the cash invested.



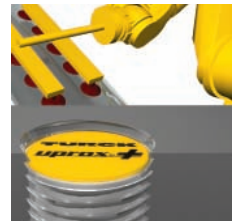
TURCK uprox+ Factor 1 sensors sense all metals at the same sensing range.

How can the spare stock be reduced? There are several ways to reduce sensor stock levels, but one of the easiest and most efficient is standardization. Standardizing on styles, sizes and brands is a great first step to lessening your sensor stock.

Using smaller sensors with extended range is another great way to reduce your sensor stock. Sensors that are specified for extended range can replace several (often bulkier) other sensors, thereby reducing the number and type of sensors required to do the job. A smaller sensor also offers increased mounting flexibility, as it can fit in places larger sensors cannot.

If your targets are non-ferrous, be sure to use Factor 1 sensors. Factor 1 sensors achieve longer sensing ranges than traditional sensors, because these sensors can detect non-ferrous metals at the same rated distance as steel. Many Factor 1 sensors also lack a ferrite core, allowing them to be incorporated into unique and nontraditional housings that may easily replace other sensors, therefore reducing the amount of sensors needed to keep on hand.

It may seem like common sense, but it is good practice to mount a sensor so there is little likelihood it will be hit by the target. A target hitting a sensor is the No. 1 cause of sensor failure. If the application or location requires a sensor to be very close to the target, try to use a sensor that can be recessed in its mounting apparatus to promote a higher degree of protection from the target. It is vital to choose a sensor that has been designed for recessed mounting, as a conventional proximity sensor will lock on if recessed in metal.



Sensors recessed in metal avoid being damaged by the target.

EMI/RFI can interact with sensing elements, causing the sensor to lock on or "chatter". Noise emitting devices can range from two-way radios to motors and drives, so the likelihood that a sensor will be exposed to EMI/RFI is relatively high. This will only increase as the use of wireless communication increases. Several sensors have been designed for noise immunity, including Factor 1 sensors. If you use Factor 1 sensors you shouldn't have to stock both these and noise-immune sensors.



A quick-disconnect sensor and cordset combination.

Another way to reduce your overall stock levels is to standardize the sensor's connector sizes, along with corresponding cables/cordsets. Choosing a quick disconnect sensor/cable combination will also lessen installation time.

This might sound basic, but make sure your sensor supplier has local support or is willing to visit your location – wherever it is. Sometimes sensors need to be applied in tricky situations and remote support from your supplier just won't cut it. Even the best sensors sometimes need onsite troubleshooting. When issues arise, you want to make sure you can get reliable support where you need it – and fast.

proven tips for ...

# CONNECTIVITY SUCCESS

Understanding the choices and options for your system's connectivity early in the design process is essential to making the right connector/cordset selections. This knowledge can reduce cost, increase efficiency and lessen headaches later in the design process.

» **Begin the design process sooner rather than later.**

Knowing the connectivity requirements needed for an application's specifications early in the process will help lessen errors and connection issues later in design implementation.

» **Identify the connection pieces.**

Do you need straight or right angle connectors? Nickel-plated brass or stainless steel connectors? Junction boxes or splitters?

» **Identify connector specifics (threads, pins, terminals, etc.).**

Does your application require the transfer of data or power? What will the cables be connected to and how?

» **Establish voltage and current limits.**

It is good practice to troubleshoot the minimum/maximum current that will be traveling over the cable when determining cable usage.

» **Identify application environment.**

Does the environment require welding, high-flex robotics, cut/abrasion immunity, RFI/EMI shielding? Does it require washdowns or sanitary/hygienic conditions?

» **Identify approvals that may impact cable usability.**

Cables are approved by agencies like the NEC, UL or CSA for use in industrial and process environments.

» **Determine diagnostic requirements.**

LEDs can aid in error identification and lessen the time it takes to fix problems and get back online.

» **Identify wiring esthetic options (color coding, labeling, etc.).**

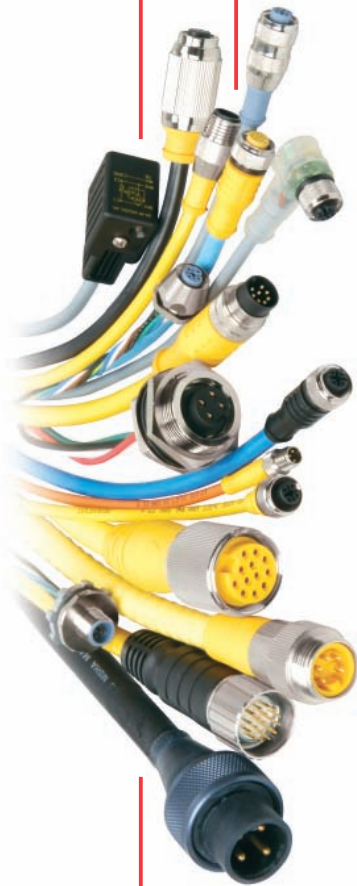
Color coding wires and special labeling eases installation time and helps reduce errors. Did you know that **TURCK** engineers can help you design a cordset/connector product proprietary to your application?

» **Determine protection requirements.**

**TURCK** cordsets and connectors are rated for IP protection, as well as NEMA rated for indoor/outdoor usability.

» **Identify unique application requirements.**

Need to mold a customer supplied connector or private label? **TURCK** engineers can design cordsets for unique applications, including custom harnesses and cable assemblies.



**TURCK** project engineers are available to answer all your questions and assist you with finding a connectivity solution to your design challenge. For more information on making the right connectivity choices, visit [www.turck-usa.com/Press\\_Room](http://www.turck-usa.com/Press_Room) and browse all the latest **TURCK** white papers, case studies and product information.

## **TURCK USA**

TURCK Inc.  
3000 Campus Drive  
Minneapolis, MN 55441  
Phone: (763) 553-7300  
Fax: (763) 553-0708  
Application Support:  
1-800-544-7769

## **TURCK Mexico**

TURCK Mexico S. de R.L. de C.V.  
Carr. Saltillo-Zacatecas km 4.5 s/n  
Parque Industrial La Angostura  
Saltillo, COAH. CP. 25070  
Phone: 011 +52 (844) 411-6647/46  
Fax: 011 +52 (844) 482-6926  
Toll Free: 01-800-01-TURCK (Mexico only)  
(01-800-01-88725)  
email: ventasmexico@turck.com

## **TURCK Canada**

CHARTWELL  
ELECTRONICS, INC.  
140 Duffield Drive  
Markham, Ontario  
Canada, L6G 1B5  
Phone: (905) 513-7100  
Fax: (905) 513-7101  
Toll Free: 1-877-513-7769

## **TURCK**

### **World Headquarters**

Hans TURCK GmbH & Co. KG  
Witzlebenstrasse 7  
D-45472 Muelheim an der Ruhr  
Federal Republic of Germany  
Phone: (+49) 208-49 52-0  
Fax: (+49) 208-49 52 264

**....Sense It!....Connect It!....Bus It!**