



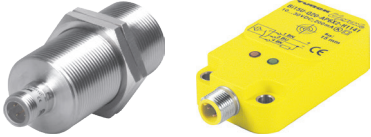


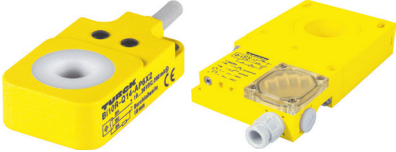
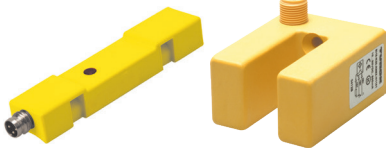


# Specialty Sensor Section

Specialty Sensors			
			
Housing	Barrel and Rectangular	12, 18, and 30 mm	40, 80, and 160 mm
Features	Washdown Uprox+	High Temperature Sensors	High Temperature Sensors
Pages	C9 - 14	C15 - 20	C21




Specialty Sensors			
			
Housing	8, 12, 18, and 30 mm	Barrel and Rectangular	30 mm
Features	Stainless Steel Face Sensors	Mobile Equipment Sensors	High Current Solid State Sensors
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Specialty Sensors			
			
Housing	12, 18, and 30 mm	Variable	Variable
Features	FM, Class I Div 2 Approved Sensors	Ring Sensing	Tube and Slot Sensing
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We reserve the right to make technical alterations without prior notice.

## Specialty Sensor Selection Guide

Specialty Sensors			
			
Housing	12 mm	80 and 130 mm	130 mm
Features	Weld Nut Detection Sensor	Edge Detection Sensing	Can Line Sensing
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Specialty Sensors			
			
Housing	8, 12, and 18 mm	18 mm	Barrel and Rectangular
Features	Magnetic Inductive Sensing	Submersible	Selective Metal Sensing
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Specialty Sensors		
		
Housing	12 and 18 mm	18 and 30 mm
Features	In Cylinder Sensor	Rotational Speed Monitoring
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Specialty Sensors

# Specialty Sensor Part Number Key

B	I	10	U	-	G	T	30	-	A	DZ	30	X2		Wiring Option*	Special Option Code**
<b>Mounting</b>														<b>Number of LEDs</b>	
B = embeddable														(blank) = no LEDs	
BID = high pressure sensor														X = 1 LED	
N = nonembeddable														X2 = 2 LEDs	
S = slot															
<b>Principle of Operation</b>														<b>Voltage Range</b>	
I = inductive														<b>AC/DC: (No SCP**)</b>	
IM = inductive magnet operated														3 = 20-250 VAC, 10-300 VDC	
<b>Rated Operating Distance (mm)</b>														<b>AC/DC: (Latched SCP)</b>	
														30 = 20-250 VAC, 10-300 VDC 400 mA	
<b>Sensing Characteristics</b>														<b>DC:</b>	
FE = ferrous only														4 = 10-65 VDC, polarity protected, pulsed SCP**	
R = ring sensor														6 = 10-30 VDC, polarity protected, pulsed SCP	
U = Uprox® Sensor														44 = 10-55 VDC	
														45 = 8.4-65 Volts	
<b>Housing Material Modifier</b>														<b>Output</b>	
E = stainless steel														D = 2-wire DC (transistor output)	
														DZ = 2-wire AC/DC, (power MOSFET output)	
<b>Housing Style</b>														N = NPN transistor (current sinking)	
<b>Barrel - Metal</b>														P = PNP transistor (current sourcing)	
G = full threading, generally chrome plated brass														Z = 2-wire AC or 2-wire AC/DC	
H = smooth, chrome plated brass or stainless steel														M = high current solid state relay	
M = partial threading, chrome plated brass															
<b>Barrel - Plastic</b>														<b>Output Function</b>	
K = smooth														A = normally open (N.O.)	
P = full threading														DA = dynamic output (ring sensor), normally open	
S = partial threading														R = normally closed (N.C.)	
<b>Rectangular</b>														U = jumper programmable (N.O. or N.C.)	
Q = metal or plastic, various rectangular styles														V = complementary outputs: one N.O., one N.C.	
<b>Limit Switch</b>														Y0 = NAMUR output, requires switching amplifier	
CA = stubby®, short aluminum housing, connector														Y1 = NAMUR output, requires switching amplifier, ATEX approved	
CK = stubby®, short plastic housing, connector															
<b>Slot</b>														<b>Secondary Barrel Modifier</b>	
K = slot sensor, plastic housing														E = extended barrel length	
<b>Ring</b>														EE = extra long barrel length	
32SR = large plastic housing, static or dynamic output														FE = stainless steel face, extended barrel length	
Q = small rectangular plastic housing, static output														FM = stainless steel face, medium barrel length	
W = small plastic housing, dynamic output														M = medium barrel length	
														TC = terminal chamber	
														WD = washdown IP67/IP68/IP69K	
														F = stainless steel face, standard length	
<b>Primary Barrel Modifier</b>															
T = PTFE® coated															
<b>Housing Diameter or Height (mm)</b>															

## NOTE:

Part number keys are to assist in identification only.  
 Verify new part numbers with factory; some configurations are not possible.  
 \* See next page Wiring Options and Special Option Codes.

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## Specialty Sensor Part Number Key

### Wiring Options\*

#### A. Connectorized Sensor

Bi2 - M12 - AN6X2 - **H1** **1** **4** **1**

##### Connector Family

- B1 = Minifast®, 7/8"-16UN, metal, male
- B2 = Minifast, 7/8"-16UN, plastic, male
- B3 = Microfast®, 1/2"-20UNF, metal, male
- H1 = Eurofast®, M12x1, metal or plastic, male
- V1 = Picofast®, snap and M8x1, metal, male (Q08 snap only)
- 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:

- 0 = non-standard wiring
- 1 = standard wiring
- 3 = N.C. DC output on pin 4 (for US)
- 4 = N.O. 2-wire DC output on pin 4

##### Number of Pins

- 3 = 3
- 4 = 4
- 5 = 5

#### B. Potted Cable

Bi2 - G12 - AN6X **7M**

##### Cable Length

- (blank) = 2 meter cable
- 7M = 7 meter cable
- \*M = custom cable lengths available

### Special Option Codes\*\*

Bi **2-S12-AN7X** /**S100** or **Bi10R-W30-DAN6X-H1141** /**F2**

##### Example:

- /S90 = TPU cable
- /S97 = -40 °C (-40 °F) operating temperature
- /S100 = +100 °C (+212 °F) operating temperature
- /S120 = +120 °C (+248 °F) operating temperature
- /S139 = submersible
- /S907 = +160 °C (+320 °F) operating temperature
- /S1009 = 250 ms internal off delay
- /S1102 = +250 °C (+482 °F) operating temperature
- /S1751 = approved for FM Class I, Div 2, groups A, B, C, and D

##### Example:

- /F2 = alternate oscillator frequency

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Specialty Sensors

## Specialty Sensors

### Uprox+ Washdown Sensors

The Uprox+ Washdown product family is with a full line of inductive sensors that senses all metals at the same range (no correction factor), extended temperature rating from -40 to +100 °C, robust construction with IP68 and IP69k sealing ratings, and housing materials compatible with common acidic and alkaline chemicals used in Food and Beverage applications.



### Sensors with Extended Temperature Range

Turck offers sensors for applications that withstand extreme temperatures of -40 to +250 °C. Typically, these sensors are used in applications like cold storage facilities, metal foundries, glass making, outdoor applications, and in painting shops in the automotive industry.



### Stainless Steel Face Sensors

Inductive sensors with one piece stainless steel faced barrels are ideal for applications where physical impact is common or where ingress through the sensing face is a concern. The sensors are available in barrel diameters from 8 mm to 30 mm, standard and extended sensing ranges, rated IP68/IP69K, with optional coatings for welding environments, and 2 and 3-wire designs.



### Mobile Equipment Sensors

Position sensing applications in mobile equipment have different electrical requirements than what is common for industrial sensors. Turck designs and manufactures a diverse line of inductive sensors that meet or exceed the industry requirements for sealing (IP68/IP69K), load dump protection, resistance to shock, vibration, EMC immunity, extended temperature range, wide operating voltage, and extended sensing range.



### Inductive Sensor with 6 A Rated Output

This 30 mm mobile equipment sensor uses a MOSFET component to switch up to 6 amps of current with either a normally open output or a complementary normally open and closed output in a stainless steel housing. The sensor can be configured as an embeddable or nonembeddable sensor.



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## Specialty Sensors

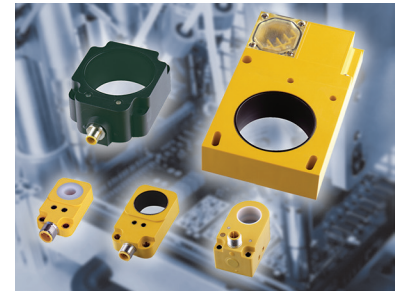
### FM Class I Div 2

The new FM approval standard permits the use of quick disconnect with a lock fast accessory equipped sensor being used in Class I Div 2, Groups A, B, C, D. The ability to use quick disconnect will enable users to install sensors faster and at a lower cost than traditional conduit methods. We also offer approved cordsets with Eurofast or Minifast connectors (when used with a Lokfast guard). All cables have the ITC-ER rating. For applications where conduit is preferred, we offer sensors with potted-in ITC rated cables.



### Inductive Ring Sensor

Turck offers a variety of ring sensor designs that detect a wide variety of target sizes, with sensor outputs to solve either static or dynamic part feeding applications. In addition to our six different ring sensor housings, Turck offers the TS12 Uprox®+ sensor, which senses all metals at the same range while functioning like a ring sensor but can be strapped onto a tube to simplify installation.



### Inductive Slot Sensors

Turck's slot sensors incorporate a U-shaped design with the active sensing face between the two arms. If the object being detected moves into the U-shaped area, the sensor is actuated. Slot sensors are capable of securely detecting targets whose distance from the active face is not clearly defined upon side approach.



### Weld Nut Sensors

Turck's magnetic weld nut sensors provide efficient and economical detection of weld nuts in automotive applications. The sensors detect ferromagnetic components, such as nuts, bushings and spacer sleeves, to ensure these components are present before robotic welding occurs. These sensors are less complex than existing devices that require additional software or electronics to detect the target.



### Can and Edge Detection Sensor

Turck's Q130 sensor is designed for easy mounting on metal can conveying systems to help detect jam ups or lack of metal cans in the conveyor, while the CK4080 and CK40130 sensors are optimized to detect the edges of metal sheets commonly used in transfer presses found in automotive or white goods stamping applications.



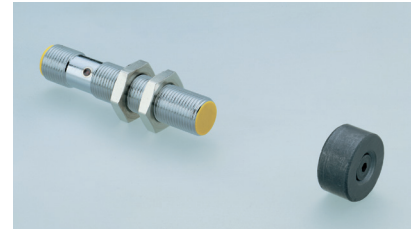
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Specialty Sensors

## Specialty Sensors

### Inductive-Magnetic Proximity Sensors

Turck's line of BIM barrel sensors are designed to work with external magnets and can be used to solve a wide variety of sensing applications, especially where the user would like long sensing ranges (up to 90 mm with DMR31-15-5 magnet) in small housings, such as 8 or 12 mm.



### Submersible Inductive Sensors

These sensors are rated for submersion in water depths up to 500 meters. The materials used to construct this 18 mm diameter sensor are seawater resistant. Available in a variety of sensing ranges and outputs.



### Selective Metal Sensors

Standard inductive sensors sense all metals. Turck's family of selective metal inductive sensors offer a reliable solution for applications where the user wants to detect ferrous metals or non-ferrous metals only.



### In-Cylinder Inductive Sensors

These inductive sensors are designed for use in a hydraulic cylinder to detect extended or retracted positions. Available in M12 or M18 barrels, these sensors can withstand static pressures up to 7,250 psi.



### Rotational Speed Sensors

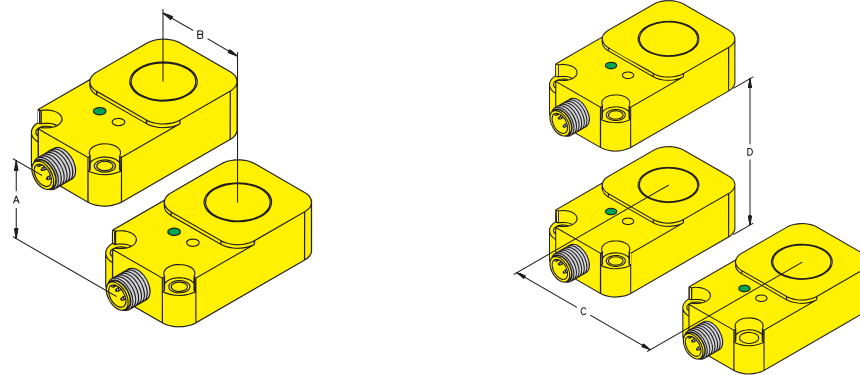
Rotational speed sensors are designed to work with a rotating metal target like a keyway or sprocket. These sensors feature a simple potentiometer for adjusting the set point and are ideal for monitoring applications where the user wants to monitor under speed or over speed conditions. If the speed is below the set point the output is off, and if the speed is above the set point the output turns on.



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## Specialty Sensors

### Ring and Tube Sensor Mounting Characteristics



Sensor Type	A	B	C	D
Bi6R-Q14	0	14	45	45
Bi6R-W30	120	6	120	120
Bi10R-Q14	30	14	45	45
Bi10R-W30	120	10	120	120
Bi15R-Q14	30	14	45	45
Bi15R-W30	120	15	120	120
Bi20R-Q14	30	14	45	45
Bi20R-W30	120	20	120	120
Ni20R-S32SR	150	150	150	150
Bi30R-Q20	40	20	55	55
Bi30R-W30	120	30	120	120
Ni40R-S32SR	150	150	150	150
Bi50R-Q80*	90	50	140	120
Ni65R-Q80*	90	65	140	150
Ni65R-S32SR	150	150	150	150
Ni100R-S32XL**	Consult data sheet	Consult data sheet	290	240
Ni20U-TS12*** (tube)	Consult data sheet	Consult data sheet	42	50

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Specialty Sensors

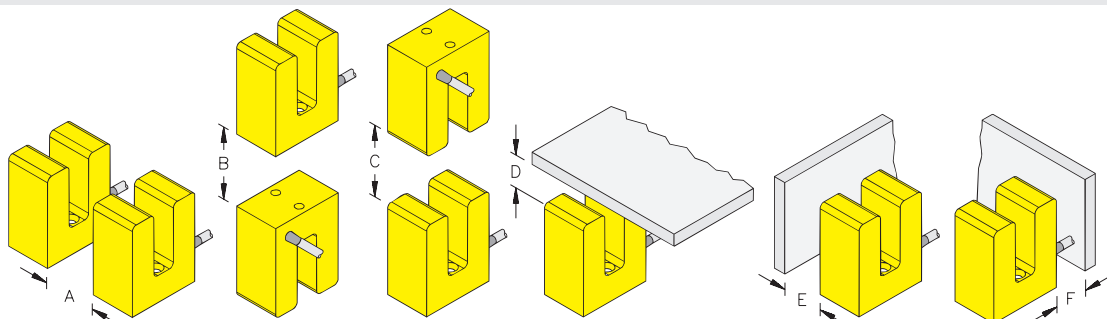
Dimensions are in mm.

\* Do not use a metal mounting bracket.

\*\* Sensitivity adjustment does affect the recommended mounting spacing. Please consult factory for assistance when using multiple sensors.

\*\*\* Spacing of multiple sensors depends on the actual number and orientation. Please contact factory for assistance.

### Slot Sensor Mounting Characteristics




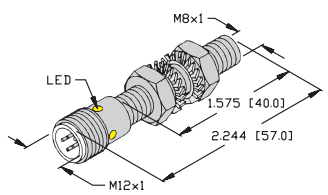
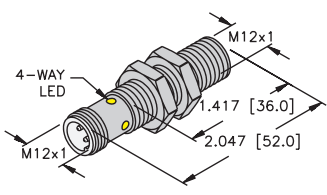
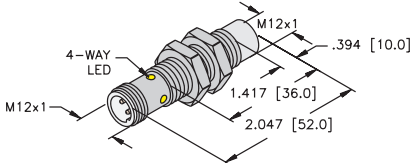
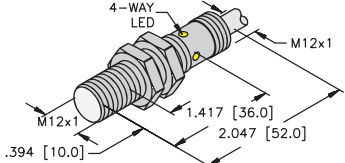
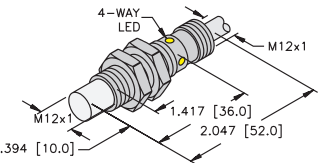
Sensor Type	A	B	C	D	E	F
Si3.5	15.00	5.00	15.00	0	0	0
Si5	10.00	0	5.00	0	0	0
Si15	30.00	10.00	30.00	5.00	5.00	5.00

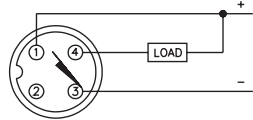
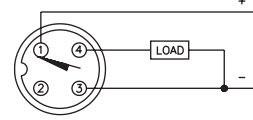
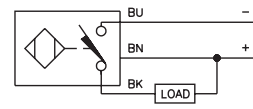
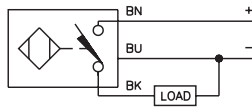
Dimensions are in mm.



# Specialty Sensors | Washdown

## Threaded Metal Barrels with Cable or Connector and 3-Wire DC Outputs

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>8 mm - Embeddable, M12 Eurofast Connection</p>	<p><b>B</b></p>  <p>12 mm - Embeddable, M12 Eurofast Connection</p>
<p><b>C</b></p>  <p>12 mm - Nonembeddable, M12 Eurofast Connection</p>	<p><b>D</b></p>  <p>12 mm - Embeddable, Potted-in Cable</p>	<p><b>E</b></p>  <p>12 mm - Nonembeddable, Potted-in Cable</p>

Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RKV 4T-*; RKV 4T-*/S90</p>	<p><b>2</b></p>  <p>Mating Cordset: RKV 4T-*; RKV 4T-*/S90</p>	<p><b>3</b></p> 	<p><b>4</b></p> 

A4		3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection:</p> <ul style="list-style-type: none"> <li><math>\geq 220\text{ mA}</math> on 200 mA Load Current</li> <li><math>\geq 170\text{ mA}</math> on 150 mA Load Current</li> <li><math>\geq 120\text{ mA}</math> on 100 mA Load Current</li> </ul> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)</p> <p><math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>		

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Washdown

### Threaded Metal Barrels with Cable or Connector and 3-Wire DC Outputs


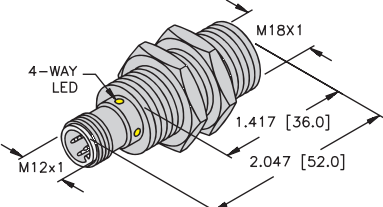
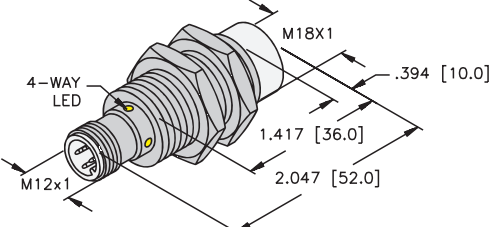
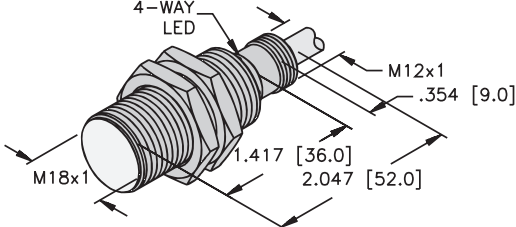
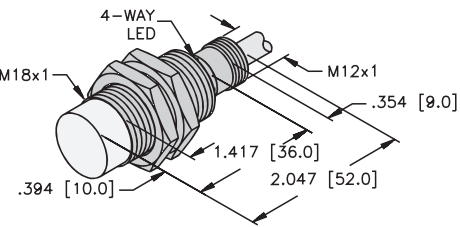
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi1.5-EG08WD-AN6X-H1341 4602211	Washdown	1.5	3-wire DC NPN	10-30 VDC	3000	≤150	-25 to +85	IP68/69K	SS	PVDF	N/A	YE	--	A	1	A4
Bi1.5-EG08WD-AP6X-H1341 4602210	Washdown	1.5	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +85	IP68/69K	SS	PVDF	N/A	YE	--	A	2	A4
Bi4U-EM12WD-AN6X-H1141 1634841	Uprox+, Washdown	4	3-wire DC NPN	10-30 VDC	2000	≤200	-40 to +100	IP68/69K	SS	PVDF	N/A	YE	--	B	1	A4
Bi4U-EM12WD-AP6X-H1141 1634812	Uprox+, Washdown	4	3-wire DC PNP	10-30 VDC	2000	≤200	-40 to +100	IP68/69K	SS	PVDF	N/A	YE	--	B	2	A4
Ni10U-EM12WD-AN6X-H1141 1634837	Uprox+, Washdown	10	3-wire DC NPN	10-30 VDC	1000	≤200	-40 to +100	IP68/69K	SS	PVDF	N/A	YE	--	C	1	A4
Ni10U-EM12WD-AP6X-H1141 1634814	Uprox+, Washdown	10	3-wire DC PNP	10-30 VDC	1000	≤200	-40 to +100	IP68/69K	SS	PVDF	N/A	YE	--	C	2	A4
Bi4U-EM12WD-AN6X 1634842	Uprox+, Washdown	4	3-wire DC NPN	10-30 VDC	2000	≤200	-40 to +100	IP68/69K	SS	PVDF	N/A	YE	2M/PP	D	3	A4
Bi4U-EM12WD-AP6X 1634811	Uprox+, Washdown	4	3-wire DC PNP	10-30 VDC	2000	≤200	-40 to +100	IP68/69K	SS	PVDF	N/A	YE	2M/PP	D	4	A4
Ni10U-EM12WD-AP6X 1634813	Uprox+, Washdown	10	3-wire DC PNP	10-30 VDC	1000	≤200	-40 to +100	IP68/69K	SS	PVDF	N/A	YE	2M/PP	E	4	A4

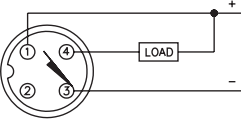
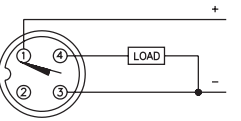
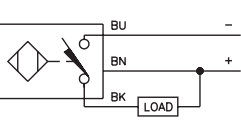
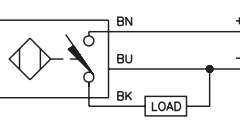
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Specialty Sensors

# Specialty Sensors | Washdown

## Threaded Metal Barrels with Cable or Connector and 3-Wire DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Embeddable, M12 Eurofast Connection</p>
<p><b>B</b></p>  <p>18 mm - Nonembeddable, M12 Eurofast Connection</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, Potted-in Cable</p>
<p><b>D</b></p>  <p>18 mm - Nonembeddable, Potted-in Cable</p>	

Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RKV 4T-*/S90</p>	<p><b>2</b></p>  <p>Mating Cordset: RKV 4T-*/S90</p>	<p><b>3</b></p> 	<p><b>4</b></p> 

A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Washdown

### Threaded Metal Barrels with Cable or Connector and 3-Wire DC Outputs


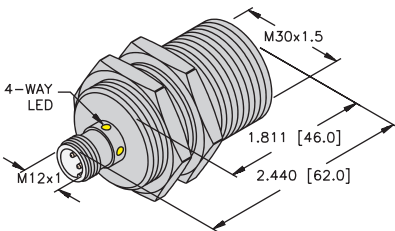
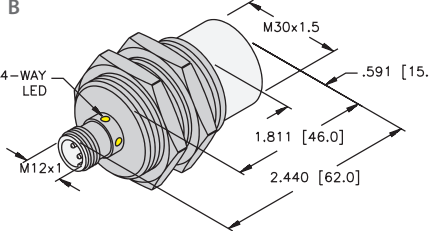
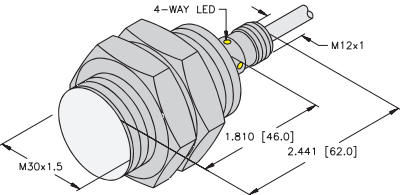
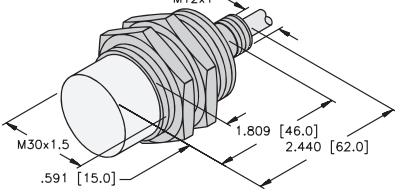
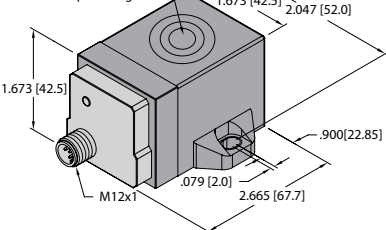
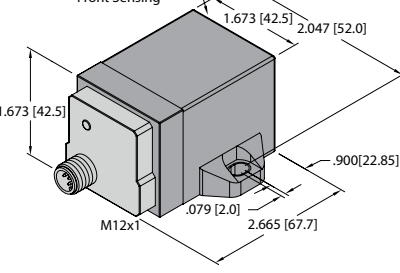
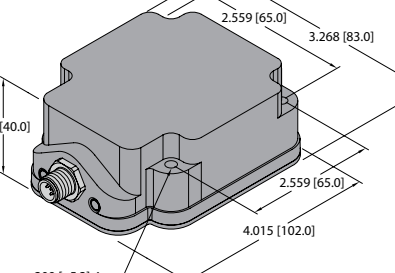
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi8U-EM18WD-AN6X-H1141 1634839	Uprox+, Washdown	8	3-wire DC NPN	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	A	1	A4
Bi8U-EM18WD-AP6X-H1141 1634816	Uprox+, Washdown	8	3-wire DC PNP	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	A	2	A4
Ni15U-EM18WD-AN6X-H1141 1634835	Uprox+, Washdown	15	3-wire DC NPN	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	B	1	A4
Ni15U-EM18WD-AP6X-H1141 1634818	Uprox+, Washdown	15	3-wire DC PNP	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	B	2	A4
Bi8U-EM18WD-AN6X 1634840	Uprox+, Washdown	8	3-wire DC NPN	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	C	3	A4
Bi8U-EM18WD-AP6X 1634815	Uprox+, Washdown	8	3-wire DC PNP	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	C	4	A4
Ni15U-EM18WD-AN6X 1634836	Uprox+, Washdown	15	3-wire DC NPN	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	D	3	A4
Ni15U-EM18WD-AP6X 1634817	Uprox+, Washdown	15	3-wire DC PNP	10-30 VDC	1500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	D	4	A4

We reserve the right to make technical alterations without prior notice.

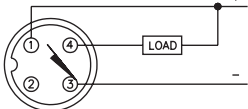
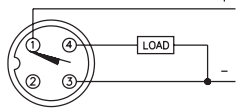
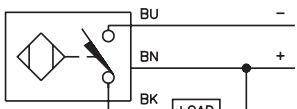
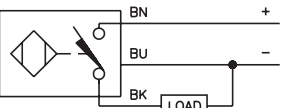
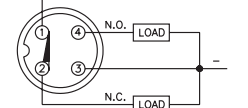
Specialty Sensors

# Specialty Sensors | Washdown

## Rectangular and Threaded Metal Barrels with Cable or Connector and 3-Wire DC Outputs

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>30 mm - Embeddable, M12 Eurofast Connection</p>	<p><b>B</b></p>  <p>30 mm - Nonembeddable, M12 Eurofast Connection</p>
<p><b>C</b></p>  <p>30 mm - Embeddable, Potted-in Cable</p>	<p><b>D</b></p>  <p>30 mm - Nonembeddable, Potted-in Cable</p>	<p><b>E</b></p>  <p>Q42T - Nonembeddable, M12 Eurofast Connector</p>
<p><b>F</b></p>  <p>Q42F - Nonembeddable, M12 Eurofast Connector</p>	<p><b>G</b></p>  <p>Q80 - Nonembeddable, M12 Eurofast Connector</p>	

We reserve the right to make technical alterations without prior notice.

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: RKV 4T-*/S90</p>	<p><b>2</b></p>  <p>Mating Cordset: RKV 4T-*/S90</p>	<p><b>3</b></p> 
<p><b>4</b></p> 	<p><b>5</b></p>  <p>Mating Cordset: RKV 4.4T-*</p>	

A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)		
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox, Q42)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3, Q80)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>	

## Specialty Sensors | Washdown

### Rectangular and Threaded Metal Barrels with Cable or Connector and 3-Wire DC Outputs


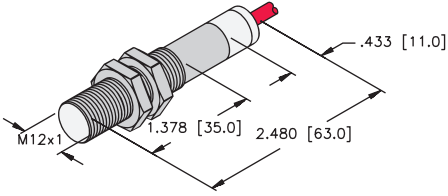
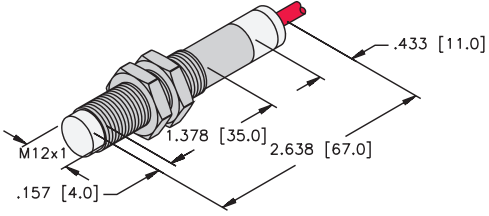
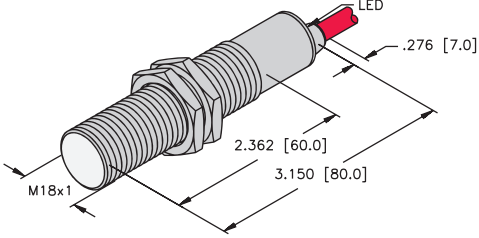
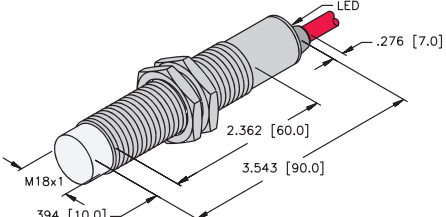
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi15U-EM30WD-AN6X-H1141 1634834	Uprox+, Washdown	15	3-wire DC NPN	10-30 VDC	750	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	A	1	A4
Bi15U-EM30WD-AP6X-H1141 1634820	Uprox+, Washdown	15	3-wire DC PNP	10-30 VDC	750	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	A	2	A4
Ni30U-EM30WD-AN6X-H1141 1634832	Uprox+, Washdown	30	3-wire DC NPN	10-30 VDC	500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	B	1	A4
Ni30U-EM30WD-AP6X-H1141 1634822	Uprox+, Washdown	30	3-wire DC PNP	10-30 VDC	500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	--	B	2	A4
Bi15U-EM30WD-AN6X 1634843	Uprox+, Washdown	15	3-wire DC NPN	10-30 VDC	750	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	C	3	A4
Bi15U-EM30WD-AP6X 1634819	Uprox+, Washdown	15	3-wire DC PNP	10-30 VDC	750	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	C	4	A4
Ni30U-EM30WD-AN6X 1634833	Uprox+, Washdown	30	3-wire DC NPN	10-30 VDC	500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	D	3	A4
Ni30U-EM30WD-AP6X 1634821	Uprox+, Washdown	30	3-wire DC PNP	10-30 VDC	500	≤200	-40 to +100	IP68/69K	SS	LCP	N/A	YE	2M/PP	D	4	A4
NI50U-Q42TWD-VP6X-H1141 1538306	Uprox+, Washdown	50	4-wire DC PNP	10-30 VDC	250	≤200	-40 to +100	IP68/69K	PA 12	PA 12	N/A	YE	--	E	5	A4
NI50U-Q42FWD-VP6X-H1141 1538305	Uprox+, Washdown	50	4-wire DC PNP	10-30 VDC	250	≤200	-40 to +100	IP68/69K	PA 12	PA 12	N/A	YE	--	F	5	A4
NI75U-Q80WD-VP6X2-H1141 1625920	Uprox+, Washdown	75	4-wire DC PNP	10-30 VDC	250	≤200	-25 to +70	IP68/69K	PPS	PPS	GN	YE	--	G	5	A4

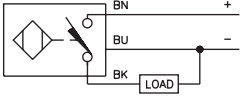
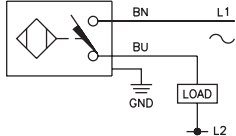
We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | High Temperature

## Threaded Metal Barrels with Cable and AC or DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>12 mm - Embeddable, Potted-In Cable</p>
<p><b>B</b></p>  <p>12 mm - Nonembeddable, Potted-In Cable</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, Partial Threading, Potted-In Cable</p>
<p><b>D</b></p>  <p>18 mm - Nonembeddable, Partial Threading, Potted-In Cable</p>	

Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> 	<p><b>2</b></p> 

A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
A6 2-wire AC/DC w/o Short-Circuit Protection - (AZ,RZ,FZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>  AC: <math>\leq 100\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p>	<p>Inrush Current: <math>\leq 8\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz)  <math>\leq 1\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz) 12 mm  <math>\leq 0.2\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 0.2 Hz) 8 mm</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | High Temperature

### Threaded Metal Barrels with Cable and AC or DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi2-EM12D-AP6/S120</b> 4614512	High Temp. 120 °C	2	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP67	SS	PTFE	PTFE	N/A	N/A	2M/PTFE	A	1	A4
<b>Ni4-EM12D-AP6/S120</b> 1633110	High Temp. 120 °C	4	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP67	SS	PTFE	PTFE	N/A	N/A	2M/PTFE	B	1	A4
<b>Bi5-M18-AP6X/S120</b> 4611030	High Temp. 120 °C	5	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP67	CPB	PA 12	EPTR	N/A	YE	2M/Silicone	C	1	A4
<b>Bi5-M18-AZ3X/S120</b> 4310410	High Temp. 120 °C	5	2-wire AC	20-250 VAC	20	≤100	-25 to +120	IP67	CPB	PA 12	EPTR	N/A	YE	2M/Silicone	C	2	A6
<b>Ni8-M18-AZ3X/S120</b> 4310530	High Temp. 120 °C	8	2-wire AC	20-250 VAC	20	≤400	-25 to +120	IP67	CPB	PA 12	EPTR	N/A	YE	2M/Silicone	D	2	A6
<b>Ni8-M18-AP6X/S120</b> 4611230	High Temp. 120 °C	8	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP67	CPB	PA 12	EPTR	N/A	YE	2M/Silicone	D	1	A4


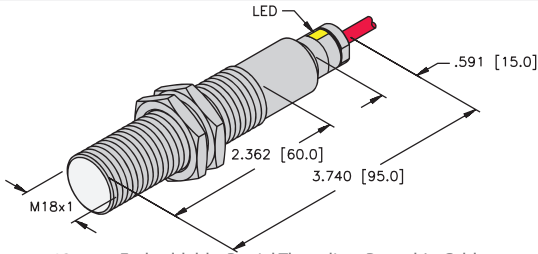
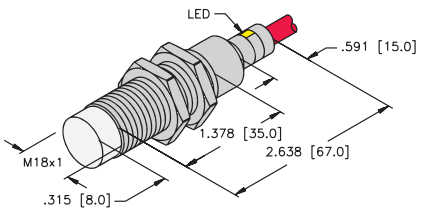
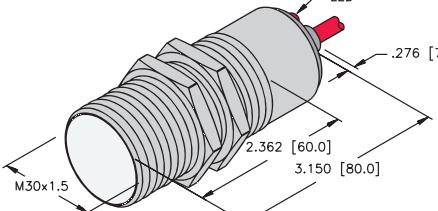
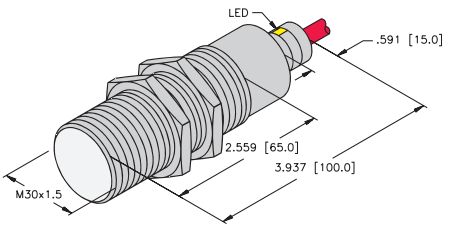
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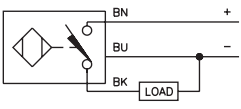
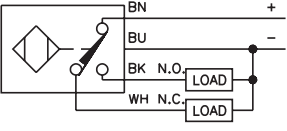
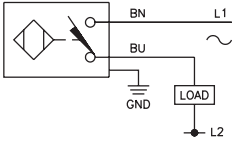
Specialty Sensors



# Specialty Sensors | High Temperature

## Threaded Metal Barrels with Cable and AC or DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Embeddable, Partial Threading, Potted-In Cable</p>
<p><b>B</b></p>  <p>18 mm - Nonembeddable, Partial Threading, Potted-In Cable</p>	<p><b>C</b></p>  <p>30 mm - Embeddable, Partial Threading, Potted-In Cable</p>
<p><b>D</b></p>  <p>30 mm - Embeddable, Partial Threading, Potted-In Cable</p>	

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p> 	<p><b>2</b></p> 	<p><b>3</b></p> 

A4	3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>		<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
A6	2-wire AC/DC w/o Short-Circuit Protection - (AZ, RZ, FZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>  AC: <math>\leq 100\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p>		<p>Inrush Current: <math>\leq 8\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz)  <math>\leq 1\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz) 12 mm  <math>\leq 0.2\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 0.2 Hz) 8 mm</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | High Temperature

### Threaded Metal Barrels with Cable and AC or DC Outputs


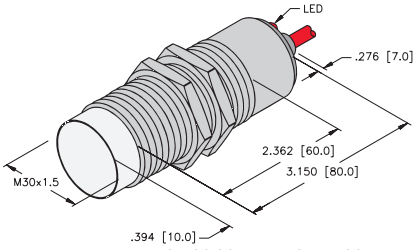
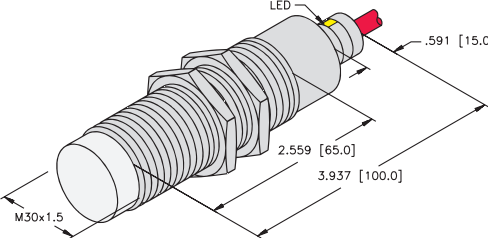
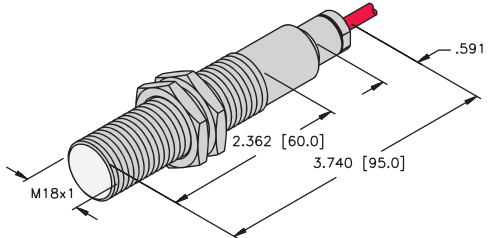
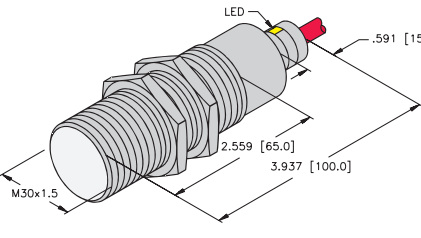
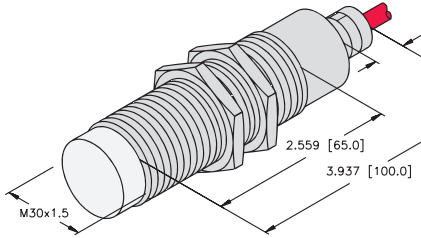
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi5-EM18D-VP6X/S120</b> 4614900	High Temp. 120 °C	5	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP68/69K	SS	PTFE	PTFE	N/A	YE	2M/PTFE	A	2	A4
<b>Ni7-EM18D-VP6X/S120</b> 4632100	High Temp. 120 °C	7	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP68/69K	SS	PTFE	PTFE	N/A	YE	2M/PTFE	B	2	A4
<b>Bi10-M30-AP6X/S120</b> 4617010	High Temp. 120 °C	10	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP67	CPB	PA 12	PA 12	N/A	YE	2M/Silicone	C	1	A4
<b>Bi10-M30-AZ3X/S120</b> 4316410	High Temp. 120 °C	10	2-wire AC	20-250 VAC	20	≤400	-25 to +120	IP67	CPB	PA 12	PA 12	N/A	YE	2M/Silicone	C	3	A6
<b>Bi10-EM30D-VP6X/S120</b> 4617035	High Temp. 120 °C	10	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP68/69K	SS	PTFE	PTFE	N/A	YE	2M/PTFE	D	2	A4

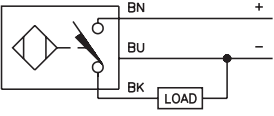
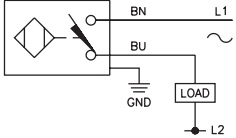
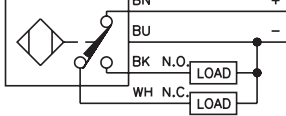
We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | High Temperature

## Threaded Metal Barrels with Cable and AC or DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>30 mm - Nonembeddable, Potted-In Cable</p>
<p><b>B</b></p>  <p>30 mm - Nonembeddable, Potted-In Cable</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, Partial Threading, Potted-In Cable</p>
<p><b>D</b></p>  <p>30 mm - Embeddable, Partial Threading, Potted-In Cable</p>	<p><b>E</b></p>  <p>30 mm - Non-embeddable, Partial Threading, Potted-In Cable</p>

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p> 	<p><b>2</b></p> 	<p><b>3</b></p> 

A4	3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection:  <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current:  <math>\leq 0.1\text{ mA}</math>                      No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>		<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
A6	2-wire AC/DC w/o Short-Circuit Protection - (AZ, RZ, FZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>                      AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p>		<p>Inrush Current: <math>\leq 8\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz)  <math>\leq 1\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz) 12 mm  <math>\leq 0.2\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 0.2 Hz) 8 mm</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | High Temperature

### Threaded Metal Barrels with Cable and AC or DC Outputs


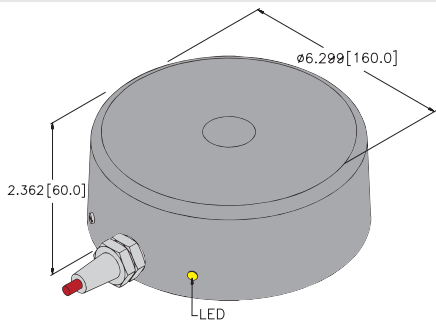
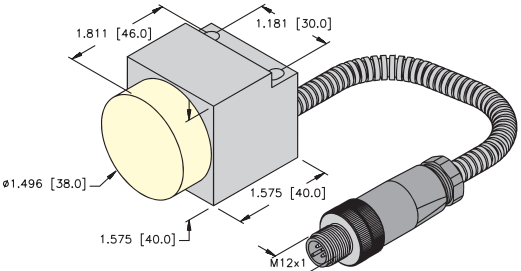
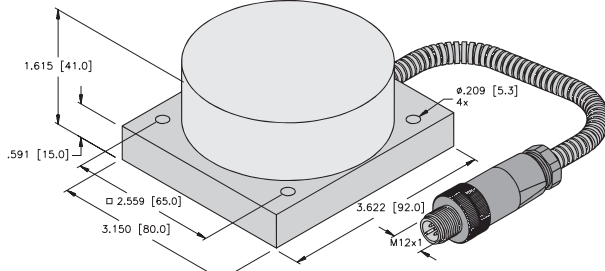
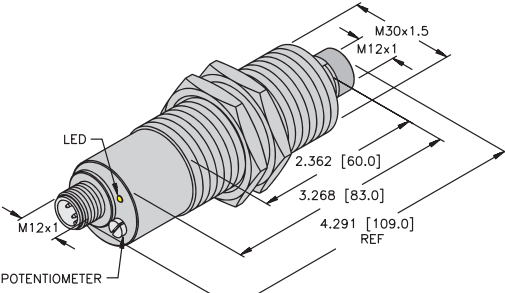
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Ni15-M30-AP6X/S120 4617210	High Temp. 120 °C	15	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +120	IP67	CPB	PA 12	PA 12	N/A	YE	2M/Silicone	A	1	A4
Ni15-M30-AZ3X/S120 4316506	High Temp. 120 °C	15	2-wire AC	20-250 VAC	20	≤400	-25 to +120	IP67	CPB	PA 12	PA 12	N/A	YE	2M/Silicone	A	2	A6
Ni15-EM30D-VP6X/S120 4617410	High Temp. 120 °C	15	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +120	IP68/69K	SS	PTFE	PTFE	N/A	YE	2M/PTFE	B	3	A4
Bi5-EM18-AP6/S907 4617425	High Temp. 160 °C	5	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +160	IP67	SS	PEEK	PTFE	N/A	N/A	2M/PTFE	C	1	A4
Bi10-EM30-AP6/S907 4614513	High Temp. 160 °C	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +160	IP67	SS	PEEK	PTFE	N/A	N/A	2M/PTFE	D	1	A4
Ni15-EM30-AP6/S907 4617412	High Temp. 160 °C	15	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +160	IP67	SS	PEEK	PTFE	N/A	N/A	2M/PTFE	E	1	A4

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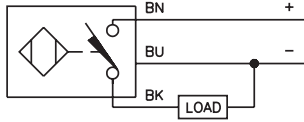
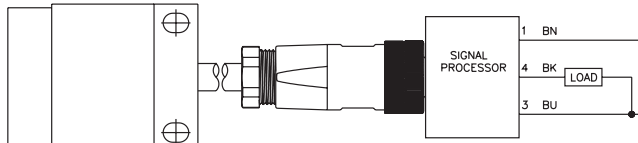
Specialty Sensors

# Specialty Sensors | High Temperature

## Rectangular and Round Housings

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>160 mm - Nonembeddable</p>
<p><b>B</b></p>  <p>CQ40 - Nonembeddable</p>	<p><b>C</b></p>  <p>CQ80 - Nonembeddable</p>
<p><b>D</b></p>  <p>30 mm - Signal Processor</p>	

We reserve the right to make technical alterations without prior notice.

Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> 	<p><b>2</b></p> 

A20 3-wire DC - High Temp (AP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 2\text{ V}</math> (120 °C)  <math>\leq 1.8\text{ V}</math> (250 °C)</p> <p>Trigger Current for Short Circuit Protection: <math>\geq 420\text{ mA}</math> on 400 mA Load Current  <math>\geq 220\text{ mA}</math> on 200 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 20\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

**Note:**  
CQ40 and CQ80 sensors require signal processor for operation.

## Specialty Sensors | High Temperature


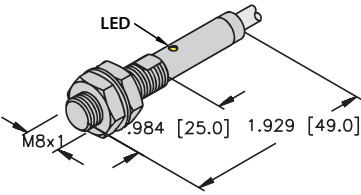
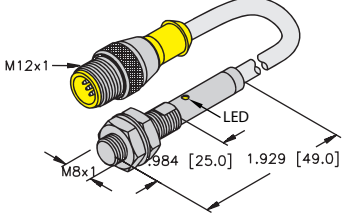
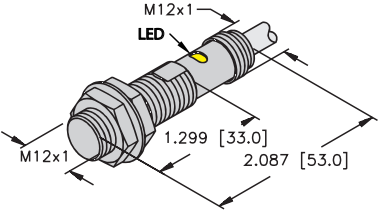
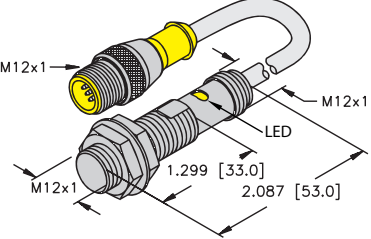
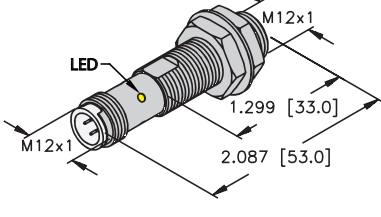
### Rectangular and Round Housings

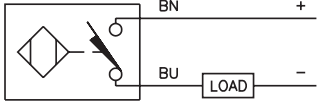
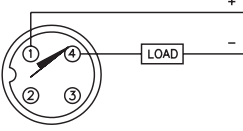
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Ni100-Q160-AP44X/S120 1440012	High Temp. 120 °C	100	3-wire DC PNP	10-55 VDC	50	≤400	-25 to +120	IP67	PPO	PPO	--	N/A	YE	2M/Silicone	A	1	A20
Ni25-CQ40/S1102 5M 1602410	High Temp. 250 °C	25	Remote	--	40	Remote	0 to +250	IP60	AL	PEEK	PEEK	N/A	N/A	5M/PTFE	B	2	--
Ni25-CQ40/S1102 10M 1602403	High Temp. 250 °C	25	Remote	--	40	Remote	0 to +250	IP60	AL	PEEK	PEEK	N/A	N/A	10M/PTFE	B	2	--
Ni40-CQ80/S1102 5M 1602404	High Temp. 250 °C	40	Remote	--	40	Remote	0 to +250	IP60	AL	PEEK	PEEK	N/A	N/A	5M/PTFE	C	2	--
EM30-AP6X2-H1141/S1102 1602411	Signal Processor	N/A	3-wire DC PNP	10-30 VDC	40	≤200	-20 to +70	IP67	SS	SS	--	GN	YE	--	D	2	A20

We reserve the right to make technical alterations without prior notice.

# Specialty Sensors | Stainless Front Face

## Embeddable Threaded Metal Barrels with 2-Wire DC Outputs

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>8 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>	<p><b>B</b></p>  <p>8 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>
<p><b>C</b></p>  <p>8 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>	<p><b>D</b></p>  <p>12 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>	<p><b>E</b></p>  <p>12 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>

Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> 	<p><b>2</b></p>  <p>Mating Cordset: RKV 4.23T.*</p>

A21	2-wire DC Stainless Front Face (AG)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 1-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 3.5</math> V Polarized</p> <p>Trigger Current for Short Circuit Protection: <math>\geq 120</math> mA on 100 mA Load Current</p> <p>Minimum Load Current: <math>\geq 3.0</math> mA</p>	<p>Temperature Drift: <math>\leq \pm 20\%</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.8</math> mA</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>	

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Stainless Front Face

### Embeddable Threaded Metal Barrels with 2-Wire DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi1.5-EG08F-AG6X</b> 4614628	Full Stainless Steel	1.5	2-wire DC	10-30 VDC	200	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	2M/ PVC	A	1	A21
<b>Bi1.5-EGT08F-AG6X</b> 4614677	Full Stainless Steel, PTFE	1.5	2-wire DC	10-30 VDC	200	≤100	-25 to +70	IP68/69K	TC	SS	GN	RD	2M/ PVC	A	1	A21
<b>Bi1.5-EG08F-AG6X-0.3-RS4.23T</b> 4614684	Full Stainless Steel	1.5	2-wire DC	10-30 VDC	200	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	0.3M/ PVC	B	2	A21
<b>Bi1.5-EGT08F-AG6X-0.2-RS4.23T</b> 4614686	Full Stainless Steel, PTFE	1.5	2-wire DC	10-30 VDC	200	≤100	-25 to +70	IP68/69K	TC	SS	GN	RD	0.2M/ PVC	B	2	A21
<b>Bi2-EG08F-AG6X</b> 4614664	Full Stainless Steel	2	2-wire DC	10-30 VDC	200	≤100	-25 to +70	IP67	SS	SS	N/A	RD	2M/ PVC	A	1	A21
<b>Bi2-EG12F-AG6X</b> 4614634	Full Stainless Steel	2	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	2M/ PVC	C	1	A21
<b>Bi2-EGT12F-AG6X</b> 46146651	Full Stainless Steel, PTFE	2	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	TC	SS	GN	RD	2M/ PVC	C	1	A21
<b>Bi2-EG12F-AG6X-0.3-RS4.23T</b> 4614693	Full Stainless Steel	2	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	0.3M/ PVC	D	2	A21
<b>Bi3-EG12F-AG6X</b> 4614665	Full Stainless Steel	3	2-wire DC	10-30 VDC	80	≤100	-25 to +70	IP67	SS	SS	N/A	RD	2M/ PVC	C	1	A21
<b>Bi2-EG12F-AG6X-H1141</b> 4614637	Full Stainless Steel	2	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	--	E	2	A21
<b>Bi2-EGT12F-AG6X-H1141</b> 4614698	Full Stainless Steel, PTFE	2	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	TC	SS	GN	RD	--	E	2	A21

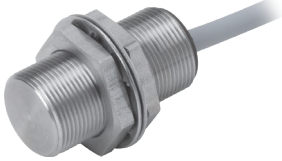
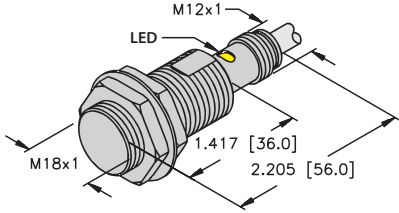
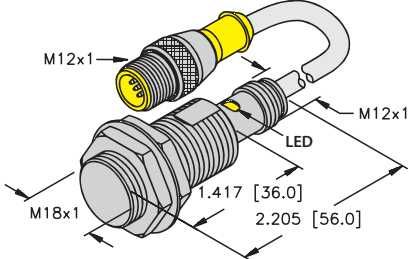
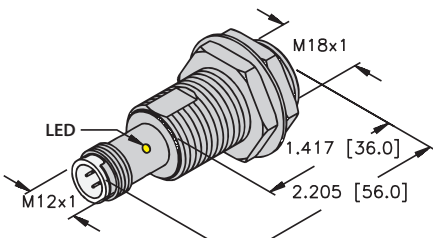
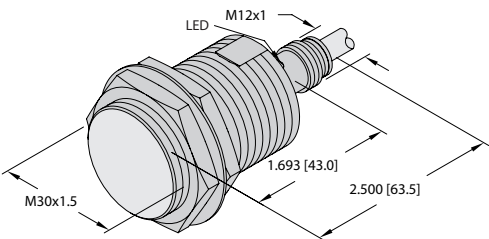
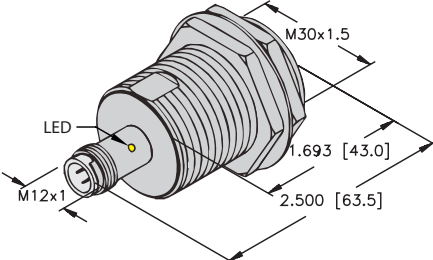
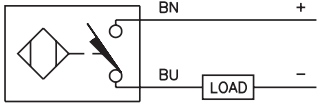
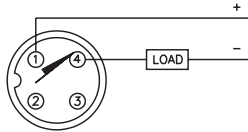
We reserve the right to make technical alterations without prior notice.

Specialty Sensors



# Specialty Sensors | Stainless Front Face

## Embeddable Threaded Metal Barrels with 2-Wire DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>
<p><b>B</b></p>  <p>18 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>
<p><b>D</b></p>  <p>30 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>	<p><b>E</b></p>  <p>30 mm - Embeddable, M12 Eurofast Connection, Stainless Steel</p>
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> 	<p><b>2</b></p>  <p>Mating Cordset: RKV 4T-*; RKV 4.23T-*</p>
A21 2-wire DC Stainless Front Face (AG)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 1-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 3.5</math> V Polarized</p> <p>Trigger Current for Short Circuit Protection: <math>\geq 120</math> mA on 100 mA Load Current</p> <p>Minimum Load Current: <math>\geq 3.0</math> mA</p>	<p>Temperature Drift: <math>\leq \pm 20\%</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.8</math> mA</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Stainless Front Face

### Embeddable Threaded Metal Barrels with 2-Wire DC Outputs


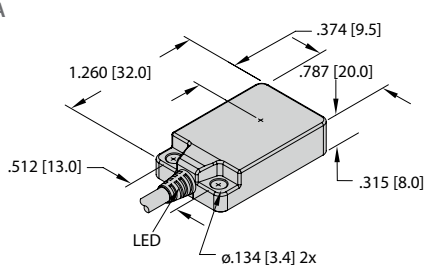
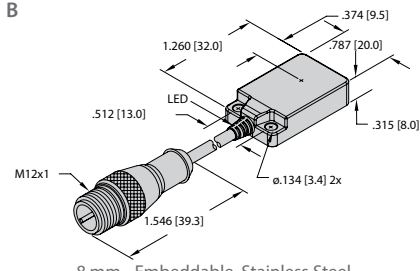
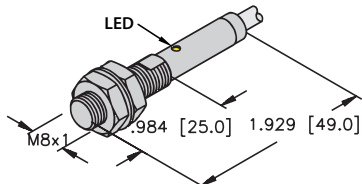
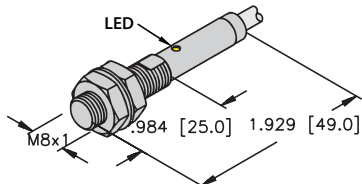
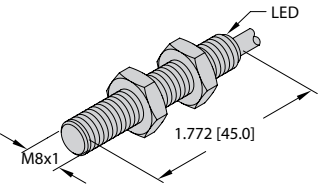
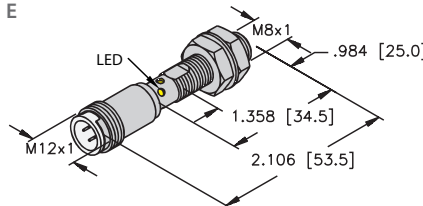
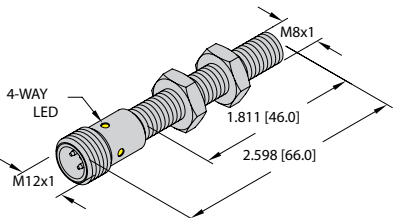
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi5-EG18F-AG6X 4614640	Full Stainless Steel	5	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	2M/PVC	A	1	A21
Bi5-EGT18F-AG6X 46146400	Full Stainless Steel, PTFE	5	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	TC	SS	GN	RD	2M/PVC	A	1	A21
Bi5-EG18F-AG6X-0.3-RS4.23T 4614694	Full Stainless Steel	5	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	0.3M/ PVC	B	2	A21
Bi7-EG18F-AG6X 4614666	Full Stainless Steel	7	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP67	SS	SS	N/A	RD	2M/PVC	A	1	A21
Bi5-EG18F-AG6X-H1141 4614643	Full Stainless Steel	5	2-wire DC	10-30 VDC	100	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	--	C	2	A21
Bi12-EG30F-AG6X 4614667	Full Stainless Steel	12	2-wire DC	10-30 VDC	50	≤100	-25 to +70	IP67	SS	SS	N/A	RD	2M/PVC	D	1	A21
Bi10-EG30F-AG6X-H1141 4614649	Full Stainless Steel	10	2-wire DC	10-30 VDC	50	≤100	-25 to +70	IP68/69K	SS	SS	GN	RD	--	E	2	A21
Bi10-EGT30F-AG6X-H1141/ S1589 46146490	Full Stainless Steel, PTFE, Weldguard	10	2-wire DC	10-30 VDC	50	≤100	-25 to +70	IP68/69K	TC	WG	GN	RD	--	E	2	A21

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Specialty Sensors

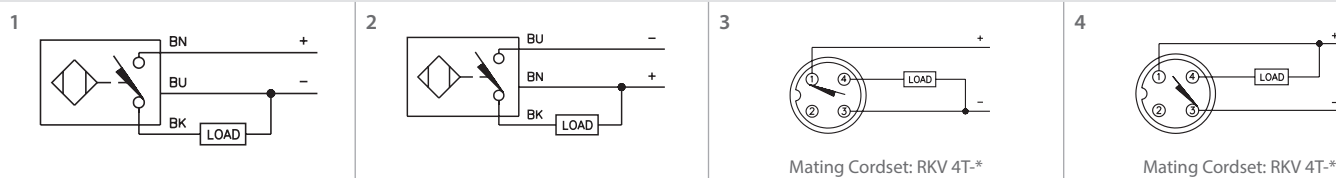
# Specialty Sensors | Stainless Front Face

## Embeddable Rectangular and Threaded Metal Barrels with 3-Wire DC Outputs

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>8 mm - Embeddable, Stainless Steel, Potted-In Cable</p>	<p><b>B</b></p>  <p>8 mm - Embeddable, Stainless Steel, M12 Eurofast Quick Disconnect</p>
	<p><b>C</b></p>  <p>8 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>	<p><b>D</b></p>  <p>8 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>
		<p><b>E</b></p>  <p>8 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>
		

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### Wiring Diagrams/Mating Cordsets



A22

### 3-wire DC Stainless Front Face (AP, AN, RP, RN)

Ripple:	≤10%
Differential Travel (Hysteresis):	3-15% (5% typical)
Voltage Drop Across Conducting Sensor:	≤1.8 V
Trigger Current for Short Circuit Protection:	≥220 mA on 200 mA Load Current
No-Load Current:	≤15 mA
Off-State (Leakage) Current:	≤0.1 mA

Temperature Drift:	±10%
Reverse Polarity Protection:	Incorporated
Wire-Break Protection:	Incorporated
Shock:	30 g, 11 ms
Vibration:	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability:	≤2% of Rated Operating Distance

A23

### 3-wire DC Stainless Front Face Ext Range (AP, AN, RP, RN)

Ripple:	≤10%
Differential Travel (Hysteresis):	20%
Voltage Drop Across Conducting Sensor:	≤2 V
Trigger Current for Short Circuit Protection:	≥220 mA on 200 mA Load Current
No-Load Current:	≤10 mA
Off-State (Leakage) Current:	≤0.1 mA

Temperature Drift:	±10%
Reverse Polarity Protection:	Incorporated
Wire-Break Protection:	Incorporated
Shock:	30 g, 11 ms
Vibration:	55 Hz, 1 mm Amplitude, in all 3 Planes
Repeatability:	≤5% of Rated Operating Distance

## Specialty Sensors | Stainless Front Face

### Embeddable Rectangular and Threaded Metal Barrels with 3-Wire DC Outputs


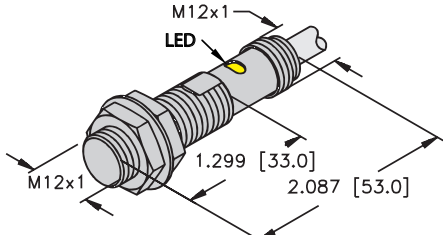
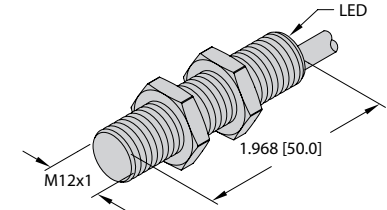
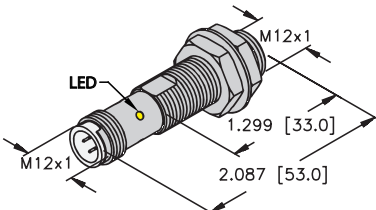
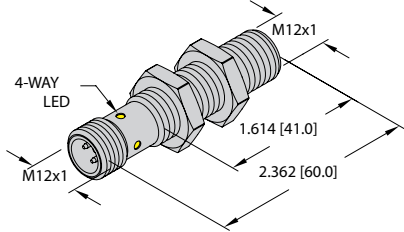
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi7-Q08F-AN6X</b> 1608914	Full Stainless Steel	7	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/TPE	A	2	A23
<b>Bi7-Q08F-AP6X</b> 1608916	Full Stainless Steel	7	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/TPE	A	1	A23
<b>Bi7-Q08F-AP6X-0.2-RS4T</b> 16089160	Full Stainless Steel	7	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	0.2M/TPE	B	3	A23
<b>Bi1.5-EG08F-AN6X</b> 4614627	Full Stainless Steel	1.5	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	C	2	A22
<b>Bi3-EG08FE-AN6X</b> 4614712	Full Stainless Steel	3	3-wire DC NPN	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	2M/PVC	D	2	A23
<b>Bi1.5-EG08F-AP6X</b> 4614626	Full Stainless Steel	1.5	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	C	1	A22
<b>Bi1.5-EGT08F-AP6X</b> 4614678	Full Stainless Steel, PTFE	1.5	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	2M/PVC	C	1	A22
<b>Bi3-EG08FE-AP6X</b> 4614704	Full Stainless Steel	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	2M/PVC	D	1	A23
<b>Bi3-EGT08FE-AP6X</b> 46147043	Full Stainless Steel, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	SS	N/A	YE	2M/PVC	D	1	A23
<b>Bi1.5-EG08F-AN6X-H1341</b> 4614630	Full Stainless Steel	1.5	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	E	4	A22
<b>Bi3-EG08FE-AN6X-H1341</b> 4614711	Full Stainless Steel	3	3-wire DC NPN	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	--	F	4	A23
<b>Bi1.5-EG08F-AP6X-H1341</b> 4614629	Full Stainless Steel	1.5	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	E	3	A22
<b>Bi3-EG08FE-AP6X-H1341</b> 4614703	Full Stainless Steel	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	--	F	3	A23
<b>Bi3-EGT08FE-AP6X-H1341</b> 46147030	Full Stainless Steel, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	SS	N/A	YE	--	F	3	A23
<b>Bi3-EGT08FE-AP6X-H1341/S1589</b> 46147032	Full Stainless Steel, PTFE, Weldguard	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	--	F	3	A23

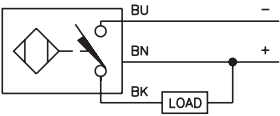
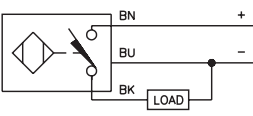
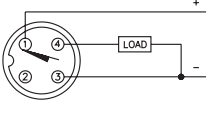
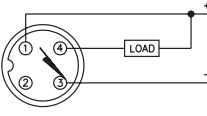
We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Stainless Front Face

## Embeddable Threaded Metal Barrels with 3-Wire DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>12 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>
<p><b>B</b></p>  <p>12 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>	<p><b>C</b></p>  <p>12 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>
<p><b>D</b></p>  <p>12 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>	

Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p> 	<p><b>2</b></p> 	<p><b>3</b></p>  <p>Mating Cordset: RKV 4T-*</p>	<p><b>4</b></p>  <p>Mating Cordset: RKV 4T-*</p>

A22 3-wire DC Stainless Front Face (AP, AN, RP, RN)		A23 3-wire DC Stainless Front Face Ext Range (AP, AN, RP, RN)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current</p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>		
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 20%</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 2\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current</p> <p>No-Load Current: <math>\leq 10\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 5\%</math> of Rated Operating Distance</p>		

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Stainless Front Face

### Embeddable Threaded Metal Barrels with 3-Wire DC Outputs


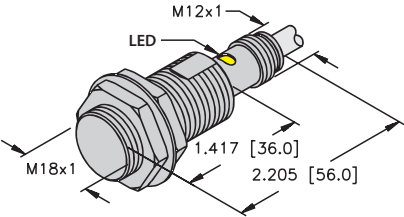
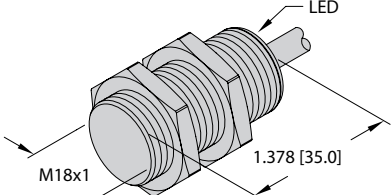
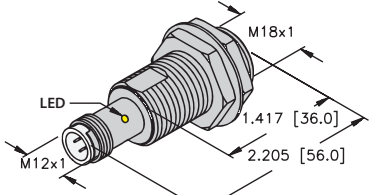
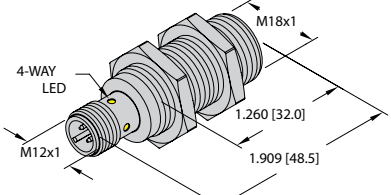
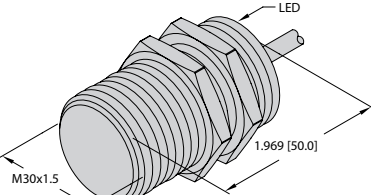
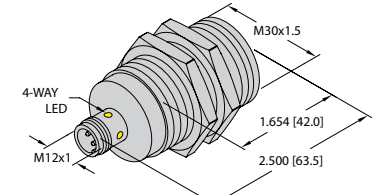
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi2-EG12F-AN6X</b> 4614633	Full Stainless Steel	2	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	A	2	A22
<b>Bi6-EG12FE-AN6X</b> 4614721	Full Stainless Steel	6	3-wire DC NPN	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	B	2	A23
<b>Bi2-EG12F-AP6X</b> 4614632	Full Stainless Steel	2	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	A	1	A22
<b>Bi6-EG12FE-AP6X</b> 4614720	Full Stainless Steel	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	B	1	A23
<b>Bi2-EG12F-AN6X-H1141</b> 4614636	Full Stainless Steel	2	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	C	4	A22
<b>Bi6-EG12FE-AN6X-H1141</b> 4614714	Full Stainless Steel	6	3-wire DC NPN	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	D	4	A23
<b>Bi6-EGT12FE-AN6X-H1141</b> 46147140	Full Stainless Steel, PTFE	6	3-wire DC NPN	10-30 VDC	600	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	D	4	A23
<b>Bi2-EG12F-AP6X-H1141</b> 4614635	Full Stainless Steel	2	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	C	3	A22
<b>Bi2-EGT12F-AP6X-H1141</b> 46146971	Full Stainless Steel, PTFE	2	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	C	3	A22
<b>Bi6-EG12FE-AP6X-H1141</b> 4614706	Full Stainless Steel	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	D	3	A23
<b>Bi6-EGT12FE-AP6X-H1141</b> 46147060	Full Stainless Steel, PTFE	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	D	3	A23
<b>Bi6-EGT12FE-AP6X-H1141/S1589</b> 46147061	Full Stainless Steel, PTFE, Weldguard	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	TC	WG	N/A	YE	--	D	3	A23

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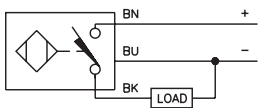
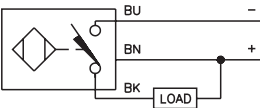
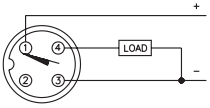
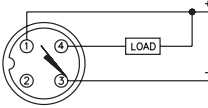
Specialty Sensors

# Specialty Sensors | Stainless Front Face

## Embeddable Threaded Metal Barrels with 3-Wire DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>
<p><b>B</b></p>  <p>18 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>
<p><b>D</b></p>  <p>18 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect</p>	<p><b>E</b></p>  <p>30 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable</p>
<p><b>F</b></p>  <p>30 mm - Embeddable, M12 Eurofast Connection, Stainless Steel</p>	

We reserve the right to make technical alterations without prior notice.

Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p> 	<p><b>2</b></p> 	<p><b>3</b></p>  <p>Mating Cordset: RKV 4T-*</p>	<p><b>4</b></p>  <p>Mating Cordset: RKV 4T-*</p>

A22 3-wire DC Stainless Front Face (AP, AN, RP, RN)		A23 3-wire DC Stainless Front Face Ext Range (AP, AN, RP, RN)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current</p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>		
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 20%</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 2\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current</p> <p>No-Load Current: <math>\leq 10\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 5\%</math> of Rated Operating Distance</p>		

## Specialty Sensors | Stainless Front Face

### Embeddable Threaded Metal Barrels with 3-Wire DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi5-EG18F-AN6X 4614639	Full Stainless Steel	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	A	2	A22
Bi10-EG18F-AN6X 4614723	Full Stainless Steel	10	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	B	2	A23
Bi10-EG18F-AP6X 4614722	Full Stainless Steel	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	B	1	A23
Bi5-EG18F-AN6X-H1141 4614642	Full Stainless Steel	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	C	4	A22
Bi5-EGT18F-AN6X-H1141 4614672	Full Stainless Steel, PTFE	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	C	4	A22
Bi10-EG18F-AN6X-H1141 4614716	Full Stainless Steel	10	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	D	4	A23
Bi5-EG18F-AP6X-H1141 4614641	Full Stainless Steel	5	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	C	3	A22
Bi5-EGT18F-AP6X-H1141 4614675	Full Stainless Steel, PTFE	5	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	C	3	A22
Bi10-EG18F-AP6X-H1141 4614708	Full Stainless Steel	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	D	3	A23
Bi10-EGT18F-AP6X-H1141 46147080	Full Stainless Steel, PTFE	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	D	3	A23
Bi10-EGT18F-AP6X-H1141/S1589 46147081	Full Stainless Steel, PTFE, Weldguard	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	TC	WG	N/A	YE	--	D	3	A23
Bi20-EG30F-AP6X 4614724	Full Stainless Steel	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	E	1	A23
Bi20-EG30F-AP6X-H1141 4614710	Full Stainless Steel	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	F	3	A23
Bi20-EGT30F-AP6X-H1141 46147100	Full Stainless Steel, PTFE	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	F	3	A23
Bi20-EGT30F-AP6X-H1141/S1589 46147101	Full Stainless Steel, PTFE, Weldguard	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	TC	WG	N/A	YE	--	F	3	A23


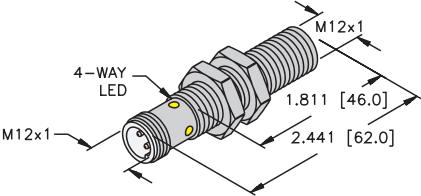
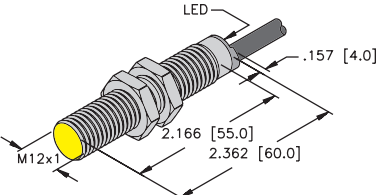
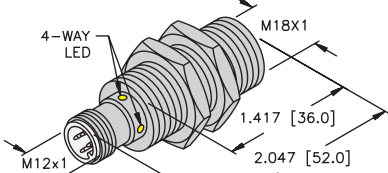
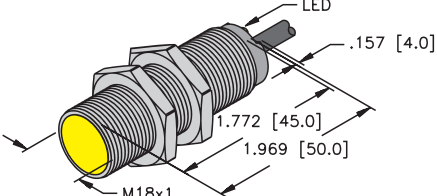
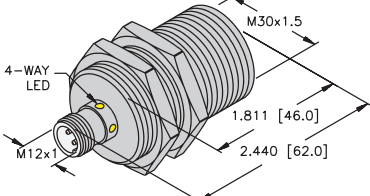
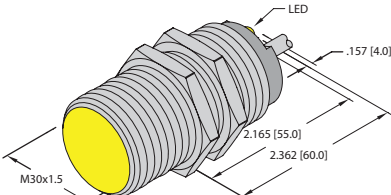
We reserve the right to make technical alterations without prior notice.

Specialty Sensors

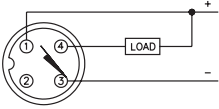
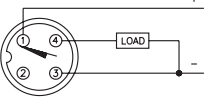
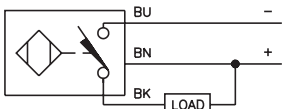
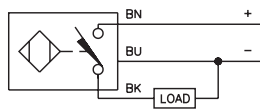


# Specialty Sensors | Mobile Equipment

## Barrel Sensors Designed for use on Vehicles and Equipment

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>12 mm - Embeddable, M12 Eurofast Connection</p>
<p><b>B</b></p>  <p>12 mm - Embeddable, Partial Threading, Potted-In Cable</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, M12 Eurofast Connection</p>
<p><b>D</b></p>  <p>18 mm - Embeddable, Partial Threading, Potted-In Cable</p>	<p><b>E</b></p>  <p>30 mm - Embeddable, M12 Eurofast Connection</p>
<p><b>F</b></p>  <p>30 mm - Embeddable, Partial Threading, Potted-In Cable</p>	

We reserve the right to make technical alterations without prior notice.

Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RK 4T-*/S90</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*/S90</p>	<p><b>3</b></p> 	<p><b>4</b></p> 

A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection:</p> <ul style="list-style-type: none"> <li><math>\geq 220\text{ mA}</math> on 200 mA Load Current</li> <li><math>\geq 170\text{ mA}</math> on 150 mA Load Current</li> <li><math>\geq 120\text{ mA}</math> on 100 mA Load Current</li> </ul> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox) <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>		

Features	
<ul style="list-style-type: none"> <li>• Load Dump Protection</li> <li>• Shock Resistant</li> <li>• EMC Immunity</li> <li>• Extended Temperature Range</li> </ul>	<ul style="list-style-type: none"> <li>• Broader Operating Voltage</li> <li>• Improved Sealing and Environmental Protection</li> <li>• Longer Sensing Range</li> </ul>

## Specialty Sensors | Mobile Equipment

### Barrel Sensors Designed for use on Vehicles and Equipment


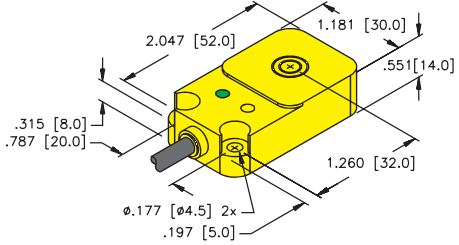
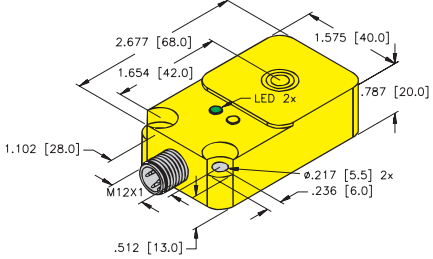
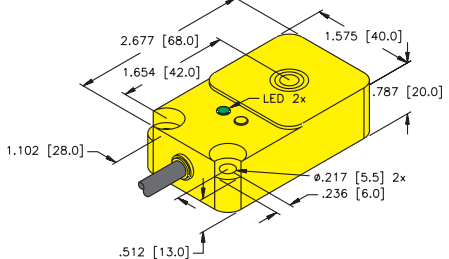
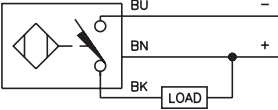
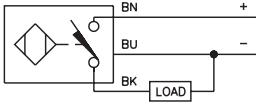
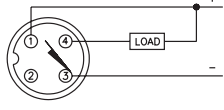
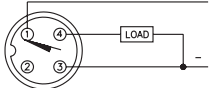
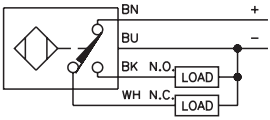
Part Number/ ID Number	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi4-EM12E-AN45XLD-H1141 1584003	4	3-wire DC NPN	8.4-65 VDC	2000	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	--	A	1	A4
Bi4-EM12E-AP45XLD-H1141 1584000	4	3-wire DC PNP	8.4-65 VDC	2000	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	--	A	2	A4
Bi4-EM12E-AN45XLD 1584004	4	3-wire DC NPN	8.4-65 VDC	2000	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	2M/TPE	B	3	A4
Bi4-EM12E-AP45XLD 1584001	4	3-wire DC PNP	8.4-65 VDC	2000	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	2M/TPE	B	4	A4
Bi8-EM18-AN45XLD-H1141 1584017	8	3-wire DC NPN	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	--	C	1	A4
Bi8-EM18-AP45XLD-H1141 1584010	8	3-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	--	C	2	A4
Bi8-EM18-AN45XLD 1584014	8	3-wire DC NPN	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	2M/TPE	D	3	A4
Bi8-EM18-AP45XLD 1584011	8	3-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	2M/TPE	D	4	A4
Bi15-EM30-AN45XLD-H1141 1584024	15	3-wire DC NPN	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	--	E	1	A4
Bi15-EM30-AP45XLD-H1141 1584020	15	3-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	--	E	2	A4
Bi15-EM30-AN45XLD 1584022	15	3-wire DC NPN	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	2M/TPE	F	1	A4
Bi15-EM30-AP45XLD 1584021	15	3-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	SS	PA12	N/A	YE	2M/TPE	F	2	A4

We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Mobile Equipment

## Rectangular Sensors Designed for use on Vehicles and Equipment

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>14 mm - Embeddable, Potted-In Cable</p>	
<p><b>B</b></p>  <p>20 mm - Embeddable, M12 Eurofast Connection</p>	<p><b>C</b></p>  <p>20 mm - Embeddable, Potted-In Cable</p>	
Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p> 	<p><b>2</b></p> 	<p><b>3</b></p>  <p>Mating Cordset: RK 4T-*/S90</p>
<p><b>4</b></p>  <p>Mating Cordset: RK 4T-*/S90</p>	<p><b>5</b></p> 	
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)		
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA on 200 mA Load Current          ≥170 mA on 150 mA Load Current          ≥120 mA on 100 mA Load Current</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA (Ferrite, Uprox)          ≤20 mA (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: ≤8 ms</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: ≤±10%</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p>	
Features		
<ul style="list-style-type: none"> <li>• Load Dump Protection</li> <li>• Shock Resistant</li> <li>• EMC Immunity</li> <li>• Extended Temperature Range</li> <li>• Broader Operating Voltage</li> <li>• Improved Sealing and Environmental Protection</li> <li>• Longer Sensing Range</li> </ul>		

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Mobile Equipment

### Rectangular Sensors Designed for use on Vehicles and Equipment


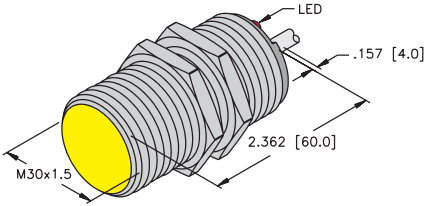
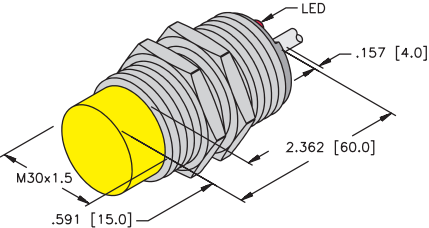
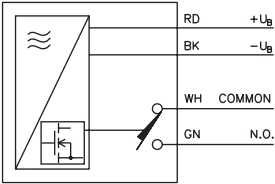
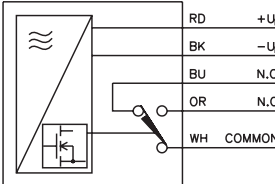
Part Number/ ID Number	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi10-Q14-AN45X2LD</b> 1584032	10	3-wire DC NPN	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	PBT	PBT	GN	YE	2M/TPE	A	1	A4
<b>Bi10-Q14-AP45X2LD</b> 1584031	10	3-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	PBT	PBT	GN	YE	2M/TPE	A	2	A4
<b>Bi20-Q20-AN45X2LD-H1141</b> 1584042	20	3-wire DC NPN	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	PBT	PBT	GN	YE	--	B	3	A4
<b>Bi20-Q20-AP45X2LD-H1141</b> 1584040	20	3-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	PBT	PBT	GN	YE	--	B	4	A4
<b>Bi20-Q20-AN45X2LD</b> 1584043	20	3-wire DC NPN	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	PBT	PBT	GN	YE	2M/TPE	C	1	A4
<b>Bi20-Q20-AP45X2LD</b> 1584041	20	3-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	PBT	PBT	GN	YE	2M/TPE	C	2	A4
<b>Bi20-Q20-VP45X2LD</b> 1584047	20	4-wire DC PNP	8.4-65 VDC	500	≤200	-40 to +85	IP68/69K	PBT	PBT	GN	YE	2M/TPE	C	5	A4

We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | 6A Solid State

## Threaded Metal Barrel Sensors with Cable

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>30 mm - Embeddable, Potted-In Cable</p>
<p><b>B</b></p>  <p>30 mm - Nonembeddable, Potted-In Cable</p>	
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> 	<p><b>2</b></p> 
A10 Solid State Relay (AM6, VM6)	
<p>Ripple: <math>\leq 10\%</math>  Output Voltage: <math>\leq 35\text{ V AC}, \leq 50\text{ V DC}</math>  Differential Travel (Hysteresis): 3-15% (5% typical)  Voltage Drop Across Conducting Sensor: <math>\leq 0.4\text{ V}</math>  Continuous Load Current: <math>\leq 6\text{ Amp}</math>  Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math>  Inrush Current: <math>\leq 8.0\text{ A}</math> (<math>\leq 10.0\text{ ms max } 5\text{ Hz}</math>)  No-Load Current: <math>\leq 25\text{ mA}</math></p>	<p>Reverse Polarity Protection: Incorporated  Wire-Break Protection: Incorporated  Short Circuit Protected: No  Transient Protection: Per EN 60947-5-2  Shock: 30 g, 11 ms  Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes  Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.


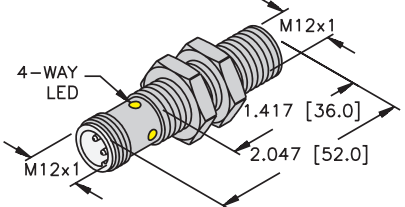
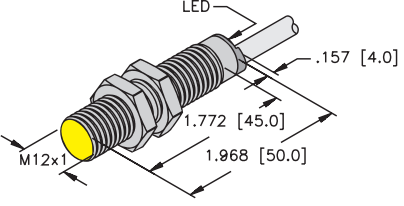
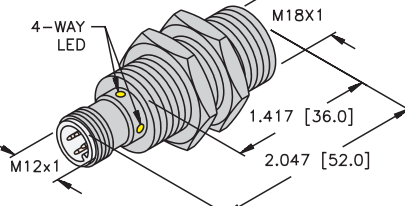
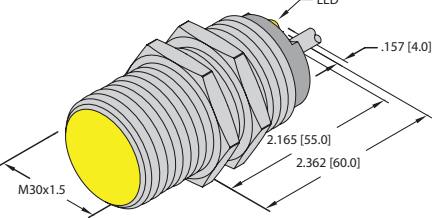
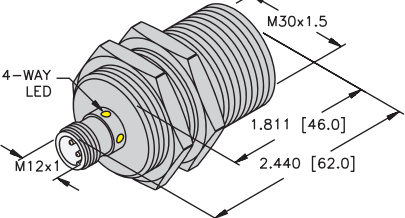
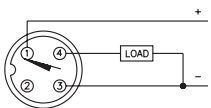
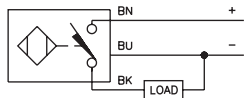
## Specialty Sensors | 6A Solid State Threaded Metal Barrel Sensors with Cable

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi12-G30-AM6/37X/S97</b> 1711200	High current rated	12	4-wire DC	10-30 VDC	20	≤6000	-40 to 70	IP67	CPB	PA12	N/A	YE	2M/PVC	A	1	A10
<b>Bi12-G30-VM6/37X/S97</b> 1711290	High current rated	12	5-wire DC	10-30 VDC	20	≤6000	-40 to 70	IP67	CPB	PA12	N/A	YE	2M/PVC	A	2	A10
<b>Ni20-G30-VM6/37X/S97</b> 4205472	High current rated	20	5-wire DC	10-30 VDC	20	≤6000	-40 to 70	IP67	CPB	PA12	N/A	YE	2M/PVC	B	2	A10

We reserve the right to make technical alterations without prior notice.

# Specialty Sensors | FM Approved Class I Div 2

## Threaded Metal Barrels with 3-Wire DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>12 mm - Embeddable, M12 Eurofast Connector</p>
<p><b>B</b></p>  <p>12 mm - Embeddable, Potted-In Cable</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, M12 Eurofast Connector</p>
<p><b>D</b></p>  <p>30 mm - Embeddable, Potted-In Cable</p>	<p><b>E</b></p>  <p>30 mm - Embeddable, M12 Eurofast Connector</p>
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p>  <p>Mating Cordset: P-RKGV 4.43T-1699XL*</p>	<p><b>2</b></p> 
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | FM Approved Class I Div 2 Threaded Metal Barrels with 3-Wire DC Outputs


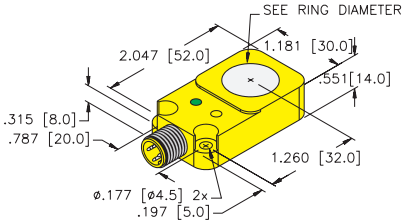
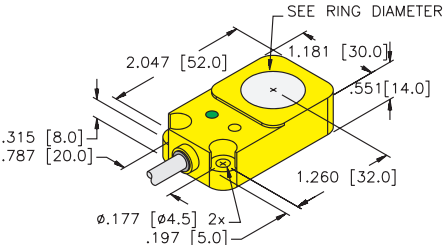
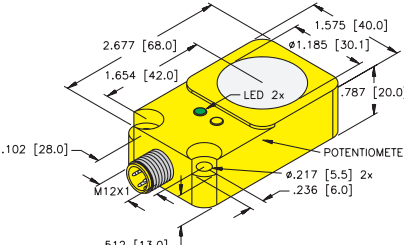
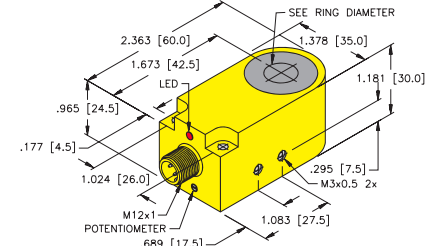
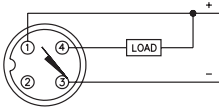
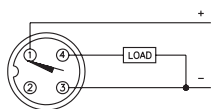
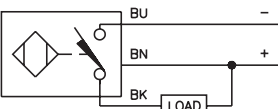
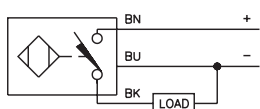
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi4-M12-AP6X-H1141/S1751</b> 4607075	FM Approved	4	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	--	A	1	A4
<b>Bi4-M12-AP6X/S1751</b> 4607073	FM Approved	4	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	2M/ PVC	B	2	A4
<b>Bi8-M18-AP6X-H1141/S1751</b> 4615078	FM Approved	8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	--	C	1	A4
<b>Bi15-M30-AP6X-H1141/S97/S1751</b> 4618574	FM Approved	15	3-wire DC PNP	10-30 VDC	500	≤200	-40 to +70	IP67	CPB	PA 12	N/A	YE	--	E	1	A4
<b>Bi15-M30-AP6X/S1751</b> 46185302	FM Approved	15	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	2M/ PVC	D	2	A4

We reserve the right to make technical alterations without prior notice.



# Specialty Sensors | Ring Sensors

## Plastic Housing Sensors with Cable or Connector and 3-Wire DC Output

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>14 mm - Rectangular, Ring Sensor, M12 Eurofast Connector</p>
<p><b>B</b></p>  <p>14 mm - Rectangular, Ring Sensor, Potted-In Cable</p>	<p><b>C</b></p>  <p>20 mm - Rectangular, Ring Sensor, M12 Eurofast Connector</p>
<p><b>D</b></p>  <p>30 mm - Rectangular, Ring Sensor, M12 Eurofast Connector</p>	
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*</p>
<p><b>3</b></p> 	<p><b>4</b></p> 
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA on 200 mA Load Current          ≥170 mA on 150 mA Load Current          ≥120 mA on 100 mA Load Current</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA (Ferrite, Uprox)          ≤20 mA (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: ≤8 ms</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: ±±10%</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Ring Sensors

### Plastic Housing Sensors with Cable or Connector and 3-Wire DC Output


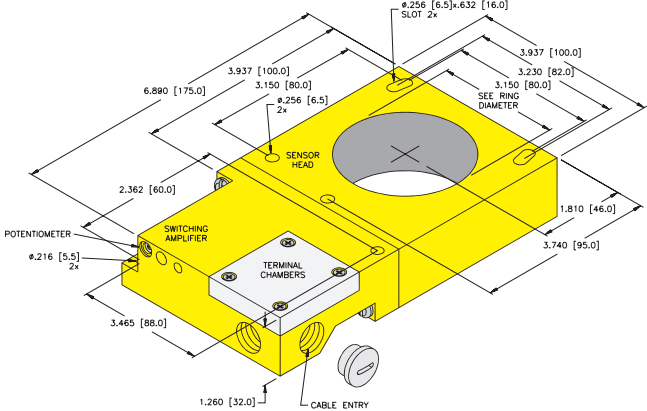
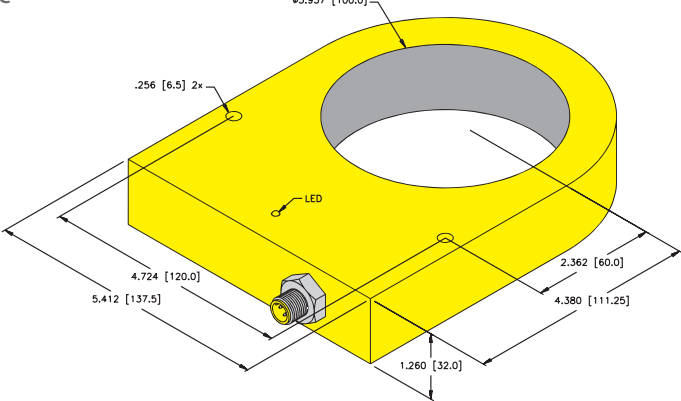
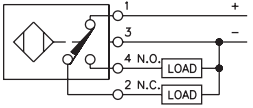
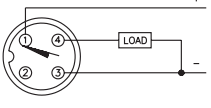
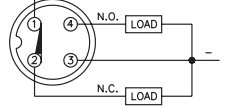
Part Number/ ID Number	Features	Minimum Target Diameter	Ring Diameter (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi10R-Q14-AN6X2-H1141 1407120	Static Output	≥ 2 mm	10	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	A	1	A4
Bi15R-Q14-AN6X2-H1141 1407220	Static Output	≥ 3 mm	15	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	A	1	A4
Bi20R-Q14-AN6X2-H1141 1407320	Static Output	≥ 4 mm	20	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	A	1	A4
Bi6R-Q14-AP6X2-H1141 14070	Static Output	≥ 2 mm	6	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	A	2	A4
Bi10R-Q14-AP6X2-H1141 14071	Static Output	≥ 2 mm	10	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	A	2	A4
Bi15R-Q14-AP6X2-H1141 14072	Static Output	≥ 3 mm	15	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	A	2	A4
Bi20R-Q14-AP6X2-H1141 14073	Static Output	≥ 4 mm	20	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	A	2	A4
Bi10R-Q14-AN6X2 1406120	Static Output	≥ 2 mm	10	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	2M/PVC	B	3	A4
Bi15R-Q14-AN6X2 1406220	Static Output	≥ 3 mm	15	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	2M/PVC	B	3	A4
Bi20R-Q14-AN6X2 1406320	Static Output	≥ 4 mm	20	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	2M/PVC	B	3	A4
Bi10R-Q14-AP6X2 14061	Static Output	≥ 2 mm	10	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	2M/PVC	B	4	A4
Bi15R-Q14-AP6X2 14062	Static Output	≥ 3 mm	15	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	2M/PVC	B	4	A4
Bi20R-Q14-AP6X2 14063	Static Output	≥ 4 mm	20	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	2M/PVC	B	4	A4
Bi30R-Q20-AN6X2-H1141 1407520	Static Output	≥ 6 mm	30	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	C	1	A4
Bi30R-Q20-AP6X2-H1141 14075	Static Output	≥ 6 mm	30	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PBT	POM	GN	YE	--	C	2	A4
Bi6R-W30-DAN6X-H1141 14037	Dynamic Output	≥ 0.6 mm	6	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	1	A4
Bi10R-W30-DAN6X-H1141 14039	Dynamic Output	≥ 1 mm	10	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	1	A4
Bi15R-W30-DAN6X-H1141 14041	Dynamic Output	≥ 1.5 mm	15	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	1	A4
Bi20R-W30-DAN6X-H1141 14043	Dynamic Output	≥ 2 mm	20	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	1	A4
Bi30R-W30-DAN6X-H1141 1404501	Dynamic Output	≥ 3 mm	30	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	1	A4
Bi6R-W30-DAP6X-H1141 14036	Dynamic Output	≥ 0.6 mm	6	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	2	A4
Bi10R-W30-DAP6X-H1141 14038	Dynamic Output	≥ 1 mm	10	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	2	A4
Bi15R-W30-DAP6X-H1141 14040	Dynamic Output	≥ 1.5 mm	15	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	2	A4
Bi20R-W30-DAP6X-H1141 14042	Dynamic Output	≥ 2 mm	20	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	2	A4
Bi30R-W30-DAP6X-H1141 14045	Dynamic Output	≥ 3 mm	30	3-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP67	PA 12	POM	N/A	YE	--	D	2	A4

We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Ring Sensors

## Plastic Housing Sensors with a Large Diameter Ring and 3 or 4-Wire DC Output

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>32 mm - Rectangular, Ring Sensor, Terminal Chamber</p>	
<p><b>B</b></p> <p>80 mm - Rectangular, Ring Sensor, M12 Eurofast Connector</p>	<p><b>C</b></p>  <p>100 mm - Rectangular, Ring Sensor, M12 Eurofast Connector</p>	
Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p> 	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>3</b></p>  <p>Mating Cordset: RK 4.4T-*</p>
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)		
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>	

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Ring Sensors

### Plastic Housing Sensors with a Large Diameter Ring and 3 or 4-Wire DC Output

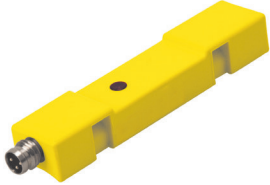
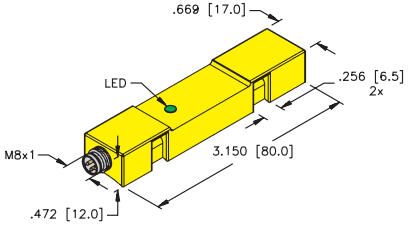
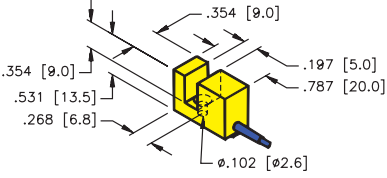
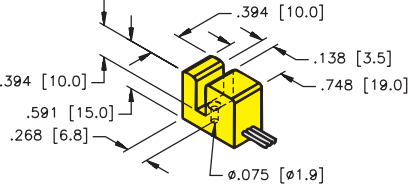
Part Number/ ID Number	Features	Minimum Target Diameter	Ring Diameter (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
Ni20R-S32SR-VP44X 1440001	Static Output	≥ 0.4 mm	20	4-wire DC PNP	10-55 VDC	8	≤200	-25 to +70	IP67	ABS	ABS	N/A	YE	A	1	A4
Ni40R-S32SR-VP44X 1440005	Static Output	≥ 1 mm	40	4-wire DC PNP	10-55 VDC	8	≤200	-25 to +70	IP67	ABS	ABS	N/A	YE	A	1	A4
Ni65R-S32SR-VP44X 1440008	Static Output	≥ 12 mm	65	4-wire DC PNP	10-55 VDC	8	≤200	-25 to +70	IP67	ABS	ABS	N/A	YE	A	1	A4
Bi50R-Q80-AP6X2-H1141 1407530	Static Output	≥ 8 mm	50	3-wire DC PNP	10-30 VDC	10	≤200	-25 to +70	IP67	PBT	PA 66	GN	YE	B	2	A4
Bi65R-Q80-AP6X2-H1141 1407531	Static Output	≥ 10 mm	65	3-wire DC PNP	10-30 VDC	10	≤200	-25 to +70	IP67	PBT	PA 66	GN	YE	B	2	A4
Ni100R-S32XL-VP44X-H1141 1510301	Static Output	≥ 10mm	100	4-wire DC PNP	10-55 VDC	8	≤200	-25 to +70	IP67	POM	POM	N/A	YE	C	3	A4

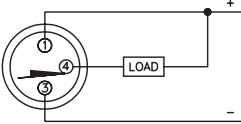
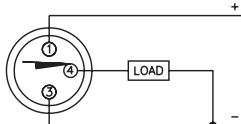
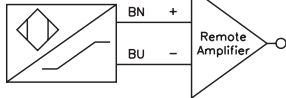
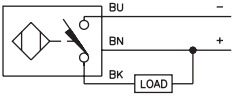
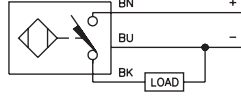
We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Tube and Slot Sensors

## Plastic Housing Sensors with Cable or Connector

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>Tube Sensing Nonembeddable, M8 Picofast Connector</p>
<p><b>B</b></p>  <p>9 mm - Slot Sensor, Potted-In Cable</p>	<p><b>C</b></p>  <p>10 mm - Slot Sensor, Potted-In Cable</p>

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: PKG 3M-*</p>	<p><b>2</b></p>  <p>Mating Cordset: PKG 3M-*</p>	<p><b>3</b></p>  <p>Remote Amplifier</p>
<p><b>4</b></p> 	<p><b>5</b></p> 	

A1	2-wire DC NAMUR - (Y0 and Y1)	
<p>Differential Travel (Hysteresis): 1-10% (5% typical)</p> <p>Nominal Voltage: 8.2 VDC (EN60947-5-6)</p> <p>Load Resistance: 1000 Ω</p> <p>Non-activated Current Consumption: ≥2.1 mA</p> <p>Activated Current Consumption: ≤1.2 mA</p> <p>Recommended Switching Point for Remote Amplifier:</p> <p>Amplifier: &gt;1.2 to &lt;2.1 mA, typ. 1.55 mA ON/1.75 mA OFF</p>		<p>Power-On Effect: Realized in Amplifier</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Realized in Amplifier</p> <p>Transient Protection: Realized in Amplifier</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p>

A4	3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection:</p> <p>≥220 mA on 200 mA Load Current</p> <p>≥170 mA on 150 mA Load Current</p> <p>≥120 mA on 100 mA Load Current</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA (Ferrite, Uprox) ≤20 mA (Uprox+, Uprox 3)</p>		<p>Time Delay Before Availability: ≤8 ms</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: ≤±10%</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Tube and Slot Sensors

### Plastic Housing Sensors with Cable or Connector

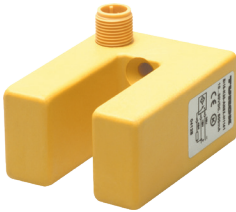
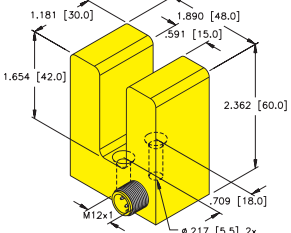
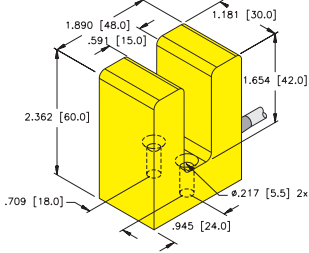
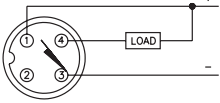
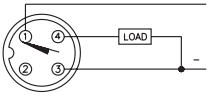
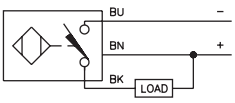
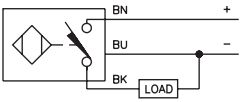
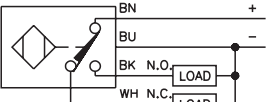
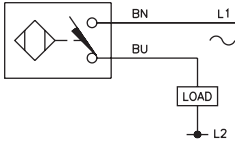
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Ni20U-TS12-AN6X2-V1131 1625822	Uprox+	20	3-wire DC NPN	10-30 VDC	8	≤200	-25 to +70	IP68	PBT	PBT	GN	YE	--	A	1	A4
Ni20U-TS12-AP6X2-V1131 1646640	Uprox+	20	4-wire DC PNP	10-30 VDC	8	≤200	-25 to +70	IP68	PBT	PBT	GN	YE	--	A	2	A4
Si5-K09-Y1 0.5M 10240		5	2-wire DC NAMUR	5-30 VDC	5000	Remote	-25 to +70	IP67	PBT	PBT	N/A	N/A	0.5M/PVC	B	3	A1
Si3.5-K10-AN7 17190		3.5	3-wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP67	PBT	PBT	N/A	N/A	2M/PVC	C	4	A4
Si3.5-K10-AP6X 1650001		3.5	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	PBT	PBT	N/A	YE	2M/PVC	C	5	A4
Si3.5-K10-Y1 10365		3.5	2-wire DC NAMUR	5-30 VDC	3000	Remote	-25 to +70	IP67	PBT	PBT	N/A	N/A	2M/PVC	C	3	A1

We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Slot Sensors

## Plastic Housing Sensors with Cable or Connector

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>30 mm - Slot Sensor, M12 Eurofast Connector</p>	
<p><b>B</b></p>  <p>30 mm - Slot Sensor, Potted-In Cable</p>		
Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>3</b></p> 
<p><b>4</b></p> 	<p><b>5</b></p> 	<p><b>6</b></p> 
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)		
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>	
A6 2-wire AC/DC w/o Short-Circuit Protection - (AZ, RZ, FZ)		
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>  AC: <math>\leq 100\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p>	<p>Inrush Current: <math>\leq 8\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz)  <math>\leq 1\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz) 12 mm  <math>\leq 0.2\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 0.2 Hz) 8 mm</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>	

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Slot Sensors

### Plastic Housing Sensors with Cable or Connector

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Si15-K30-AN6X-H1141 1605107		15	3-wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP67	PBT	PBT	N/A	YE	--	A	1	A4
Si15-K30-AP6X-H1141 1605007		15	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	PBT	PBT	N/A	YE	--	A	2	A4
Si15-K30-AN6X 1605003		15	3-wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP67	PBT	PBT	N/A	YE	2M/PVC	B	3	A4
Si15-K30-AP6X 1605001		15	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	PBT	PBT	N/A	YE	2M/PVC	B	4	A4
Si15-K30-VP6 1605030	Comp. Outputs	15	4-wire DC PNP	10-30 VDC	350	≤200	-25 to +70	IP67	PBT	PBT	N/A	N/A	2M/PVC	B	5	A4
Si15-K30-AZ3 13069		15	2-wire AC/DC	20-250 VAC/10- 300 VDC	20	≤400/300	-25 to +70	IP67	PBT	PBT	N/A	N/A	2M/PVC	B	6	A6


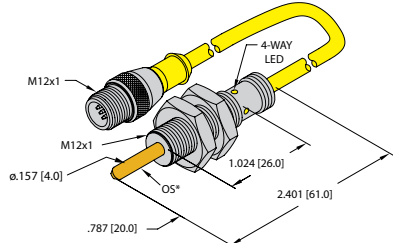
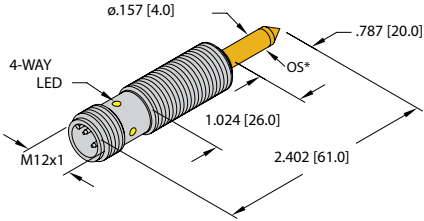
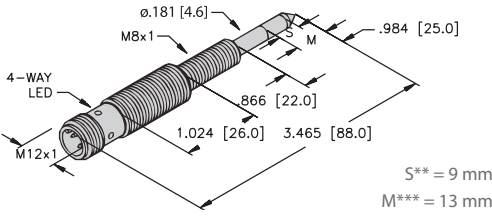
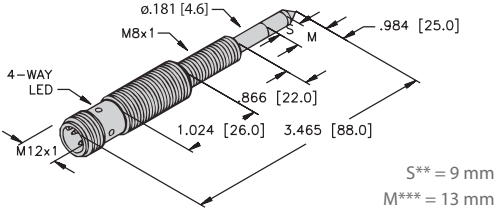
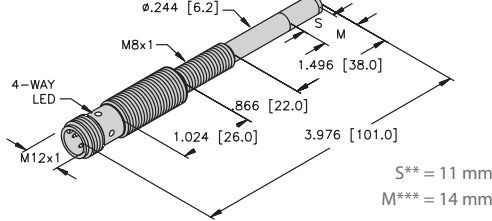
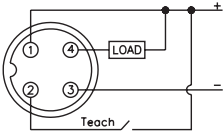
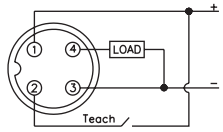
We reserve the right to make technical alterations without prior notice.

Specialty Sensors



# Specialty Sensors | Weld Nut Sensors

## Threaded Metal Barrel with Smooth Sensing Probe and 3-Wire DC Output

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>Nut Sensor, 5-12 mm Diameter Nut, Potted-In Cable</p>	
<p><b>B</b></p>  <p>Nut Sensor, 5-12 mm Diameter Nut, M12 Eurofast Connector</p>	<p><b>C</b></p>  <p>Nut Sensor, 6-12 mm Diameter Nut, M12 Eurofast Connector</p>	
<p><b>D</b></p>  <p>Nut Sensor, 6-12 mm Diameter Nut, M12 Eurofast Connector</p>	<p><b>E</b></p>  <p>Nut Sensor, 10-20 mm Diameter Nut, M12 Eurofast Connector</p>	
Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: RK 4.4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4.4T-*</p>	
A24 3-wire DC Nut Detection Sensor (AP, AN)		
<p>Ripple: <math>\leq 10\%</math></p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1</math> V</p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220</math> mA on 200 mA Load Current</p> <p>No-Load Current: <math>\leq 15</math> mA</p> <p>Off-State (Leakage) Current: <math>\leq 0.1</math> mA</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p>	

**Note:**  
 OS\* The optimal sensitive area for the 4.0 mm diameter probes has a width of 0.5 mm and is laser-engraved on the tip of the probe, 11.9 mm above the M12 thread.  
 S\*\* Sensitive area: Within this area the sensor signal changes when assembly parts are changed.  
 M\*\*\* Maximum area: The maximum signal intensity is reached if the sensitive area is completely covered.

Optional teach adapter available, part number VB2-SP1.

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Weld Nut Sensors

### Threaded Metal Barrel with Smooth Sensing Probe and 3-Wire DC Output


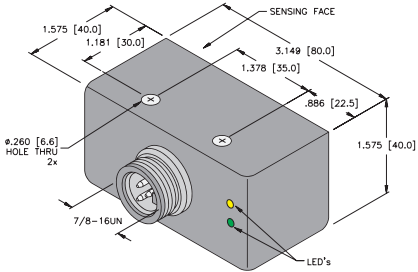
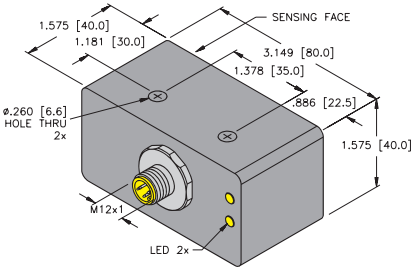
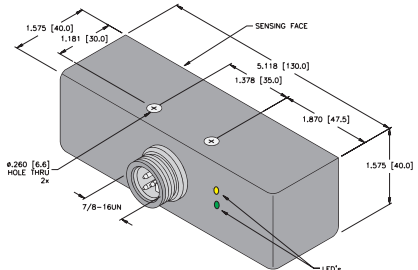
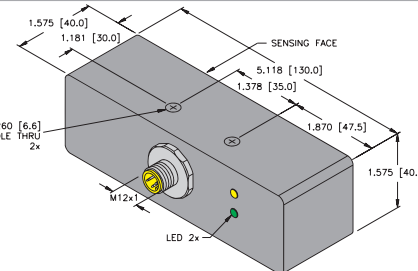
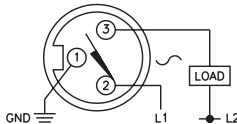
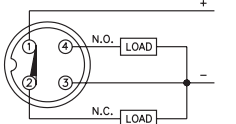
Part Number/ ID Number	Features	Nut Diameter	Output	Voltage	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
NIMFE-EM12/4.0L61-UP6X-0.3XYE-RS4/S1182 1600623	Titanium Nitride	5-12 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	0.3M/ TPE	A	2	A24
NIMFE-EM12/4.0L61-UN6X-0.3XYE-RS4/S1182 1600624	Titanium Nitride	5-12 mm	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	0.3M/ TPE	A	1	A24
NIMFE-EM12/4.0L61-UP6X-H1141/S1182 1600621	Titanium Nitride	5-12 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	B	2	A24
NIMFE-EM12/4.0L61-UN6X-H1141/S1182 1600622	Titanium Nitride	5-12 mm	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	B	1	A24
NIMFE-M12/4.6L88-UN6X-H1141 1600610		6-12 mm	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	C	1	A24
NIMFE-EMT12/4.6L88-UN6X-H1141 1600618	PTFE Coated	6-12 mm	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	1	A24
NIMFE-EM12/4.6L88-UN6X-H1141/S1182 1600617	Titanium Nitride	6-12 mm	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	1	A24
NIMFE-M12/4.6L88-UP6X-H1141 1600608		6-12 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	C	2	A24
NIMFE-EMT12/4.6L88-UP6X-H1141 1600619	PTFE Coated	6-12 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	2	A24
NIMFE-EM12/4.6L88-UP6X-H1141/S1182 1600620	Titanium Nitride	6-12 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	2	A24
NIMFE-EM12/4.9L88-UP6X-H1141/S1182 1600616	Titanium Nitride	6-12 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	D	2	A24
NIMFE-M12/6.2L101-UN6X-H1141 1600611		10-20 mm	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	E	1	A24
NIMFE-EMT12/6.2L101-UN6X-H1141 1600615	PTFE Coated	10-20 mm	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	E	1	A24
NIMFE-M12/6.2L101-UP6X-H1141 1600609		10-20 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	E	2	A24
NIMFE-EMT12/6.2L101-UP6X-H1141 1600613	PTFE Coated	10-20 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	E	2	A24
NIMFE-EM12/6.2L101-UP6X-H1141/S1182 1600612	Titanium Nitride	10-20 mm	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	E	2	A24

We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Edge Detection Sensors

## Rectangular Metal Housing with AC or DC Outputs and Integral Connector

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>CA4080 - Embeddable, Minifast Connector</p>
<p><b>B</b></p>  <p>CA4080 - Embeddable, M12 Eurofast Connector</p>	<p><b>C</b></p>  <p>CA40130 - Embeddable, Minifast Connector</p>
<p><b>D</b></p>  <p>CA40130 - Embeddable, M12 Eurofast Connector</p>	
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p>  <p>Mating Cordset: RKM 30-*M</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4.4T-*</p>
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
A5 2-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: AC: <math>\geq 440\text{ mA}</math>; DC: <math>\geq 330\text{ mA}</math>  AC: <math>\geq 120\text{ mA}</math>; DC: <math>\geq 120\text{ mA}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>  AC: <math>\leq 100\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math> (AC)  <math>\leq 1.5\text{ mA}</math> (DC)</p>	<p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p> <p>Inrush Current: <math>\leq 3\text{ A}</math> (<math>\leq 20\text{ ms}</math>, max 5 Hz)</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Edge Detection Sensors

### Rectangular Metal Housing with AC or DC Outputs and Integral Connector


Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi20-CA4080-ADZ30X2-B1131</b> 4283400		20	2-wire AC/DC	20-250 VAC/10-300 VDC	30/100	≤400/300	-25 to +70	IP67	TS	SF	GN	YE	A	1	A5
<b>Bi20-CA4080-VP4X2-H1141</b> 1625591		20	4-wire DC PNP	10-65 VDC	100	≤400	-25 to +70	IP67	TS	SF	GN	YE	B	2	A4
<b>Bi20-CA4080-VP4X2-H1141/S1009</b> 1625590	250 ms Off Delay	20	4-wire DC PNP	10-65 VDC	100	≤400	-25 to +70	IP67	TS	SF	GN	YE	B	2	A4
<b>Bi20-CA40130-ADZ30X2-B1131</b> 4283503		20	2-wire AC/DC	20-250 VAC/10-300 VDC	30/100	≤400/300	-25 to +70	IP67	TS	SF	GN	YE	C	1	A5
<b>Bi20-CA40130-ADZ30X2-B1131/S1009</b> 4283597	250 ms Off Delay	20	2-wire AC/DC	20-250 VAC/10-300 VDC	30/100	≤400/300	-25 to +70	IP67	TS	SF	GN	YE	C	1	A5
<b>Bi20-CA40130-VP4X2-H1141</b> 4283599		20	4-wire DC PNP	10-65 VDC	100	≤400	-25 to +70	IP67	TS	SF	GN	YE	D	2	A4

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Specialty Sensors

# Specialty Sensors | Edge Detection Sensors

## Rectangular Plastic Housing with AC or DC Outputs and Integral Connector

Housing Style	Dimension Drawings
	<p><b>A</b></p> <p>CK4080 - Embeddable, 7/8" Minifast Connector</p>
<p><b>B</b></p> <p>CK4080 - Embeddable, M12 Eurofast Connector</p>	<p><b>C</b></p> <p>CK40130 - Embeddable, 7/8" Minifast Connector</p>
<p><b>D</b></p> <p>CK40130 - Embeddable, M12 Eurofast Connector</p>	
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> <p>Mating Cordset: RKM 30-*M</p>	<p><b>2</b></p> <p>Mating Cordset: RK 4.4T-*</p>
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
A5 2-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: AC: <math>\geq 440\text{ mA}</math>; DC: <math>\geq 330\text{ mA}</math>  AC: <math>\geq 120\text{ mA}</math>; DC: <math>\geq 120\text{ mA}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>  AC: <math>\leq 100\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math> (AC)  <math>\leq 1.5\text{ mA}</math> (DC)</p>	<p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p> <p>Inrush Current: <math>\leq 3\text{ A}</math> (<math>\leq 20\text{ ms}</math>, max 5 Hz)</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Edge Detection Sensors


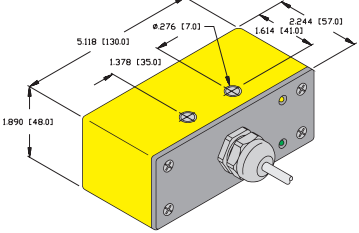
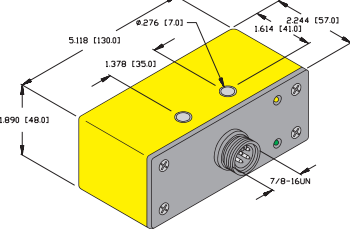
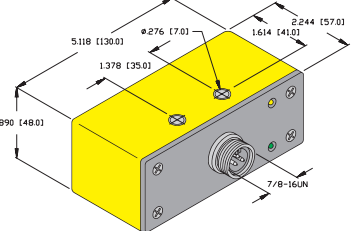
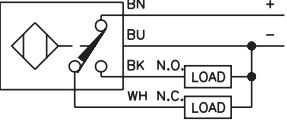
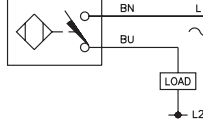
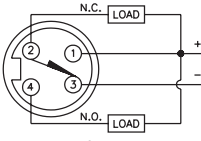
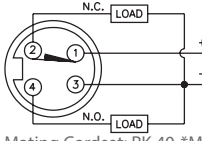
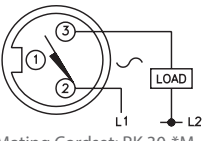
### Rectangular Plastic Housing with AC or DC Outputs and Integral Connector

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi20-CK4080-ADZ30X2-B1131</b> 4283493		20	2-wire AC/DC	20-250 VAC/10-300 VDC	30/100	≤400/300	-25 to +70	IP67	PBT	PBT	GN	RD	A	1	A5
<b>Bi20-CK4080-ADZ30X2-B1131/S1009</b> 4283495	250 ms Off Delay	20	2-wire AC/DC	20-250 VAC/10-300 VDC	30/100	≤400/300	-25 to +70	IP67	PBT	PBT	GN	RD	A	1	A5
<b>Bi20-CK4080-VP4X2-H1141</b> 4283491		20	4-wire DC PNP	10-65 VDC	100	≤400	-25 to +70	IP67	PBT	PBT	GN	YE	B	2	A4
<b>Bi20-CK4080-VP4X2-H1141/S1009</b> 4283496	250 ms Off Delay	20	4-wire DC PNP	10-65 VDC	100	≤400	-25 to +70	IP67	PBT	PBT	GN	YE	B	2	A4
<b>Bi20-CK40130-ADZ30X2-B1131</b> 4283589		20	2-wire AC/DC	20-250 VAC/10-300 VDC	30/100	≤400/300	-25 to +70	IP67	PBT	PBT	GN	YE	C	1	A5
<b>Bi20-CK40130-ADZ30X2-B1131/S1009</b> 42835953	250 ms Off Delay	20	2-wire AC/DC	20-250 VAC/10-300 VDC	30/100	≤400/300	-25 to +70	IP67	PBT	PBT	GN	YE	C	1	A5
<b>Bi20-CK40130-VP4X2-H1141</b> 42835911		20	4-wire DC PNP	10-65 VDC	100	≤400	-25 to +70	IP67	PBT	PBT	GN	YE	D	2	A4
<b>Bi20-CK40130-VP4X2-H1141/S1009</b> 42835963	250 ms Off Delay	20	4-wire DC PNP	10-65 VDC	100	≤400	-25 to +70	IP67	PBT	PBT	GN	YE	D	2	A4

We reserve the right to make technical alterations without prior notice.

# Specialty Sensors | Can Sensors

## Rectangular Plastic Housing with AC or DC Outputs and Integral Connector

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>Q130 - Nonembeddable, Potted-In Cable</p>	
<p><b>B</b></p>  <p>Q130 - Nonembeddable, 7/8" Minifast Connector</p>	<p><b>C</b></p>  <p>Q130 - Nonembeddable, 7/8" Minifast Connector</p>	
Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p> 	<p><b>2</b></p> 	<p><b>3</b></p>  <p>Mating Cordset: RK 40-*M</p>
<p><b>4</b></p>  <p>Mating Cordset: RK 40-*M</p>	<p><b>5</b></p>  <p>Mating Cordset: RK 30-*M</p>	
A4	3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>	
A5	2-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)	
<p>Line Frequency: <math>\geq 50\text{ Hz}</math> <math>\leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: AC: <math>\geq 440\text{ mA}</math>; DC: <math>\geq 330\text{ mA}</math>  AC: <math>\geq 120\text{ mA}</math>; DC: <math>\geq 120\text{ mA}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>  AC: <math>\leq 100\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math> (AC)  <math>\leq 1.5\text{ mA}</math> (DC)</p>	<p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p> <p>Inrush Current: <math>\leq 3\text{ A}</math> (<math>\leq 20\text{ ms}</math>, max 5 Hz)</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>	

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Can Sensors

### Rectangular Plastic Housing with AC or DC Outputs and Integral Connector


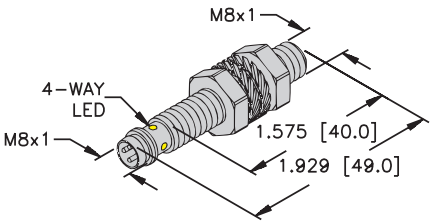
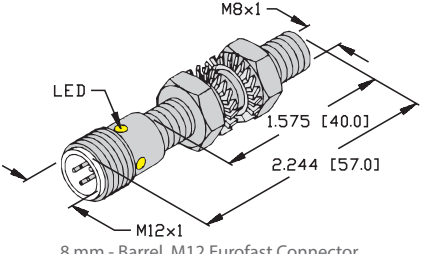
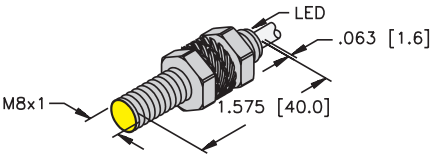
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Ni30-Q130-VP4X2 15179	Comp. Output	30	4-wire DC PNP	10-65 VDC	60	≤200	-25 to +70	IP67	PBT	PBT	GN	YE	2M/ PVC	A	1	A4
Ni30-Q130-ADZ30X2 42095		30	2-wire AC/DC	20-250 VAC/10- 300 VDC	30	≤400/300	-25 to +70	IP67	PBT	PBT	GN	RD	2M/ PVC	A	2	A5
Ni30-Q130-VN4X2-B2141 15180	Comp. Output	30	4-wire DC NPN	10-65 VDC	60	≤200	-25 to +70	IP67	PBT	PBT	GN	YE	--	B	3	A4
Ni30-Q130-VP4X2-B2141 1518001	Comp. Output	30	4-wire DC PNP	10-65 VDC	60	≤200	-25 to +70	IP67	PBT	PBT	GN	YE	--	B	4	A4
Ni30-Q130-ADZ30X2-B1131 42100		30	2-wire AC/DC	20-250 VAC/10- 300 VDC	30	≤400/300	-25 to +70	IP67	PBT	PBT	GN	YE	--	C	5	A5

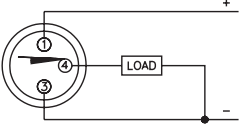
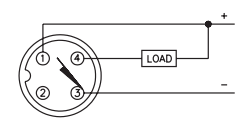
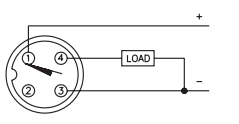
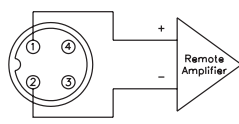
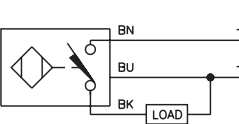
We reserve the right to make technical alterations without prior notice.



# Specialty Sensors | Inductive Magnetic Sensors

## Threaded Metal Barrels Designed to Sense a Magnetic Field

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>8 mm - Barrel, M8 Picofast Connector</p>
<p><b>B</b></p>  <p>8 mm - Barrel, M12 Eurofast Connector</p>	<p><b>C</b></p>  <p>8 mm - Barrel, Potted-In Cable</p>

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: PKG 3M-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>3</b></p>  <p>Mating Cordset: RK 4T-*</p>
<p><b>4</b></p>  <p>Mating Cordset: RK 4.21T-*</p>	<p><b>5</b></p> 	

A25	3-wire DC Magnetic Barrel (AP, AN)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 1-10%</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current <math>\geq 170\text{ mA}</math> on 150 mA Load Current</p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 15\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 0.3\%</math> of Full Scale</p>	
A27	2-wire DC Namur Magnetic Barrel (Y1)	
<p>Differential Travel (Hysteresis): 1-10%</p> <p>Nominal Voltage: 8.2 VDC (EN60947-5-6)</p> <p>Load Resistance: 1000 <math>\Omega</math></p> <p>Non-activated Current Consumption: <math>\leq 1.2\text{ mA}</math></p> <p>Activated Current Consumption: <math>\geq 2.1\text{ mA}</math></p> <p>Recommended Switching Point for Remote Amplifier: <math>&gt; 1.2</math> to <math>&lt; 2.1\text{ mA}</math></p> <p>Amplifier: typ. 1.55 mA ON/1.75 mA OFF</p>	<p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Realized in Amplifier</p> <p>Transient Protection: Realized in Amplifier</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 0.3\%</math> of Full Scale</p>	

**Note:**  
Use with Turck actuation magnet to achieve longest switching distance.  
See page I18 for part numbers and details.

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Inductive Magnetic Sensors

### Threaded Metal Barrels Designed to Sense a Magnetic Field


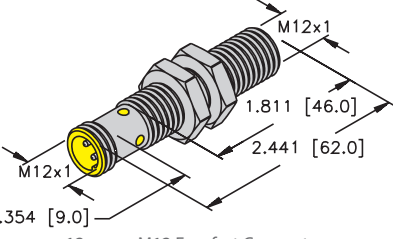
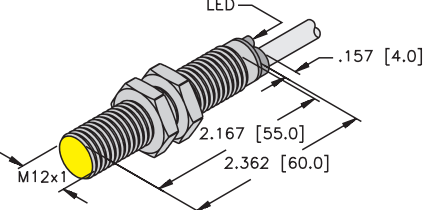
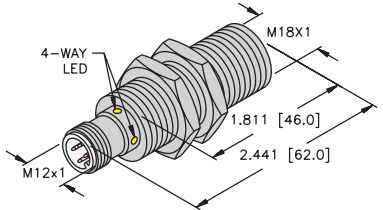
Part Number/ ID Number	Features	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>BIM-EG08-AP6X-V1131</b> 4621314	Up to 78 mm Range	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP67	SS	PA 12	N/A	YE	--	A	1	A25
<b>BIM-EG08-AN6X-H1341</b> 4621301	Up to 78 mm Range	3-wire DC NPN	10-30 VDC	1000	≤150	-25 to +70	IP67	SS	PA 12	N/A	YE	--	B	2	A25
<b>BIM-EG08-AP6X-H1341</b> 4621311	Up to 78 mm Range	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP67	SS	PA 12	N/A	YE	--	B	3	A25
<b>BIM-EG08-Y1X-H1341</b> 1074001	Up to 78 mm Range	2-wire DC NAMUR	5-30 VDC	1000	Remote	-25 to +70	IP67	SS	PA 12	N/A	YE	--	B	4	A27
<b>BIM-EG08-AP6X</b> 4621310	Up to 78 mm Range	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP67	SS	PA 12	N/A	YE	2M/TPU	C	5	A25

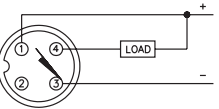
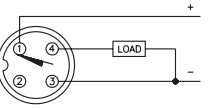
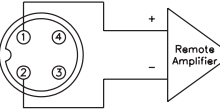
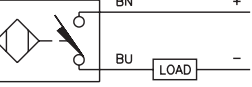
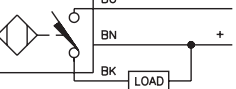
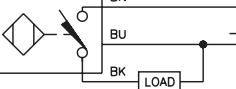
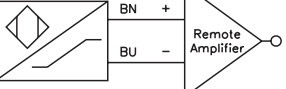
We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Inductive Magnetic Sensors

## Threaded Metal Barrels Designed to Sense a Magnetic Field

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>12 mm - M12 Eurofast Connector</p>
<p><b>B</b></p>  <p>12 mm - Potted-In Cable</p>	<p><b>C</b></p>  <p>18 mm - M12 Eurofast Connector</p>

Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*, P-RKGV 4.43T-1699XL-*</p>	<p><b>3</b></p>  <p>Mating Cordset: RK 4.21T-*</p>	<p><b>4</b></p> 
<p><b>5</b></p> 	<p><b>6</b></p> 	<p><b>7</b></p> 	

A25	3-wire DC Magnetic Barrel (AP, AN)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 1-10%</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current <math>\geq 170\text{ mA}</math> on 150 mA Load Current</p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 15\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 0.3\%</math> of Full Scale</p>	
A26	2-wire DC Magnetic Barrel (AG)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 1-10%</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 4.2\text{ V}</math> Polarized</p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current</p> <p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 15\%</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.8\text{ mA}</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 0.3\%</math> of Full Scale</p>	
A27	2-wire DC Namur Magnetic Barrel (Y1)	
<p>Differential Travel (Hysteresis): 1-10%</p> <p>Nominal Voltage: 8.2 VDC (EN60947-5-6)</p> <p>Load Resistance: 1000 <math>\Omega</math></p> <p>Non-activated Current Consumption: <math>\leq 1.2\text{ mA}</math></p> <p>Activated Current Consumption: <math>\geq 2.1\text{ mA}</math></p> <p>Recommended Switching Point for Remote Amplifier: <math>&gt; 1.2</math> to <math>&lt; 2.1\text{ mA}</math></p> <p>Amplifier: typ. 1.55 mA ON/1.75 mA OFF</p>	<p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Realized in Amplifier</p> <p>Transient Protection: Realized in Amplifier</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 0.3\%</math> of Full Scale</p>	

**Note:**  
Use with Turck actuation magnet to achieve longest switching distance.  
See page I18 for part numbers and details.

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Inductive Magnetic Sensors

### Threaded Metal Barrels Designed to Sense a Magnetic Field


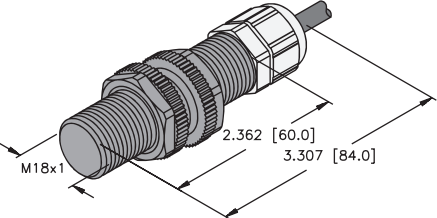
Part Number/ ID Number	Features	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
<b>BIM-M12E-AN4X-H1141</b> 1579914	Up to 90 mm Range	3-wire DC NPN	10-65 VDC	1000	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	A	1	A25
<b>BIM-EM12E-AP4X-H1141</b> 1579915	Up to 90 mm Range	3-wire DC PNP	10-65 VDC	1000	≤200	-25 to +70	IP67	SS	POM	N/A	YE	A	2	A25
<b>BIM-M12E-AP4X-H1141</b> 1579913	Up to 90 mm Range	3-wire DC PNP	10-65 VDC	1000	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	A	2	A25
<b>BIM-M12E-AP6X-H1141/S1751</b> 4681289	FM Approved	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	A	2	A25
<b>BIM-M12E-Y1X-H1141</b> 1074003	Up to 90 mm Range	2-wire DC NAMUR	5-30 VDC	1000	Remote	-25 to +70	IP67	CPB	PA 12	N/A	YE	A	3	A27
<b>BIM-M12E-AG4X</b> 44302	Up to 90 mm Range	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	CPB	PA 12	N/A	YE	B	4	A26
<b>BIM-M12E-AN4X</b> 1579912	Up to 90 mm Range	3-wire DC PNP	10-65 VDC	1000	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	B	5	A25
<b>BIM-EM12E-AP4X</b> 1579918	Up to 90 mm Range	3-wire DC PNP	10-65 VDC	1000	≤200	-25 to +70	IP67	SS	POM	N/A	YE	B	6	A25
<b>BIM-M12E-AP4X/S90</b> 1579911	Up to 90 mm Range	3-wire DC PNP	10-65 VDC	1000	≤200	-25 to +70	IP67	CPB	PA 12	N/A	YE	B	6	A25
<b>BIM-EM12E-Y1X</b> 1070036	Up to 90 mm Range	2-wire DC NAMUR	5-30 VDC	1000	Remote	-25 to +70	IP67	SS	POM	N/A	YE	B	7	A27
<b>BIM-M12E-Y1X</b> 1074002	Up to 90 mm Range	2-wire DC NAMUR	5-30 VDC	1000	Remote	-25 to +70	IP67	CPB	PA 12	N/A	YE	B	7	A27
<b>BIM-EM18M-AP4X-H1141</b> 1579933	Up to 90 mm Range	3-wire DC PNP	10-65 VDC	1000	≤200	-25 to +70	IP67	SS	POM	N/A	YE	C	2	A25

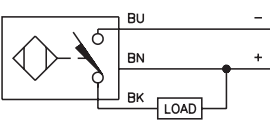
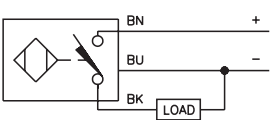
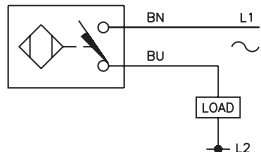
We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Submersible Sensors

## Threaded Plastic Barrel Sensors with Cable for Underwater Applications

Housing Style	Dimension Drawings
	<p>A</p>  <p>18 mm - Embeddable, Full Threading, Potted-In Cable</p>

Wiring Diagrams/Mating Cordsets		
<p>1</p> 	<p>2</p> 	<p>3</p> 

A4	3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox3)</p>		<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
A6	2-wire AC/DC w/o Short-Circuit Protection - (AZ, RZ, FZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 6.0\text{ V}</math></p> <p>Continuous Load Current: AC: <math>\leq 400\text{ mA}</math>; DC: <math>\leq 300\text{ mA}</math>  AC: <math>\leq 100\text{ mA}</math>; DC: <math>\leq 100\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 3.0\text{ mA}</math></p>		<p>Inrush Current: <math>\leq 8\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz)  <math>\leq 1\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 5 Hz) 12 mm  <math>\leq 0.2\text{ A}</math> (<math>\leq 10\text{ ms}</math> max. 0.2 Hz) 8 mm</p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Submersible Sensors


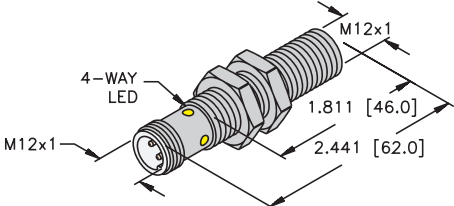
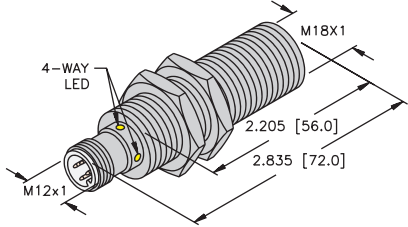
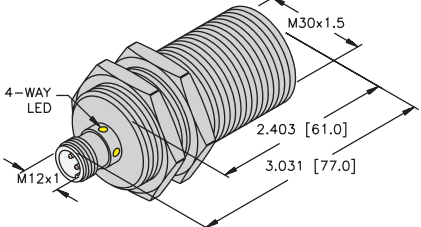
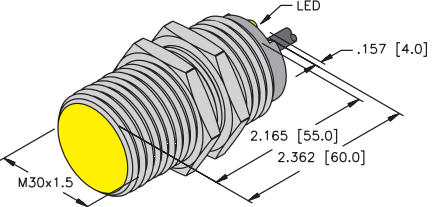
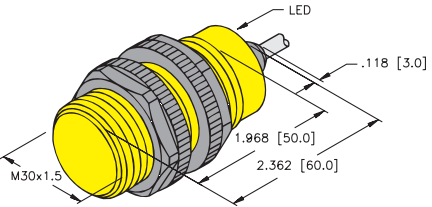
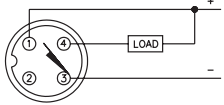
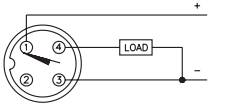
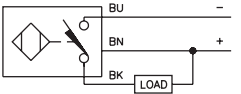
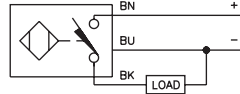
### Threaded Plastic Barrel Sensors with Cable for Underwater Applications

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>Bi5-P18-AN6/S139-S1261</b> 1650239	Submersible	5	3-wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP68	POM	PA 12	N/A	N/A	2M/TPE	A	1	A4
<b>Bi5-P18-AP6/S139-S1261</b> 1650234	Submersible	5	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	POM	PA 12	N/A	N/A	2M/TPE	A	2	A4
<b>Bi8U-P18-AP6/S139-S1261</b> 1650230	Submersible, Uprox	8	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP68	POM	PA 12	N/A	N/A	2M/TPE	A	2	A4
<b>Bi5-P18-AZ3/S139-S1261</b> 1384307	Submersible	5	2-wire AC	20-250 VAC	20	≤400	-25 to +70	IP68	POM	PA 12	N/A	N/A	2M/TPE	A	3	A6

We reserve the right to make technical alterations without prior notice.

# Specialty Sensors | Selective Metal Sensors

## Threaded Barrel Sensors Designed to Sense Nonferrous Metals Only

Housing Style	Dimension Drawings		
	<p><b>A</b></p>  <p>12 mm - Embeddable, M12 Eurofast Quick Disconnect</p>		
<p><b>B</b></p>  <p>18 mm - Embeddable, M12 Eurofast Quick Disconnect</p>	<p><b>C</b></p>  <p>30 mm - Embeddable, M12 Eurofast Quick Disconnect</p>		
<p><b>D</b></p>  <p>30 mm - Embeddable, Potted-In Cable</p>	<p><b>E</b></p>  <p>30 mm - Embeddable, Potted-In Cable, Partial Threading</p>		
Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RKV 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RKV 4T-*</p>	<p><b>3</b></p> 	<p><b>4</b></p> 
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection:</p> <ul style="list-style-type: none"> <li><math>\geq 220\text{ mA}</math> on 200 mA Load Current</li> <li><math>\geq 170\text{ mA}</math> on 150 mA Load Current</li> <li><math>\geq 120\text{ mA}</math> on 100 mA Load Current</li> </ul> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)   <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>		

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Selective Metal Sensors

### Threaded Barrel Sensors Designed to Sense Nonferrous Metals Only

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
Bi3NF-EM12HE-AP6X2-H1141 1615001	Senses nonferrous metals only	3	3-wire DC PNP	10-30 VDC	3000	≤200	0 to +60	IP67	SS	SF	GN	YE	--	A	2	A4
Bi5NF-EM18HE-AN6X2-H1141 1615004	Senses nonferrous metals only	5	3-wire DC NPN	10-30 VDC	2500	≤200	0 to +60	IP67	SS	SF	GN	YE	--	B	1	A4
Bi5NF-EM18HE-AP6X2-H1141 1615000	Senses nonferrous metals only	5	3-wire DC PNP	10-30 VDC	2500	≤200	0 to +60	IP67	SS	SF	GN	YE	--	B	2	A4
Bi10NF-EM30HE-AN6X2-H1141 1615005	Senses nonferrous metals only	10	3-wire DC NPN	10-30 VDC	2000	≤200	0 to +60	IP67	SS	SF	GN	YE	--	C	1	A4
Bi10NF-EM30HE-AP6X2-H1141 1615002	Senses nonferrous metals only	10	3-wire DC PNP	10-30 VDC	2000	≤200	0 to +60	IP67	SS	SF	GN	YE	--	C	2	A4
Bi10NF-M30-AN6X 16161	Senses nonferrous metals only	10	3-wire DC NPN	10-30 VDC	500	≤200	0 to +60	IP67	CPB	PA 12	N/A	YE	2M/ PVC	D	3	A4
Bi10NF-M30-AP6X 16061	Senses nonferrous metals only	10	3-wire DC PNP	10-30 VDC	500	≤200	0 to +60	IP67	CPB	PA 12	N/A	YE	2M/ PVC	D	4	A4
Bi10NF-S30-AN6X 16215	Senses nonferrous metals only	10	3-wire DC NPN	10-30 VDC	2000	≤200	0 to +60	IP67	PA 12	PA 12	N/A	YE	2M/ PVC	E	3	A4
Bi10NF-S30-AP6X 16115	Senses nonferrous metals only	10	3-wire DC PNP	10-30 VDC	2000	≤200	0 to +60	IP67	PA 12	PA 12	N/A	YE	2M/ PVC	E	4	A4


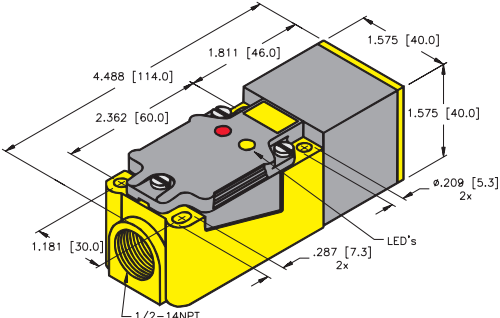
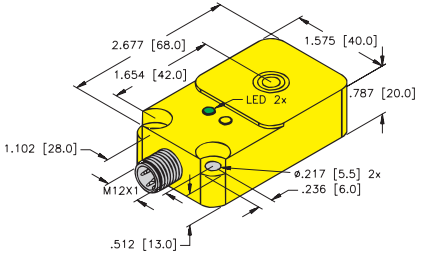
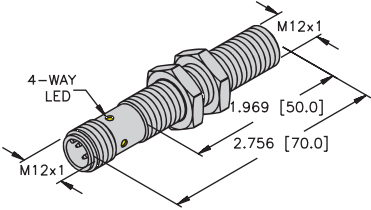
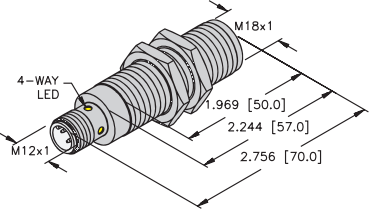
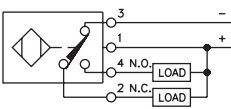
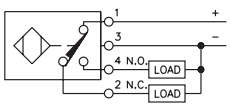
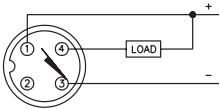
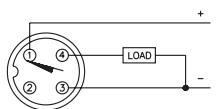
We reserve the right to make technical alterations without prior notice.

Specialty Sensors



# Specialty Sensors | Selective Metal Sensors

## Rectangular and Barrel Sensors Designed to Sense Nonferrous or Ferrous Metals Only

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>CP40 - Nonembeddable, Terminal Chamber</p>
<p><b>B</b></p>  <p>Q20 - Nonembeddable, M12 Eurofast Quick Disconnect</p>	<p><b>C</b></p>  <p>12 mm - Embeddable, M12 Eurofast Quick Disconnect</p>
<p><b>D</b></p>  <p>18 mm - Embeddable, M12 Eurofast Quick Disconnect</p>	
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> 	<p><b>2</b></p> 
<p><b>3</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>4</b></p>  <p>Mating Cordset: RK 4T-*</p>
A4 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
A28 3-wire DC Ferrous Only Sensing (AP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 2.5\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>No-Load Current: <math>\leq 20\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p>	<p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | Selective Metal Sensors

Rectangular and Barrel Sensors Designed to Sense Nonferrous or Ferrous Metals Only


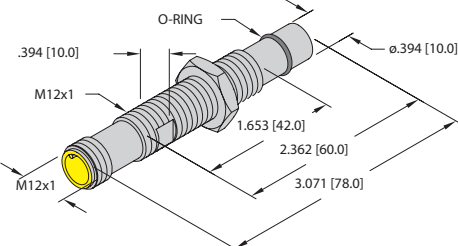
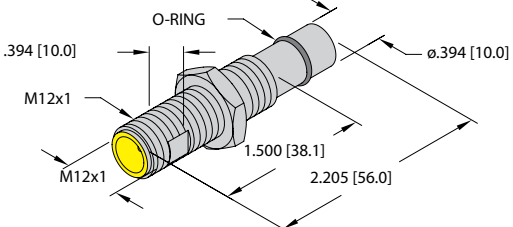
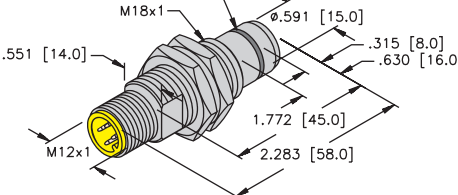
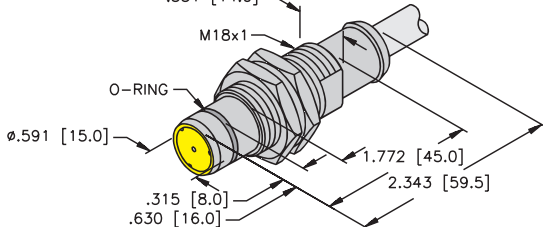
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
Ni20NF-CP40-VN4X2 15282	Senses nonferrous metals only	20	4-wire DC NPN	10-65 VDC	100	≤200	0 to +60	IP67	PBT	PBT	GN	YE	A	1	A4
Ni20NF-CP40-VP4X2 15082	Senses nonferrous metals only	20	4-wire DC PNP	10-65 VDC	100	≤200	0 to +60	IP67	PBT	PBT	GN	YE	A	2	A4
Ni25NF-Q20-AN6X2-H1141 1602710	Senses nonferrous metals only	25	3-wire DC NPN	10-30 VDC	25	≤200	0 to +60	IP67	PBT	PBT	GN	YE	B	3	A4
Bi2.5FE-EM12FE-AP6X-H1141 1615011	Senses ferrous metals only	2.5	3-wire DC PNP	10-30 VDC	1000	≤100	-25 to +70	IP67	SS	SS	N/A	YE	C	4	A28
Bi4.5FE-EM18FE-AP6X-H1141 1615012	Senses ferrous metals only	4.5	3-wire DC PNP	10-30 VDC	1000	≤100	-25 to +70	IP67	SS	SS	N/A	YE	D	4	A28

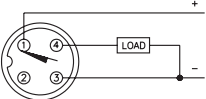
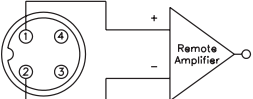
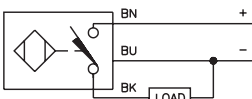
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Specialty Sensors

# Specialty Sensors | High Pressure

## Partially Threaded Metal Barrel Pressure Resistant Sensors

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>12 mm - Embeddable, M12 Eurofast Connection, Pressure Resistant Barrel Sensor</p>
<p><b>B</b></p>  <p>12 mm - Embeddable, M12 Eurofast Connection, Pressure Resistant Barrel Sensor</p>	<p><b>C</b></p>  <p>18 mm - Embeddable, M12 Eurofast Connection, Pressure Resistant Barrel Sensor</p>
<p><b>D</b></p>  <p>18 mm - Embeddable, Potted-In Cable, Pressure Resistant Barrel Sensor</p>	

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: RKV 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RKV 4.21T-*</p>	<p><b>3</b></p> 

A1	2-wire DC NAMUR - (Y0 and Y1)	
<p>Differential Travel (Hysteresis): 1-10% (5% typical)</p> <p>Nominal Voltage: 8.2 VDC (EN60947-5-6)</p> <p>Load Resistance: 1000 Ω</p> <p>Non-Activated Current Consumption: ≥2.1 mA</p> <p>Activated Current Consumption: ≤1.2 mA</p> <p>Recommended Switching Point for Remote Amplifier: &gt;1.2 to &lt;2.1 mA, typ. 1.55 mA ON/1.75 mA OFF</p>		<p>Power-On Effect: Realized in Amplifier</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Realized in Amplifier</p> <p>Transient Protection: Realized in Amplifier</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p>
A29	3-wire DC High Pressure (AP)	
<p>Ripple: ≤20%</p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤2 V, ≤1.8 V (Ext. Range)</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA on 200 mA Load Current</p> <p>No-Load Current: ≤10 mA, ≤15 mA (Ext. Range)</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p>		<p>Temperature Drift: ≤15%, ≤±10% (Ext. Range)</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p>

We reserve the right to make technical alterations without prior notice.

## Specialty Sensors | High Pressure

### Partially Threaded Metal Barrel Pressure Resistant Sensors


Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>BID1.5-G120KK-AP6-H1141</b> 1682001	500 bar	1.5	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +80	IP68	SS	CER	N/A	N/A	--	A	1	A29
<b>BID1.5-G120-AP6-H1141</b> 1682000	500 bar	1.5	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +80	IP68	SS	CER	N/A	N/A	--	B	1	A29
<b>BID2-G180-AP6-H1141/S212</b> 16885	500 bar static/350 bar dynamic	2	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +85	IP67	SS	PA 12	N/A	N/A	--	C	1	A29
<b>BID2-G180-Y0-H1141/S212</b> 1088500	500 bar static/350 bar dynamic	2	2-wire Namur	5-30 VDC	2000	≤200	-25 to +70	IP67	SS	PA 12	N/A	N/A	--	C	2	A1
<b>BID2-G180-AP6/S212</b> 1688003	500 bar static/350 bar dynamic	2	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +85	IP67	SS	PA 12	N/A	N/A	2M/TPU	D	3	A29

We reserve the right to make technical alterations without prior notice.

Specialty Sensors

# Specialty Sensors | Rotational Speed Monitor

## Threaded Metal Barrel for Target Detection on a Spinning Shaft

Housing Style	Dimension Drawings
	<p><b>A</b></p> <p>18 mm - Embeddable Rotational Speed Monitor, Potted-In Cable</p>
<p><b>B</b></p> <p>30 mm - Embeddable Rotational Speed Monitor, Potted-In Cable</p>	<p><b>C</b></p> <p>18 mm - Nonembeddable Rotational Speed Monitor, Potted-In Cable</p>
<p><b>D</b></p> <p>30 mm - Nonembeddable Rotational Speed Monitor, Potted-In Cable</p>	

### Wiring Diagrams/Mating Cordsets



A4		3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 3-15% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math> on 200 mA Load Current  <math>\geq 170\text{ mA}</math> on 150 mA Load Current  <math>\geq 120\text{ mA}</math> on 100 mA Load Current</p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math> (Ferrite, Uprox)  <math>\leq 20\text{ mA}</math> (Uprox+, Uprox 3)</p>	<p>Time Delay Before Availability: <math>\leq 8\text{ ms}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Temperature Drift: <math>\leq \pm 10\%</math></p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>		

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## Specialty Sensors | Rotational Speed Monitor

### Threaded Metal Barrel for Target Detection on a Spinning Shaft

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
<b>DBi5U-M18E-AP4X3</b> 1582236	Rotational Speed Monitor	5	3-wire DC PNP	10-65 VDC	0.05-50	≤200	-30 to +85	IP67	CPB	PBT	EPTR	GN	YE/BU	2M/PVC	A	1	A4
<b>DBi10U-M30-AP4X2</b> 1582231	Rotational Speed Monitor	10	3-wire DC PNP	10-65 VDC	0.05-50	≤200	-30 to +85	IP67	CPB	PBT	EPTR	GN	YE/BU	2M/PVC	B	1	A4
<b>DNI12U-M18E-AP4X3</b> 1582235	Rotational Speed Monitor	12	3-wire DC PNP	10-65 VDC	0.05-50	≤200	-30 to +85	IP67	CPB	PBT	EPTR	GN	YE/BU	2M/PVC	C	1	A4
<b>DNI20U-M30-AP4X3</b> 1582233	Rotational Speed Monitor	20	3-wire DC PNP	10-65 VDC	0.05-50	≤200	-30 to +85	IP67	CPB	PBT	EPTR	GN	YE/BU	2M/PVC	D	1	A4

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# Notes



Notes

