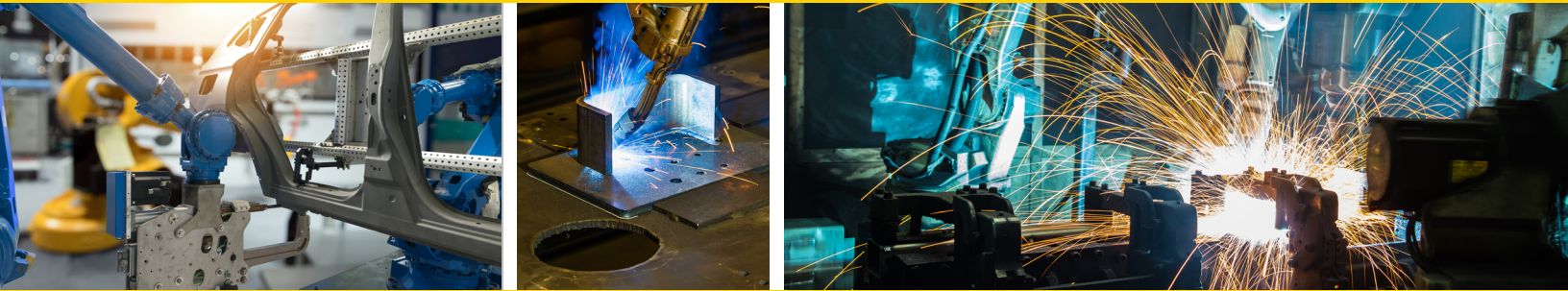


TURCK

Your Global Automation Partner



Sensors & Connectivity Solutions for Welding Applications

A Global Leader in Industrial Automation

Turck's sensors, connectivity, and fieldbus technology products are built to be the best. As one of the most **prominent** sensor manufacturers **in the world**, we even back our sensors with a **lifetime warranty**. Turck works by bringing **rugged engineering** solutions to your industrial automation applications.

85,000+
SOLUTIONS

50+
YEARS OF INNOVATION

2,000+
EXPERIENCED SALES REPRESENTATIVES

Pioneer in non-contact
sensing technology

Developed innovative **connectivity**
solutions in response to our customers' needs

Recognized the need for advanced **I/O solutions**
in harsh duty environments

**SUPPORT &
DEDICATED SERVICE**

EXTENSIVE WARRANTY



5,000+
APPLICATION EXPERTS

RESPOND
and SOLVE over 1,200 inquiries
per day



Strategically placed manufacturing facilities in the

USA with **30** GLOBAL
SUBSIDIARIES

GLOBAL BUT LOCAL...

60 representations worldwide

Solutions for Welding Environments

Increasing Productivity in Welding Applications

In weld cells and other metal fabricating applications, inductive proximity sensors and cordsets face a hostile environment – molten slag, weld spatter, impact and abrasion can take a toll on performance. Standard sensors can fail quickly, leading to downtime and costly replacements.

Turck offers high-temp, ruggedized sensors and connectivity products designed specifically to survive MIG/TIG and spot-welding applications. Real-world use often leads to abrasion and impact. Over time, this can degrade the sensing face and internal components. Our solutions resist heat, slag, spatter, and physical wear from unintended contact with targets. Many of our connectivity solutions are certified to withstand high flex, high temperatures and are flame retardant.

Turck also offers Factor 1 sensing technology in many of its inductive proximity sensors. These Uprox sensors can detect all types of metals, both ferrous and non-ferrous, at the same distance, without needing adjustments for different materials. Unlike traditional sensors that use a single coil, Factor 1 sensors use separate, independent sender and receiver coils to achieve extended sensing range and are immune to interference resulting from magnetic AC and DC fields.

Turck's protective designs extend sensor life dramatically, reducing maintenance and improving uptime. Every application is unique – let our engineering team help recommend the right solution for your needs or create a custom solution for you.

ENVIRONMENTS

METAL FORMING

- Automotive Manufacturing
- Pipe Construction
- Welding Cells
- MIG/TIG & Resistance Applications

SOLUTIONS

PRODUCT ENHANCEMENTS

- Sensor Coatings
- Factor 1 Variants
- Protective Covers
- Cable Slewing
- High Temperature Sensors



AUTOMOTIVE/TIER

With a focus on durability, Turck offers a wide range of sensors and connectivity solutions tailored for manufacturing in the automotive and Tier 1 industries, including welding applications. These solutions help you reduce component replacement due to failures in harsh conditions.



APPLIANCE/WHITE GOODS

Turck provides rugged automation solutions for appliance/white goods manufacturing, offering sensors and connectivity products engineered to perform reliably in demanding industrial environments. Designed to resist weld spatter, high temperatures, and electromagnetic interference, these solutions ensure consistent performance and a long service life.



AEROSPACE

The highly regulated aerospace industry demands manufactured parts and products that provide precision, durability and reliability. Many of Turck's automation solutions are engineered to withstand extreme conditions. Turck's weld-spatter resistant sensors and connectivity products that stand up to continuous flex ensure accurate performance in critical applications.



Best Practices for Sensors & Connectivity in Welding Applications

Follow these tips for a long service life. It is important to remember that every application is different, and no one solution will work to protect components from every application hazard.

Weld Environment Sensor Protection

- Use PTFE-coated threads and Weldguard-faced sensors in areas with heavy weld slag buildup. These surfaces help resist slag adhesion and extend sensor life.
- For extra protection, especially in high-slag or high-heat zones, run high-temp, slag-resistant tubing over the sensor, cable and connector. Make sure the tubing fits snugly against the sensor barrel to prevent slag intrusion.

Cleaning and Slag Removal

- Wipe off PTFE-coated sensors with a gloved hand whenever possible. Do not use steel brushes or tools – they'll damage the coating and cause slag to stick more easily.
- Weldguard-coated sensors typically don't need cleaning. Their anti-stick surface sheds slag naturally.
- Stainless-steel sensor faces can handle more aggressive cleaning, like brushing, but avoid using tools on any coated models (PTFE or Weldguard) to prevent damage.

Sensor Impact Protection

- If contact with the sensor is a "glancing" blow across the entire sensing face and/or threads or side, use Turck's extremely durable Armorguard protective products.
- If contact occurs directly on the sensing face, use a stainless-steel sensor.

40 mm Square/Cube Sensors

- Before pulling a cube sensor, take note of face orientation to ensure accurate reinstallation.
- When using metal BS 2.1 or BS 2.0 brackets, skip the 2.5 mm Allen wrench and use a 5/32" Allen socket instead – it's faster and easier for tight spaces.

Cordset Installation Tips

- To avoid cross-threading, spin the cordset's coupling nut counter-clockwise for one turn (or more as needed) to align threads, then tighten clockwise while keeping it straight.
- If LED visibility is limited, switch to extension cordsets with built-in LEDs molded into the connector for easier status checks in the weld cell.

Content

Weldguard	4
CA40, CK40 Rectangular Style	6
8 mm Barrel	8
12 mm Barrel	18
18 mm Barrel	26
30 mm Barrel	34
UNR, UNT	38
Q4.7, Q5.5 Rectangular Style	40
Q08 Rectangular Style	42
Armorguard	45
8 mm Barrel, 12 mm Barrel	46
18 mm Barrel, 30 mm Barrel	48
Stainless Steel Front Face	51
8 mm Barrel, Q08 Rectangular Style	52
12 mm Barrel	54
18 mm Barrel, 30 mm Barrel	56
Stoneface	59
12 mm Barrel	60, 66
18 mm Barrel	62, 66
30 mm Barrel	64, 66
Nut Detection Sensors	69
5 - 20 mm Nuts	70
Instrumentation	72
Flow Sensors	74
Pressure Sensors	76
Weld Water Control System - Modular Panels	80
Water	81
Air	81
Connectivity	82
Aramid Overbraid	85-86
M8 Picofast Cordsets	84
M12 Eurofast Cordsets	85-87, 92
1/2" Microfast Cordsets	88
7/8" Minifast Cordsets	89-91
Accessories	95

Weldguard Sensing Solutions

Superior Protection Against Weld Spatter

Turck's Weldguard coating offers a significant advancement in inductive sensor durability and performance in harsh welding environments. Engineered with a proprietary material applied to the sensing face, Weldguard sensors have been independently tested to endure over 25,000 operations without failure. This coating is impervious to weld spatter, which commonly causes pitting, chipping, and cracking in standard sensors during resistance welding. Unlike conventional sensing face materials, Weldguard resists the thermal and mechanical damage inflicted by high-velocity molten metal and elevated temperatures, ensuring consistent sensor performance and an extended service life.

- Available in a range of housing form factors and styles, including inductive magnetic cylinder, flat rectangular and up to a 30mm barrel
- Ideal for resistance welding applications where weld spatter commonly causes pitting, chipping, and cracking in standard sensors
- Its superior resistance properties make it an optimal choice for applications where conventional sensor coatings fall short
- Weld Field Immune variants available that are designed to operate reliably in strong electromagnetic fields



RESISTANCE
WELDING



WELD
SPATTER



WELD FIELD
IMMUNE (WFI)



Competitors failed at less than 2,000 welds.
Turck Weldguard lasted 34,256 welds.



Turck Weldguard lasted
25,691 welds.



Competitors failed between
449 and 1,869 welds.

Weldguard Sensing Solutions

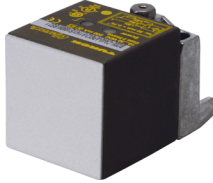
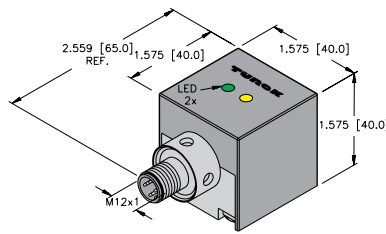
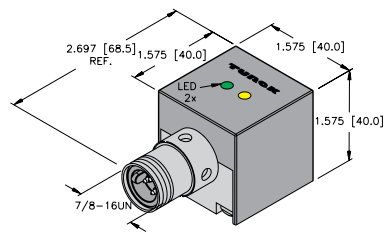
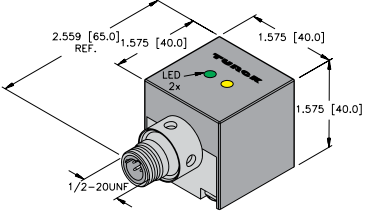
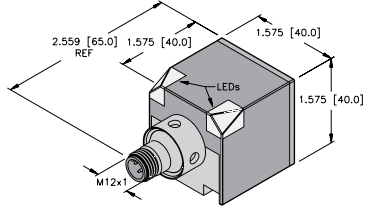
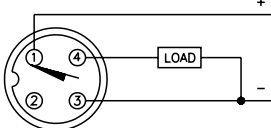
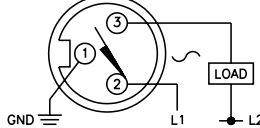
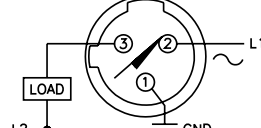
	Rectangular	Embeddable/Nonembeddable Metal Barrel			
					
Housing	30 mm	8 mm	12 mm	18 mm	30 mm
Sensing Range	20 - 50 mm	1.5 - 6 mm	2 - 10 mm	5 - 14 mm	10 - 30 mm
Pages	6	8	18	26	34

	BIM-UNR	BIM-UNT
		
Housing	UNR	UNT
Sensing Range	Magnetic	Magnetic
Pages	38	38

	Q4.7	Q5.5	Q08
			
Housing	4.7 mm	5.5 mm	8 mm
Sensing Range	2	2	5 - 8
Pages	40	40	42

Weldguard | CA40, CK40

Rotatable Sensing Head with 2 and 3-Wire Outputs

Housing Style		Dimension Drawings		
		A  CA40 - Embeddable, Eurofast Connector	B  CA40 - Embeddable, Minifast Connector	
		C  CA40 - Embeddable, Microfast Connector	D  CK40 - Embeddable/Nonembeddable, Eurofast Connector	
		Wiring Diagrams/Mating Cordsets		
1  Mating Cordset: RK 4T-*	2  Mating Cordset: RKM 30-*M	3  Mating Cordset: KB 3T-*		
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)				
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance		
A4 2-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)				
Line Frequency: ≥50... ≤60 Hz Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: ≤6.0 V Trigger Current for Short Circuit Protection: AC: ≥440 mA; DC: ≥330 mA AC: ≥120 mA; DC: ≥120 mA Continuous Load Current: AC: ≤400 mA; DC: ≤300 mA AC: ≤100 mA; DC: ≤100 mA Off-State (leakage) Current: ≤1.7 mA (AC) ≤1.5 mA (DC)		Minimum Load Current: ≥3.0 mA Inrush Current: ≤3 A (≤20 ms, max 5 Hz) Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes Repeatability: ≤2% of Rated Operating Distance		

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

Weldguard | CA40, CK40

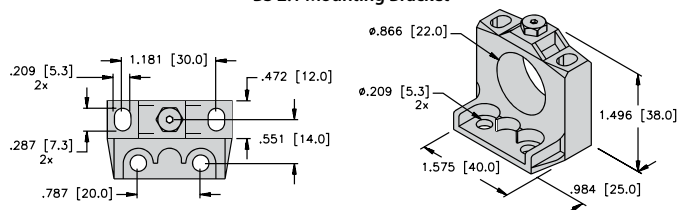
Rotatable Sensing Head with 2 and 3-Wire Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI20U-CA40-AP6X2-H1141/S1590W/BS2.1 1627295	Factor 1	20	3-wire DC PNP	10-30 VDC	250	≤200	0 to +70	IP67	AL	WG	GN	YE	A	1	A2
BI20U-CA40-AP6X2-H1141/S1590 W/BS2.0 1627297	Factor 1	20	3-wire DC PNP	10-30 VDC	250	≤200	0 to +70	IP67	AL	WG	GN	YE	A	1	A2
BI20U-CA40-ADZ30X2-B1131/S1590W/BS2.1 4283295	Factor 1	20	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-30 to +85	IP67	AL	WG	GN	YE	B	2	A4
BI20-CA40-ADZ30X2-B3131/S34/S1590 4283594	WFI	20	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-30 to +85	IP67	AL	WG	GN	YE	C	3	A4
BI30U-CK40-AP6X2-H1141/S1590 W/BS4 1625893	Factor 1	30	3-wire DC PNP	10-30 VDC	250	≤200	-10 to +60	IP68	PBT	WG	GN	YE	D	1	A2
NI50U-CK40-AP6X2-H1141/S1590 W/BS4 1625891	Factor 1	50	3-wire DC PNP	10-30 VDC	250	≤200	-30 to +85	IP68	PBT	WG	GN	YE	D	1	A2
NI35U-CK40-AP6X2-H1141/S1590 W/BS4 1625892	Factor 1	35	3-wire DC PNP	10-30 VDC	250	≤200	-30 to +85	IP68	PBT	WG	GN	YE	D	1	A2
NI25U-CK40-AP6X2-H1141/S1590 W/BS 2.1 1625796	Factor 1	25	3-wire DC PNP	10-30 VDC	250	≤200	-30 to +85	IP68	PBT	WG	GN	YE	D	1	A2

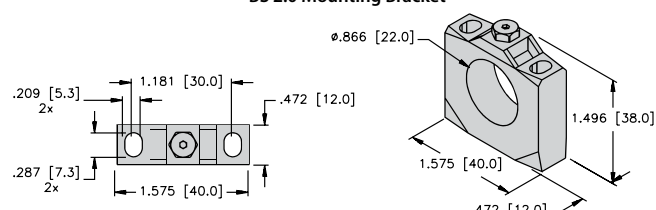
"/S1590" = Weldguard coating added to CA/CK 40 style sensor.

Weldguard

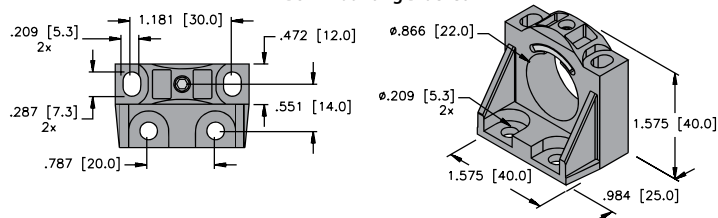
BS 2.1 Mounting Bracket



BS 2.0 Mounting Bracket

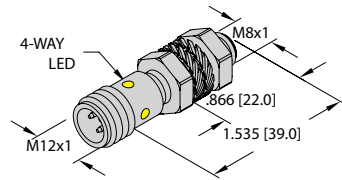
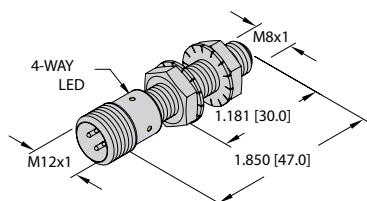
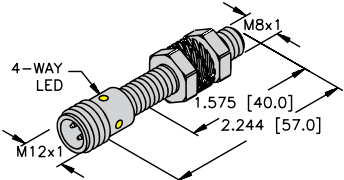
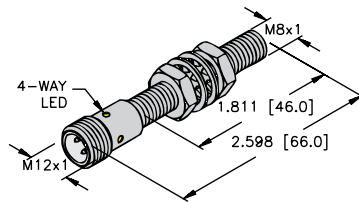


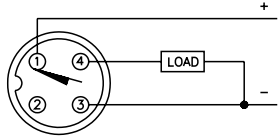
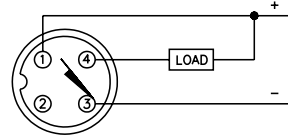
BS 4 Mounting Bracket



Weldguard | 8 mm

Embeddable Threaded Metal Barrels with Connector and DC Outputs

Housing Style	Dimension Drawings	
	A  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Connection	B  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Connection
	C  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Connection	D  8 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Connection

Wiring Diagrams/Mating Cordsets	
1	2
 Mating Cordset: RK 4T-*; RKV 4T-*	 Mating Cordset: RK 4T-*

A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: $\leq 1.8\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 220\text{ mA}$ on 200 mA Load Current $\geq 170\text{ mA}$ on 150 mA Load Current $\geq 120\text{ mA}$ on 100 mA Load Current Off-State (Leakage) Current: $\leq 0.1\text{ mA}$ No-Load Current: $\leq 15\text{ mA}$ (Ferrite, Uprox, Rectangular) $\leq 20\text{ mA}$ (Uprox+, Uprox 3) Time Delay Before Availability: $\leq 8\text{ ms}$	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: $\leq \pm 10\%$ Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance
A7 3-wire DC Stainless Front Face Ext Range (AP, AN, RP, RN)	
Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 20% Voltage Drop Across Conducting Sensor: $\leq 2\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 220\text{ mA}$ on 200 mA Load Current No-Load Current: $\leq 10\text{ mA}$ Off-State (Leakage) Current: $\leq 0.1\text{ mA}$	Temperature Drift: $\leq \pm 10\%$ Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes Repeatability: $\leq 5\%$ of Rated Operating Distance

Weldguard | 8 mm

Embeddable Threaded Metal Barrels with Connector and DC Outputs

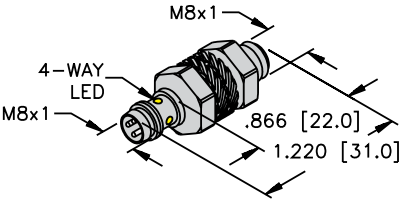
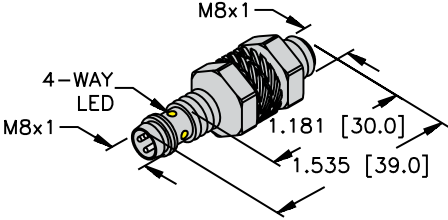
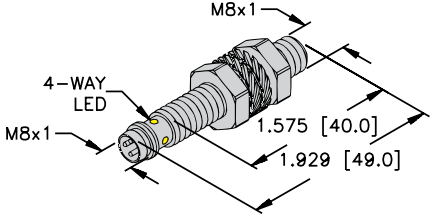
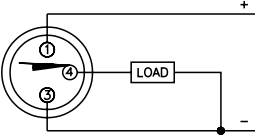
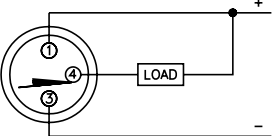
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI3U-EMT08-AP6X-H1341/S1589 46021560	Factor 1, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤150	0 to +60	IP68	TC	WG	N/A	YE	B	1	A2
BI3-EG08FE-AP6X-H1341/S1589 46147031	SSF	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	WG	N/A	YE	D	1	A7
BI3-EGT08FE-AP6X-H1341/S1589 46147032	SSF, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	D	1	A7
BI2U-EGT08-AP6X-H1341/S1589 46020702	Factor 1, PTFE	2	3-wire DC PNP	10-30 VDC	2000	≤150	-30 to +85	IP68	TC	WG	N/A	YE	C	1	A2
BI2U-EG08-AP6X-H1341/S1589 46020340	Factor 1	2	3-wire DC PNP	10-30 VDC	2000	≤150	-30 to +85	IP68	SS	WG	N/A	YE	C	1	A2
BI2-EG08-AP6X-H1341/S1589 4602086		2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	C	1	A2
BI2-EG08-AN6X-H1341/S1589 4602182		2	3-wire DC NPN	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	C	2	A2
BI2-EGT08-AP6X-H1341/S100/S1589 4602079	PTFE, High Temp. 100 °C	2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +100	IP67	TC	WG	N/A	YE	C	1	A2
BI2-EG08K-AP6X-H1341/S1589 4669486	Short Barrel	2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	A	1	A2
BI2-EG08K-AN6X-H1341/S1589 4669580	Short Barrel	2	3-wire DC NPN	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	A	2	A2
BI1.5U-EG08-AP6X-H1341/S1589 46005401	Factor 1	1.5	3-wire DC PNP	10-30 VDC	2000	≤150	-30 to +85	IP68	SS	WG	N/A	YE	C	1	A2

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 8 mm

Embeddable Threaded Metal Barrels with Connector and DC Outputs

Housing Style	Dimension Drawings
	A  8 mm - Embeddable, Miniature Threaded, M8 Picofast Quick Disconnect
B  8 mm - Embeddable, Miniature Threaded, M8 Picofast Quick Disconnect	C  8 mm - Embeddable, Miniature Threaded, M8 Picofast Quick Disconnect
Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: PKG 3M-*	2  Mating Cordset: PKG 3M-*
A23 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance

Weldguard | 8 mm

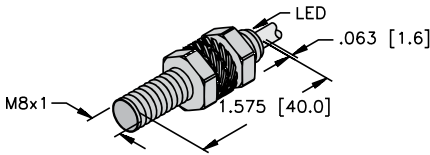
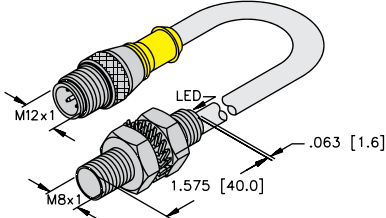
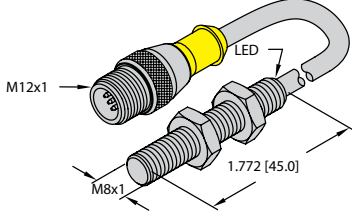
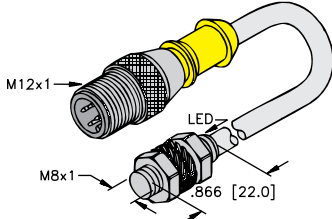
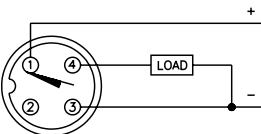
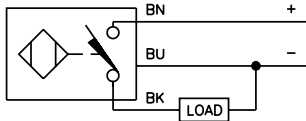
Embeddable Threaded Metal Barrels with Connector and DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI3U-EMT08-AP6X-V1131/S1589 46021550	Factor 1, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤150	0 to +60	IP68	TC	WG	N/A	YE	B	1	A2
BI2U-EGT08-AP6X-V1131/S1589 46020701	Factor 1, PTFE	2	3-wire DC PNP	10-30 VDC	2000	≤150	-30 to +85	IP68	TC	WG	N/A	YE	C	1	A2
BI2-EG08-AP6X-V1131/S1589 46020501		2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	C	1	A2
BI2-EG08-AN6X-V1131/S1589 46021500		2	3-wire DC NPN	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	C	2	A2
BI2-EG08K-AP6X-V1131/S1589 46694003	Short Barrel	2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	A	1	A2

"S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 8 mm
Embeddable Threaded Metal Barrels 3-Wire DC Outputs

Housing Style	Dimension Drawings
	A  8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable
B  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Quick Disconnect	C  8 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect
D  8 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Connection	
Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: RKV 4T-*; RK 4T-*	2 
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance
A7 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

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

Weldguard | 8 mm

Embeddable Threaded Metal Barrels 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	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI3-EGT08FE-AP6X-0.2-RS4T/S1154 46147013	SSF, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	0.2M/TPU	C	1	A7
BI2U-EG08-AP6X-0.2-RS4T/S1589 2690021	Factor 1	2	3-wire DC PNP	10-30 VDC	2000	≤150	-30 to +85	IP68	SS	WG	N/A	YE	0.2M/TPU	B	1	A2
BI2-EG08-AP6X/S1589 4602185		2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	2M/TPU	A	2	A2
BI2-EG08-AP6X-0.2-RS4T/S1589 4602084		2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	0.2M/TPU	B	1	A2
BI2-EG08K-AP6X-0.2-RS4T/S1589 46694951	Short Barrel	2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	0.2M/TPU	D	1	A2

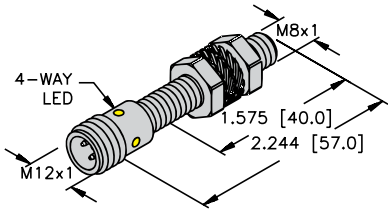
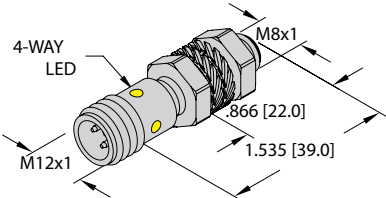
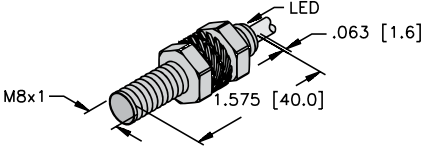
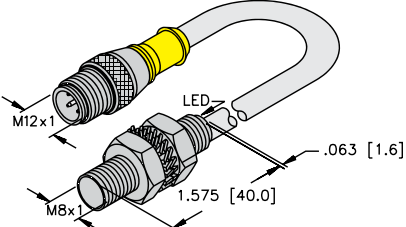
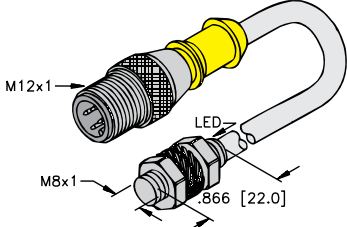
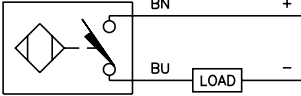
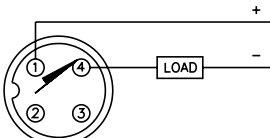
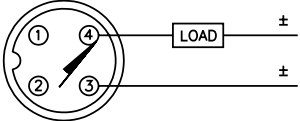
"/S1154" = Weldguard coated sensor with PTFE sleeving covering the entire cable length and captured under the connector mold body.

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 8 mm

Embeddable Threaded Metal Barrels 2-Wire DC Outputs

Housing Style	Dimension Drawings
	A  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Connection
B  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Connection	C  8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable
D  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Quick Disconnect	E  8 mm - Embeddable, Miniature Threaded, M12 Eurofast Quick Disconnect
Wiring Diagrams/Mating Cordsets	
1 	2  Mating Cordset: RK 4.23T-*
	3  Mating Cordset: RK 4.2T-*
A3 2-wire DC - (AD, RD, AG)	
Ripple: ≤10% Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: Non-polarized (AD) <5.0 V Polarized (AG) ≤4.2 V Trigger Current for Short Circuit Protection: ≥120 mA Minimum Load Current: ≥3.0 mA	Off-State (Leakage) Current: ≤0.8 mA Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance

Weldguard | 8 mm

Embeddable Threaded Metal Barrels 2-Wire DC Outputs

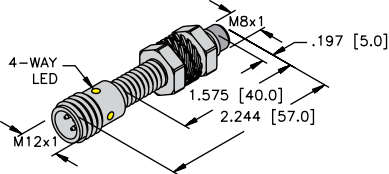
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI2-EG08-AG41X-H1341/S1589 4562095		2	2-wire DC	10-55 VDC	300	≤100	-25 to +70	IP67	SS	WG	N/A	YE	--	A	2	A3
BI2-EG08K-AG41X-H1341/S1589 4562090	Short Barrel	2	2-wire DC	10-55 VDC	300	≤100	-25 to +70	IP67	SS	WG	N/A	YE	--	B	2	A3
BI2-EGT08K-AG41X-H1341/S1589 4602599	PTFE, Short Barrel	2	2-wire DC	10-55 VDC	300	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	B	2	A3
BI2-EG08-AG41X/S1589 4562088		2	2-wire DC	10-55 VDC	300	≤100	-25 to +70	IP67	SS	WG	N/A	YE	2M/TPU	C	1	A3
BI2-EG08-AG41X-0.2-RS4.23T/S1589 4562097		2	2-wire DC	10-55 VDC	300	≤100	-25 to +70	IP67	SS	WG	N/A	YE	0.2M/TPU	D	2	A3
BI2-EG08K-AG41X-0.3-RS4.23T/S1589 45620893	Short Barrel	2	2-wire DC	10-55 VDC	300	≤100	-25 to +70	IP67	SS	WG	N/A	YE	0.3M/TPU	E	2	A3
BI1.5-EG08-AD6X-H1341/S1589 4600298		1.5	2-wire DC	10-30 VDC	3000	≤100	-25 to +70	IP67	SS	WG	N/A	YE	--	A	3	A3

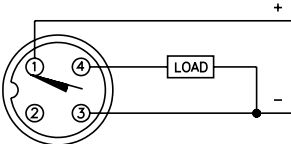
"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 8 mm

Nonembeddable Threaded Metal Barrels with Connector and DC Outputs

Housing Style	Dimension Drawings
	A  8 mm - Nonembeddable, Miniature Threaded, M12 Eurofast Quick Disconnect

Wiring Diagrams/Mating Cordsets	
1	 Mating Cordset: RK 4T-*

A2	3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
	Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: $\leq 1.8\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 220\text{ mA}$ on 200 mA Load Current $\geq 170\text{ mA}$ on 150 mA Load Current $\geq 120\text{ mA}$ on 100 mA Load Current Off-State (Leakage) Current: $\leq 0.1\text{ mA}$ No-Load Current: $\leq 15\text{ mA}$ (Ferrite, Uprox, Rectangular) $\leq 20\text{ mA}$ (Uprox+, Uprox 3) Time Delay Before Availability: $\leq 8\text{ ms}$	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: $\leq \pm 10\%$ Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance

Weldguard | 8 mm

Nonembeddable Threaded Metal Barrels with Connector and DC Outputs

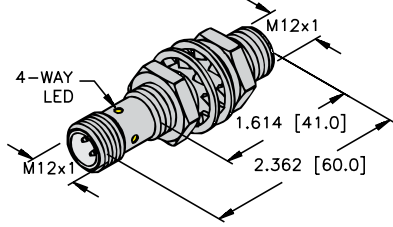
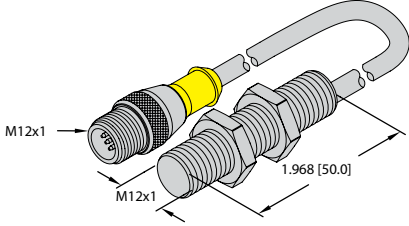
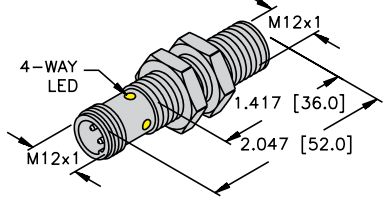
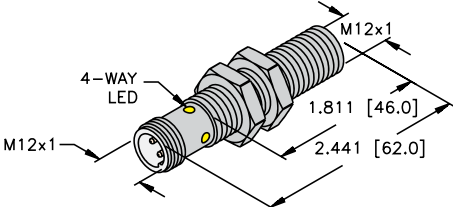
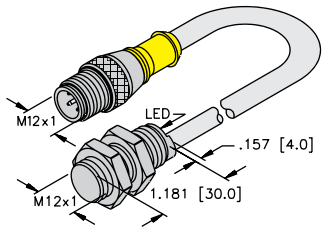
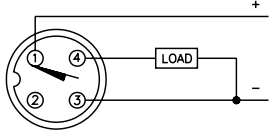
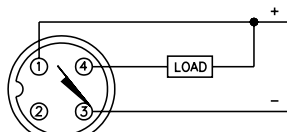
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
NI6U-EGT08-AP6X-H1341/S1589 4635989	Factor 1, PTFE	6	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP68	TC	WG	N/A	YE	A	1	A2
NI4U-EG08-AP6X-H1341/S1589 46006401	Factor 1	4	3-wire DC PNP	10-30 VDC	2000	≤150	-30 to +85	IP68	SS	WG	N/A	YE	A	1	A2
NI3-EG08-AP6X-H1341/S1589 4602799		3	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	A	1	A2

"S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 12 mm

Embeddable Threaded Metal Barrels 3-Wire DC Outputs

Housing Style	Dimension Drawings
	A  12 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Connection
B  12 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Quick Disconnect	C  12 mm - Embeddable, M12 Eurofast Connection
D  12 mm - Embeddable, M12 Eurofast Connection, Extended Barrel Length	E  12 mm - Embeddable, M12 Eurofast Quick Disconnect
Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: RK 4T-*, RKV 4T-*	2  Mating Cordset: RK 4T-*, RKV 4T-*
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance
A7 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

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

Weldguard | 12 mm

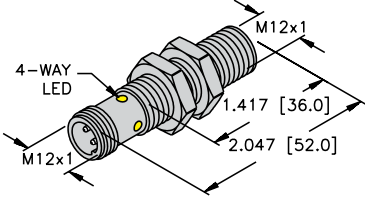
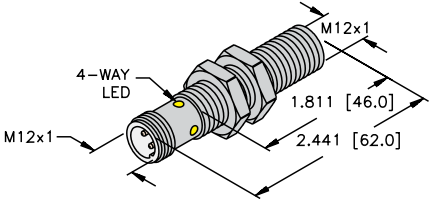
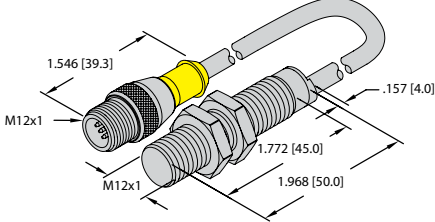
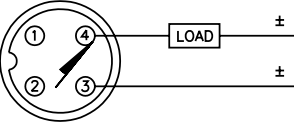
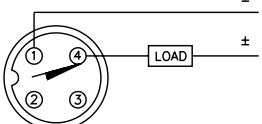
Embeddable Threaded Metal Barrels 3-Wire DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI6-EGT12FE-AP6X-H1141/S1589 46147061	SSF, PTFE	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	TC	WG	N/A	YE	--	A	1	A7
BI6-EGT12FE-AP6X-0.3-RS4T/S1589 46147200	SSF, PTFE	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	TC	WG	N/A	YE	0.3M/PVC	B	1	A7
BI4U-MT12-AP6X-H1141/S1589 1634997	Factor 1, PTFE	4	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP68	TC	WG	N/A	YE	--	C	1	A2
BI4U-MT12-AN6X-H1141/S1589 16348290	Factor 1, PTFE	4	3-wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP68	TC	WG	N/A	YE	--	C	2	A2
BI4U-MT12E-AP6X2-H1141/S1589 1644797	Factor 1, PTFE	4	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP68	TC	WG	GN	YE	--	D	1	A2
BI4U-EM12-AP6X-H1141/S1589 16348971	Factor 1	4	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP68	SS	WG	N/A	YE	--	C	1	A2
BI4-MT12-AP6X-H1141/S1589 4607099	PTFE	4	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	--	C	1	A2
BI4-MT12-AN6X-H1141/S1589 4607188	PTFE	4	3-wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	--	C	2	A2
BI4-MT12E-AP6X-H1141/S1589 4608094	PTFE	4	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	--	D	1	A2
BI4-MT12E-AN6X-H1141/S1589 4607187	PTFE	4	3-wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	--	D	2	A2
BI4-EM12E-AP6X-H1141/S1589 4607184		4	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	SS	WG	N/A	YE	--	D	1	A2
BI4-EM12E-AN6X-H1141/S1589 4607185		4	3-wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP67	SS	WG	N/A	YE	--	D	2	A2
BI3U-MT12-AP6X2-H1141/S1589 1634293	Factor 1, PTFE	3	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	WG	GN	YE	--	C	1	A2
BI3U-MT12-AP6X-H1141/S1589 16342121	Factor 1, PTFE	3	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	WG	N/A	YE	--	C	1	A2
BI3U-MT12E-AP6X2-H1141/S1589 1634291	Factor 1, PTFE	3	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	WG	GN	YE	--	D	1	A2
BI3U-MT12E-AN6X2-H1141/S1589 1634290	Factor 1, PTFE	3	3-wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	WG	GN	YE	--	D	2	A2
BI3U-EM12HE-AP6X2-H1141/S1589 1634398	Factor 1	3	3-wire DC PNP	10-30 VDC	3000	≤200	-30 to +85	IP68	SS	WG	GN	YE	--	D	1	A2
BI3U-EM12E-AN6X2-H1141/S1589 1634397	Factor 1	3	3-wire DC NPN	10-30 VDC	3000	≤200	-30 to +85	IP68	SS	WG	GN	YE	--	D	2	A2
BI2-EG12K-AP6X-0.2-RS4T/S1589 4605193	Short Barrel	2	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	SS	WG	N/A	YE	0.2M/PVC	E	1	A2

"S1589" = Weldguard coating added to sensor.

Weldguard | 12 mm

Embeddable Threaded Metal Barrels 2-Wire DC Outputs

Housing Style		Dimension Drawings	
		A	 12 mm - Embeddable, M12 Eurofast Connection
B	 12 mm - Embeddable, M12 Eurofast Connection, Extended Barrel Length	C	 12 mm - Embeddable, M12 Eurofast Quick Disconnect
Wiring Diagrams/Mating Cordsets			
1	 Mating Cordset: RK 4.2T-*	2	 Mating Cordset: RK 4.23T-*
A3		2-wire DC - (AD, RD, AG)	
Ripple: ≤10%		Off-State (Leakage) Current: ≤0.8 mA	
Differential Travel (Hysteresis): 3-15% (5% typical)		Power-On Effect: Per IEC 947-5-2	
Voltage Drop Across Conducting Sensor: Non-polarized (AD) <5.0 V		Transient Protection: Per EN 60947-5-2	
		Shock: 30 g, 11 ms	
Trigger Current for Short Circuit Protection: ≥120 mA		Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes	
Minimum Load Current: ≥3.0 mA		Repeatability: ≤2% of Rated Operating Distance	

Weldguard | 12 mm

Embeddable Threaded Metal Barrels 2-Wire DC Outputs

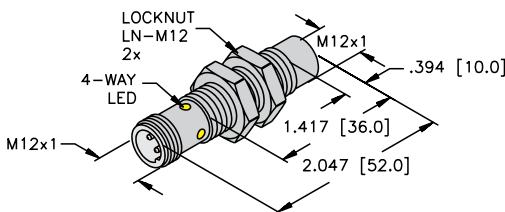
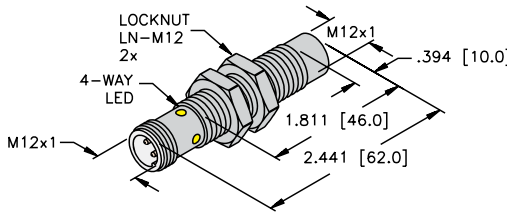
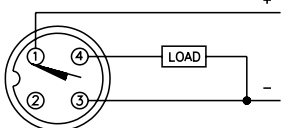
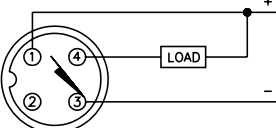
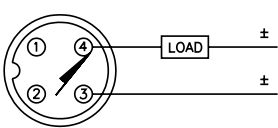
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI3-MT12-AD4X-H1141/S1589 4405082	PTFE	3	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	A	1	A3
BI3-MT12-AD4X-H1144/S1589 4405084	PTFE	3	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	A	2	A3
BI3-MT12E-AD4X-H1141/S1589 4405086	PTFE	3	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	B	1	A3
BI3-MT12E-AD4X-H1144/S1589 4405087	PTFE	3	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	B	2	A3
BI3-MT12-AD4X-0.3-RS4.23T/S1589 44050820	PTFE	3	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	0.3M/PVC	C	2	A3

"S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 12 mm

Nonembeddable Threaded Metal Barrels with Connector and DC Outputs

Housing Style		Dimension Drawings	
		A	 12 mm - Nonembeddable, M12 Eurofast Connection
B	 12 mm - Nonembeddable, Extended Barrel Length, M12 Eurofast Connection		
Wiring Diagrams/Mating Cordsets			
1	 Mating Cordset: RK 4T-*; RKV 4T-*	2	 Mating Cordset: RK 4T-*; RKV 4T-*
3	 Mating Cordset: RK 4.2T-*		
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: $\leq 1.8\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 220\text{ mA}$ on 200 mA Load Current $\geq 170\text{ mA}$ on 150 mA Load Current $\geq 120\text{ mA}$ on 100 mA Load Current Off-State (Leakage) Current: $\leq 0.1\text{ mA}$ No-Load Current: $\leq 15\text{ mA}$ (Ferrite, Uprox, Rectangular) $\leq 20\text{ mA}$ (Uprox+, Uprox 3) Time Delay Before Availability: $\leq 8\text{ ms}$		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: $\leq \pm 10\%$ Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance	
A3 2-wire DC - (AD, RD, AG)			
Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: Non-polarized (AD) $< 5.0\text{ V}$ Polarized (AG) $\leq 4.2\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 120\text{ mA}$ Minimum Load Current: $\geq 3.0\text{ mA}$		Off-State (Leakage) Current: $\leq 0.8\text{ mA}$ Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance	

Weldguard | 12 mm

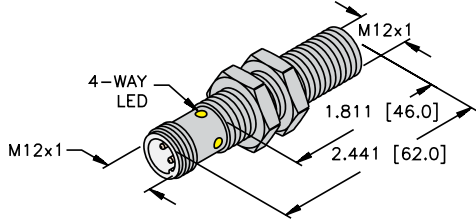
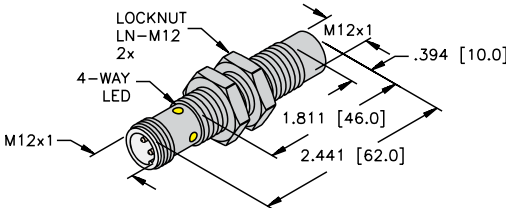
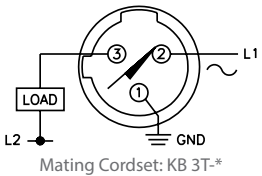
Nonembeddable Threaded Metal Barrels with Connector and DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
NI10U-MT12E-AP6X2-H1141/S1589 1634994	Factor 1, PTFE	10	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	TC	WG	GN	YE	B	1	A2
NI10U-MT12-AP6X-H1141/S1589 16348101	Factor 1, PTFE	10	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	TC	WG	N/A	YE	A	1	A2
NI8U-MT12-AP6X2-H1141/S1589 1644292	Factor 1, PTFE	8	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	WG	GN	YE	A	1	A2
NI8U-MT12E-AP6X2-H1141/S1589 1644299	Factor 1, PTFE	8	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	WG	GN	YE	B	1	A2
NI8U-MT12E-AN6X2-H1141/S1589 16442480	Factor 1, PTFE	8	3-wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	WG	GN	YE	B	2	A2
NI8U-EM12E-AP6X2-H1141/S1589 1644392	Factor 1	8	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP68	SS	WG	GN	YE	B	1	A2
NI8U-EM12E-AN6X2-H1141/S1589 1644391	Factor 1	8	3-wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP68	SS	WG	GN	YE	B	2	A2
NI8-MT12E-AP6X-H1141/S1589 4611398	PTFE	8	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	B	1	A2
NI8-MT12E-AN6X-H1141/S1589 4611397	PTFE	8	3-wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	WG	N/A	YE	B	2	A2
NI8-MT12-AD4X-H1141/S1589 4411291	PTFE	8	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	A	3	A3

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 12 mm
Threaded Metal Barrels with Connector and AC/DC Outputs

Housing Style		Dimension Drawings	
		A  12 mm - Embeddable, 1/2" Microfast Connection	
B  12 mm - Nonembeddable, 1/2" Microfast Connection			
Wiring Diagrams/Mating Cordsets			
1  Mating Cordset: KB 3T-*			
A42-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)			
Line Frequency: Differential Travel (Hysteresis): Voltage Drop Across Conducting Sensor: Trigger Current for Short Circuit Protection: Continuous Load Current: Off-State (leakage) Current:		Minimum Load Current: Inrush Current: Power-On Effect: Transient Protection: Shock: Vibration: Repeatability:	
≥50... ≤60 Hz 3-15% (5% typical) ≤6.0 V AC: ≥440 mA; DC: ≥330 mA AC: ≥120 mA; DC: ≥120 mA AC: ≤400 mA; DC: ≤300 mA AC: ≤100 mA; DC: ≤100 mA ≤1.7 mA (AC) ≤1.5 mA (DC)		≥3.0 mA ≤3 A (≤20 ms, max 5 Hz) Per IEC 947-5-2 Per EN 60947-5-2 30 g, 11 ms 55 Hz, 1 mm Amplitude, in all 3 Planes ≤2% of Rated Operating Distance	

Weldguard | 12 mm

Threaded Metal Barrels with Connector and AC/DC Outputs

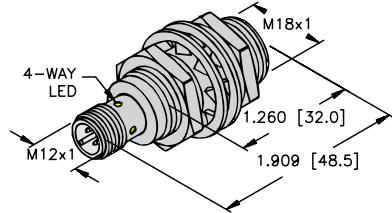
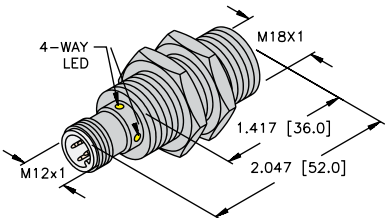
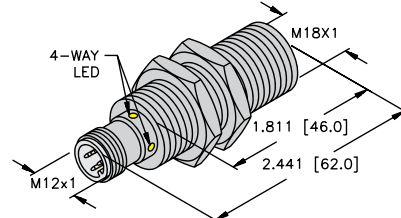
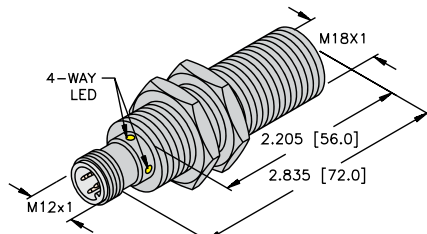
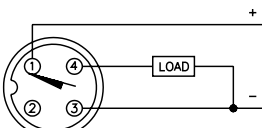
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI4-GT12-ADZ32X-B3131/S1589 4205087	PTFE	4	2-wire AC/DC	20-250 VAC/10-300 VDC	20	≤100	-25 to +70	IP67	TC	WG	N/A	RD	A	1	A4
BI2-GT12-ADZ32X-B3131/S34/S1589 4205096	PTFE, WFI	2	2-wire AC/DC	20-250 VAC/10-300 VDC	20	≤100	-25 to +70	IP67	TC	WG	N/A	RD	A	1	A4
NI8-GT12-ADZ32X-B3131/S1589 42054801	PTFE	8	2-wire AC/DC	20-250 VAC/10-300 VDC	20	≤100	-25 to +70	IP67	TC	WG	N/A	RD	B	1	A4
NI4-GT12-ADZ32X-B3131/S34/S1589 4205293	PTFE, WFI	4	2-wire AC/DC	20-250 VAC/10-300 VDC	20	≤100	-25 to +70	IP67	TC	WG	N/A	RD	B	1	A4

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 18 mm

Embeddable Threaded Metal Barrels with Connector and DC Outputs

Housing Style		Dimension Drawings	
		A	 18 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Connection
B	 18 mm - Embeddable M12 Eurofast Connection	C	 18 mm - Embeddable M12 Eurofast Connection
D	 18 mm - Embeddable, Ext. Barrel Length, M12 Eurofast Connection		
Wiring Diagrams/Mating Cordsets			
1	 Mating Cordset: RK 4T-*		
A2	3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)		
	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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	
A7	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	

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

Weldguard | 18 mm

Embeddable Threaded Metal Barrels with Connector and DC Outputs

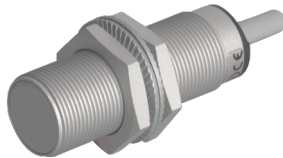
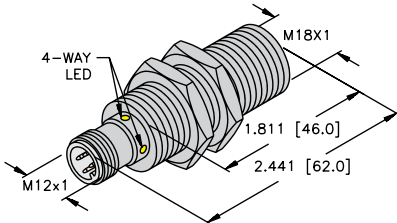
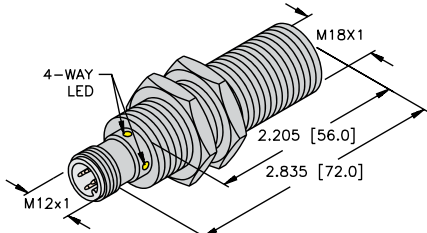
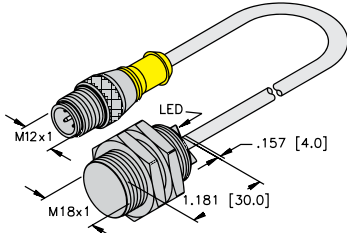
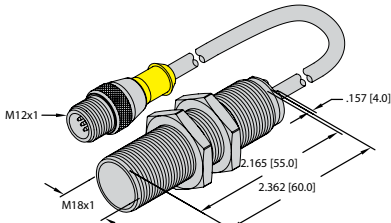
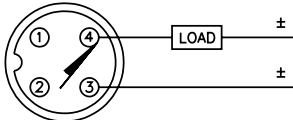
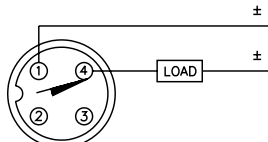
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI10-EGT18F-AP6X-H1141/S1589 46147081	SSF, PTFE	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	TC	WG	N/A	YE	A	1	A7
BI8U-MT18M-AP6X2-H1141/S1589 16447411	Factor 1, PTFE	8	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	TC	WG	GN	YE	C	1	A2
BI8U-MT18-AP6X-H1141/S1589 1644789	Factor 1, PTFE	8	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	TC	WG	N/A	YE	B	1	A2
BI8U-EM18M-AP6X2-H1141/S1589 1644771	Factor 1	8	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	SS	WG	GN	YE	C	1	A2
BI8-EM18-AP6X-H1141/S1589 4615099		8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	SS	WG	N/A	YE	B	1	A2
BI8-EM18E-AP6X-H1141/S1589 4615096		8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	SS	WG	N/A	YE	D	1	A2
BI5U-MT18-AP6X2-H1141/S395/S1589 1635291	Factor 1, PTFE	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP67	TC	WG	GN	YE	C	1	A2
BI5U-MT18-AP6X-H1141/S1589 1635294	Factor 1, PTFE	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP67	TC	WG	N/A	YE	B	1	A2
BI5U-MT18-AP6X2-H1141/S1589 1635292	Factor 1, PTFE	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP67	TC	WG	GN	YE	B	1	A2
BI5U-EM18-AP6X2-H1141/S395/S1589 1635197	Factor 1	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP68	SS	WG	GN	YE	C	1	A2

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 18 mm

Embeddable Threaded Metal Barrels 2-Wire DC Outputs

Housing Style		Dimension Drawings	
		A	 18 mm - Embeddable M12 Eurofast Connection
B	 18 mm - Embeddable, Ext. Barrel Length, M12 Eurofast Connection	C	 18 mm - Embeddable, Short Barrel Length, M12 Eurofast Quick Disconnect
D	 18 mm - Embeddable, Ext. Barrel Length, M12 Eurofast Quick Disconnect		
Wiring Diagrams/Mating Cordsets			
1	 Mating Cordset: RK 4.2T-*	2	 Mating Cordset: RK 4.23T-*
A32-wire DC - (AD, RD, AG)			
Ripple: ≤10% Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: Non-polarized (AD) <5.0 V Polarized (AG) ≤4.2 V Trigger Current for Short Circuit Protection: ≥120 mA Minimum Load Current: ≥3.0 mA		Off-State (Leakage) Current: ≤0.8 mA Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	

Weldguard | 18 mm

Embeddable Threaded Metal Barrels 2-Wire DC Outputs

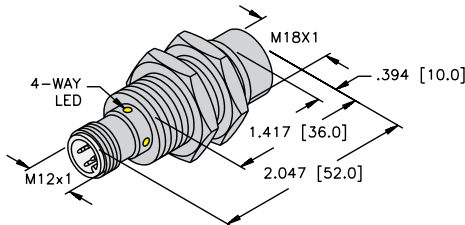
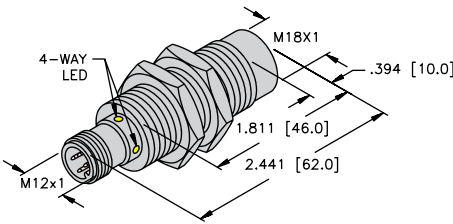
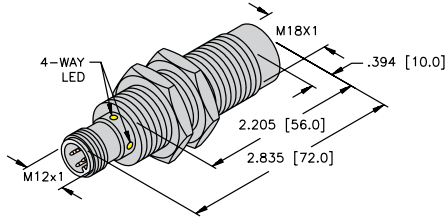
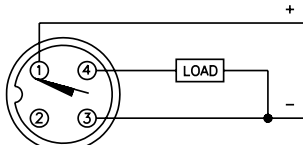
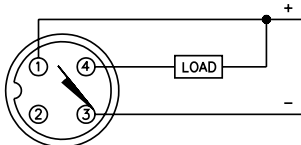
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI7-MT18-AD4X-H1144/S1589 4414576	PTFE	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	A	2	A3
BI7-MT18E-AD4X-H1141/S1589 4414588	PTFE	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	B	1	A3
BI7-MT18E-AD4X-H1144/S1589 4414599	PTFE	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	--	B	2	A3
BI7-GT18K-AD4X-0.2-RS4.23T/S1589 44145922	PTFE, Short Barrel	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	0.2M/PVC	C	2	A3
BI7-MT18E-AD4X-0.3-RS4.23T/S1589 4414589	PTFE	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	WG	N/A	YE	0.3M/PVC	D	2	A3

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 18 mm

Nonembeddable Threaded Metal Barrels with Connector and DC Outputs

Housing Style		Dimension Drawings	
		A  18 mm - Nonembeddable, M12 Eurofast Connection	
B  18 mm - Nonembeddable, M12 Eurofast Connection		C  18 mm - Nonembeddable, Ext. Barrel Length M12 Eurofast Connection	
Wiring Diagrams/Mating Cordsets			
1  Mating Cordset: RK 4T-*, RKV 4T-*		2  Mating Cordset: RK 4T-*, RKV 4T-*	
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	

Weldguard | 18 mm

Nonembeddable Threaded Metal Barrels with Connector and DC Outputs

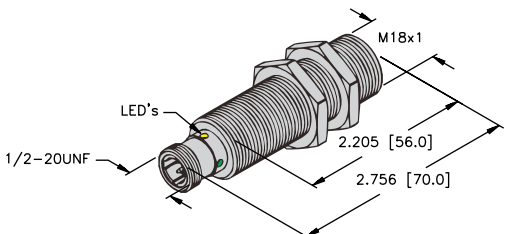
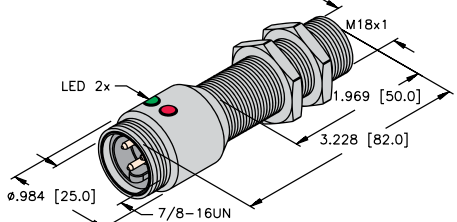
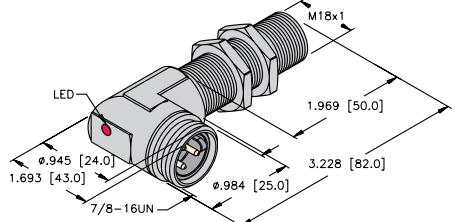
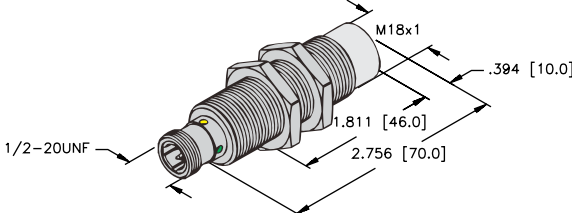
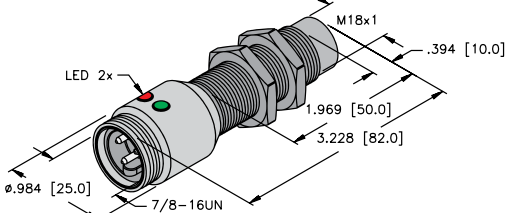
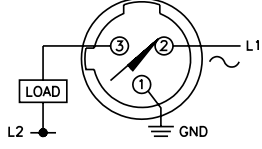
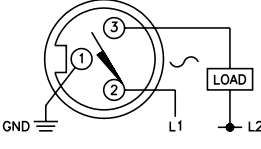
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
NI15U-MT18-AP6X-H1141/S1589 16353331	Factor 1, PTFE	15	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	TC	WG	N/A	YE		A	1	A2
NI15U-MT18M-AP6X2-H1141/S1589 16352920	Factor 1, PTFE	15	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	TC	WG	GN	YE		B	1	A2
NI14-MT18E-AP6X-H1141/S1589 4611497	PTFE	14	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	WG	N/A	YE		C	1	A2
NI14-EM18E-AP6X-H1141/S1589 4611495		14	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	WG	N/A	YE		C	1	A2
NI12U-MT18-AP6X2-H1141/S395/S1589 1645291	Factor 1, PTFE	12	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP67	TC	WG	GN	YE		B	1	A2
NI12U-MT18-AP6X2-H1141/S1589 1645293	Factor 1, PTFE	12	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP67	TC	WG	GN	YE		A	1	A2
NI12U-MT18-AP6X-H1141/S1589 1645292	Factor 1, PTFE	12	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP67	TC	WG	N/A	YE		A	1	A2
NI12U-EM18-AP6X2-H1141/S395/S1589 1645491	Factor 1	12	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP68	SS	WG	GN	YE		B	1	A2
NI12U-EM18-AN6X2-H1141/S395/S1589 1645490	Factor 1	12	3-wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP68	SS	WG	GN	YE		B	2	A2

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 18 mm

Threaded Metal Barrels with Connector and AC/DC Outputs

Housing Style	Dimension Drawings
	A  18 mm - Embeddable, 1/2" Microfast Connection
B  18 mm - Embeddable, 7/8" Minifast Connection	C  18 mm - Embeddable, 7/8" Minifast Right Angle Connection
D  18 mm - Nonembeddable, 1/2" Microfast connection	E  18 mm - Nonembeddable 7/8" Minifast Connection
Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: KB 3T-*	2  Mating Cordset: RKM 30-*M
A4 2-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)	
Line Frequency: $\geq 50 \dots \leq 60$ Hz Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: ≤ 6.0 V Trigger Current for Short Circuit Protection: AC: ≥ 440 mA; DC: ≥ 330 mA AC: ≥ 120 mA; DC: ≥ 120 mA Continuous Load Current: AC: ≤ 400 mA; DC: ≤ 300 mA AC: ≤ 100 mA; DC: ≤ 100 mA Off-State (leakage) Current: ≤ 1.7 mA (AC) ≤ 1.5 mA (DC)	Minimum Load Current: ≥ 3.0 mA Inrush Current: ≤ 3 A (≤ 20 ms, max 5 Hz) Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance

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

Weldguard | 18 mm

Threaded Metal Barrels with Connector and AC/DC Outputs

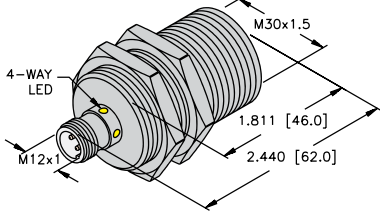
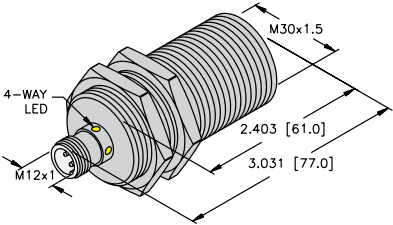
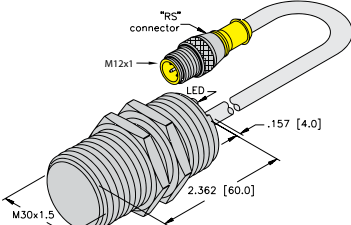
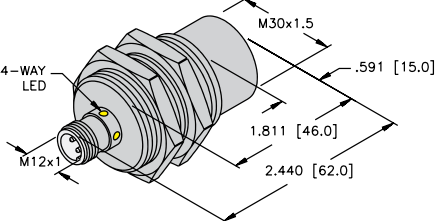
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI5-GT18-ADZ30X2-B3331/S34/S1589 4255283	PTFE, WFI	5	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	A	1	A4
BI5-GT18-ADZ30X2-B1331/S34/S1589 4255284	PTFE, WFI	5	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	B	2	A4
BI5-GT18-ADZ30X2-B1431/S34/S1589 4255285	PTFE, WFI	5	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	C	2	A4
NI14-GT18-ADZ30X2-B3331/S1589 4205491	PTFE	14	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	D	1	A4
NI14-GT18-ADZ30X2-B1331/S1589 4205484	PTFE	14	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	E	2	A4
NI8-GT18-ADZ30X2-B3331/S34/S1589 4208891	PTFE, WFI	8	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	D	1	A4
NI8-GT18-ADZ30X2-B1331/S34/S1589 4208890	PTFE, WFI	8	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	E	2	A4

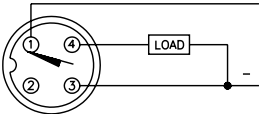
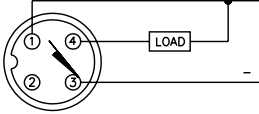
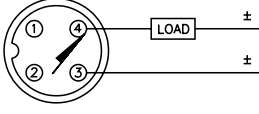
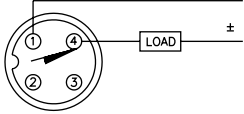
"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 30 mm

Threaded Metal Barrels with Connector and DC Outputs

Housing Style	Dimension Drawings
	A  30 mm - Embeddable, M12 Eurofast Connection
B  30 mm - Embeddable, M12 Eurofast Connection, Extended Barrel Length	C  30 mm - Embeddable, Potted-in Cable, Eurofast Quick Disconnect
D  30 mm - Nonembeddable, M12 Eurofast Connection	

Wiring Diagrams/Mating Cordsets			
1  Mating Cordset: RK 4T-*; RKV 4T-*	2  Mating Cordset: RK 4T-*; RKV 4T-*	3  Mating Cordset: RK 4.2T-*	4  Mating Cordset: RK 4.23T-*

A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance		
A3 2-wire DC - (AD, RD, AG)			
Ripple: ≤10% Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: Non-polarized (AD) <5.0 V Polarized (AG) ≤4.2 V Trigger Current for Short Circuit Protection: ≥120 mA Minimum Load Current: ≥3.0 mA	Off-State (Leakage) Current: ≤0.8 mA Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance		

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

Weldguard | 30 mm

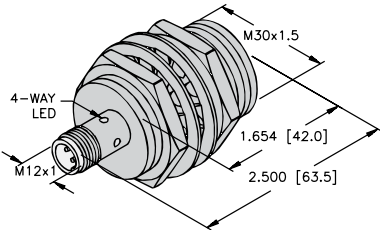
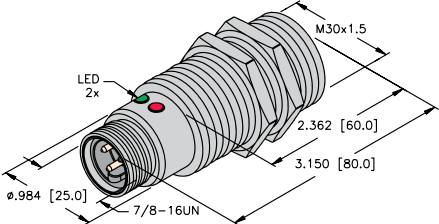
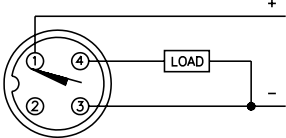
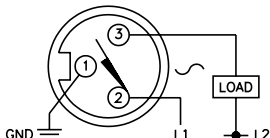
Threaded Metal Barrels with Connector and DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI15U-MT30-AP6X-H1141/S1589 1636793	Factor 1, PTFE	15	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	TC	WG	N/A	YE	--	A	1	A2
BI15-EM30-AP6X-H1141/S1589 4618593		15	3-wire DC PNP	10-30 VDC	300	≤200	-25 to +70	IP67	SS	WG	N/A	YE	--	A	1	A2
BI15-EM30E-AP6X-H1141/S1589 4618587		15	3-wire DC PNP	10-30 VDC	300	≤200	-25 to +70	IP67	SS	WG	N/A	YE	--	B	1	A2
BI12-GT30-AD4X-0.3-RS4.2T/S1589 4417086	PTFE	12	2-wire DC	10-65 VDC	500	≤100	-25 to +70	IP67	TC	WG	N/A	YE	0.3M/PVC	C	3	A3
BI12-GT30-AD4X-0.3-RS4.23T/S1589 4417085	PTFE	12	2-wire DC	10-65 VDC	500	≤100	-25 to +70	IP67	TC	WG	N/A	YE	0.3M/PVC	C	4	A3
BI10U-MT30-AP6X2-H1141/S1589 1636291	Factor 1, PTFE	10	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP67	TC	WG	GN	YE	--	A	1	A2
NI30U-MT30-AP6X2-H1141/S1589 16466351	Factor 1, PTFE	30	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	TC	WG	GN	YE	--	D	1	A2
NI20U-EM30-AP6X2-H1141/S1589 1646490	Factor 1	20	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	SS	WG	GN	YE	--	D	1	A2
NI20U-EM30-AN6X2-H1141/S1589 1646191	Factor 1	20	3-wire DC NPN	10-30 VDC	1500	≤200	-30 to +85	IP68	SS	WG	GN	YE	--	D	2	A2
NI20U-MT30-AP6X2-H1141/S1589 1646291	Factor 1, PTFE	20	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP67	TC	WG	GN	YE	--	D	1	A2

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | 30 mm
Embeddable Threaded Metal Barrels with Connector

Housing Style	Dimension Drawings
	A  30 mm - Embeddable, M12 Eurofast Connection, Stainless Steel
B  30 mm - Embeddable, 7/8" Minifast Connection	
Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: RK 4T-*	2  Mating Cordset: RKM 30-*M
A4 2-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)	
Line Frequency: $\geq 50 \dots \leq 60$ Hz Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: ≤ 6.0 V Trigger Current for Short Circuit Protection: AC: ≥ 440 mA; DC: ≥ 330 mA AC: ≥ 120 mA; DC: ≥ 120 mA Continuous Load Current: AC: ≤ 400 mA; DC: ≤ 300 mA AC: ≤ 100 mA; DC: ≤ 100 mA Off-State (leakage) Current: ≤ 1.7 mA (AC) ≤ 1.5 mA (DC)	Minimum Load Current: ≥ 3.0 mA Inrush Current: ≤ 3 A (≤ 20 ms, max 5 Hz) Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance
A7 3-wire DC Stainless Front Face Ext Range (AP, AN, RP, RN)	
Ripple: $\leq 10\%$ 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: $\leq \pm 10\%$ Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes Repeatability: $\leq 5\%$ of Rated Operating Distance

Weldguard | 30 mm

Embeddable Threaded Metal Barrels with Connector

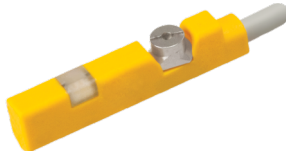
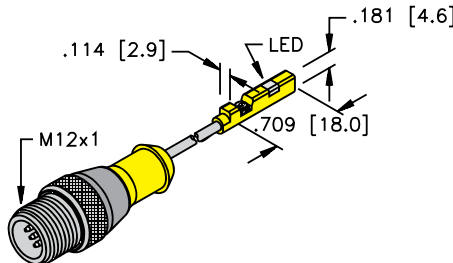
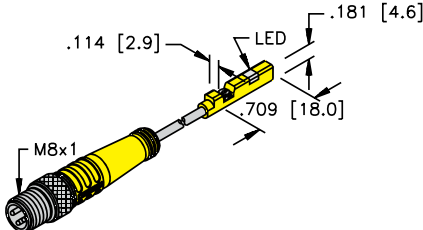
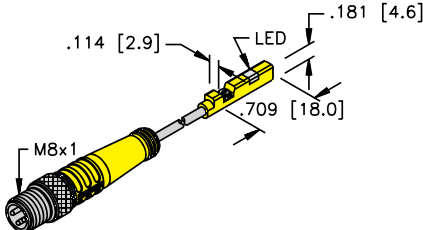
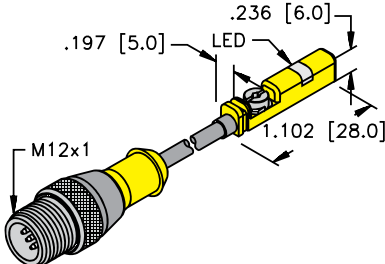
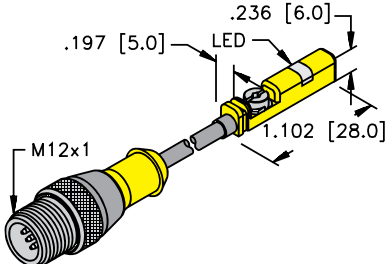
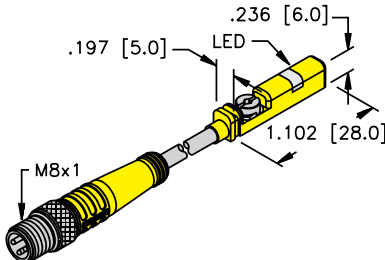
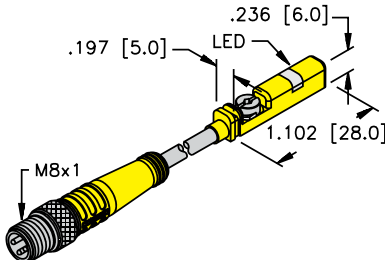
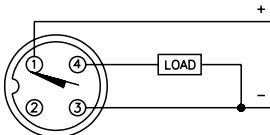
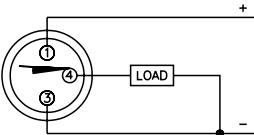
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI20-EGT30F-AP6X-H1141/S1589 46147101	SSF, PTFE	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	TC	WG	N/A	YE	A	1	A7
BI10-GT30-ADZ30X2-B1131/S34/S1589 4255280	PTFE, WFI	10	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10- 300 VDC	20	≤400/300	-25 to +70	IP67	TC	WG	GN	RD	B	2	A4

"/S1589" = Weldguard coating added to sensor.

Weldguard

Weldguard | UNR, UNT

 T-groove, C-groove, Tie-rod, and Round Cylinder Style

Housing Style		Dimension Drawings	
		A	 UNR - Eurofast Quick Disconnect
 UNR - Picofast Quick Disconnect		B	
 UNT - Eurofast Quick Disconnect		C	
 UNT - Picofast Quick Disconnect		D	
Wiring Diagrams/Mating Cordsets			
1  Mating Cordset: RK 4T-*		2  Mating Cordset: PKG 3M-*	
A1 3-wire DC - Magnetic (AN, RN, AP, RP)			
Ripple: ≤10% Differential Travel (Hysteresis): ≤1 mm Voltage Drop Across Conducting Sensor: ≤1.8 V 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 Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA; Pass Speed: ≤10 ms; ≤3 ms (UNR)		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤0.1 mm, ≤0.3 mm (UNR) Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≥± 0.1 mm, ≥± 0.3 mm (UNR)	
Additional Specifications			
Magnetic Actuation Strength (Gauss): 20-350			

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

Weldguard | UNR, UNT

T-groove, C-groove, Tie-rod, and Round Cylinder Style

Part Number/ ID Number	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BIM-UNR-AP6X-0.3-RS4T/S1764 W/M 46858416	3-wire DC PNP	10-30 VDC	300	≤100	-25 to +70	IP67	PP	N/A	YE	0.3M/TPU	A	1	A1
BIM-UNR-AP6X-0.3-PSG3M/S1764 W/M 4685889	3-wire DC PNP	10-30 VDC	300	≤100	-25 to +70	IP67	PP	N/A	YE	0.3M/TPU	B	2	A1
BIM-UNR-AP6X-0.3-RS4T/S1154 46858419	3-wire DC PNP	10-30 VDC	300	≤100	-25 to +70	IP67	PP	N/A	YE	0.3M/TPU	A	1	A1
BIM-UNR-AP6X-0.3-PSG3M/S1154 46858414	3-wire DC PNP	10-30 VDC	300	≤100	-25 to +70	IP67	PP	N/A	YE	0.3M/TPU	B	2	A1
BIM-UNT-AP6X-0.2-RS4T/S1764 4685798	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP68	PP	N/A	YE	0.2M/TPU	C	1	A1
BIM-UNT-AP6X-0.3-PSG3M/S1764 4688097	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP68	PP	N/A	YE	0.3M/TPU	D	2	A1
BIM-UNT-AP6X-0.5-PSG3M/S1764 4685794	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP68	PP	N/A	YE	0.5M/TPU	D	2	A1
BIM-UNT-AP6X-0.3-PSG3M/S1765 4685799	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP68	PP	N/A	YE	0.3M/TPU	D	2	A1
BIM-UNT-AP6X-0.3-PSG3M/S1154 46857219	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP68	PP	N/A	YE	0.3M/TPU	D	2	A1
BIM-UNT-AP6X-0.5-RS4T/S1154 46857268	3-wire DC PNP	10-30 VDC	1000	≤150	-25 to +70	IP68	PP	N/A	YE	0.5M/TPU	C	1	A1

Weldguard

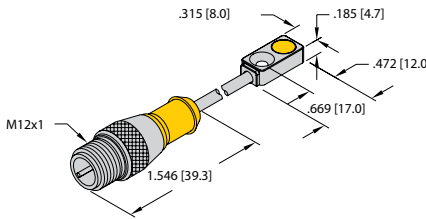
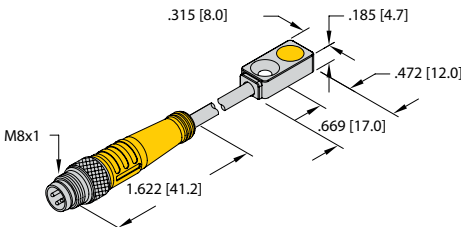
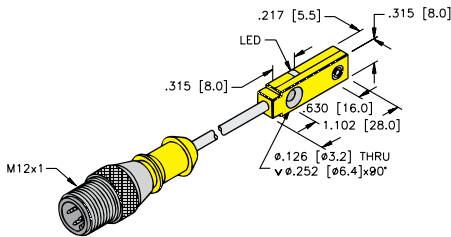
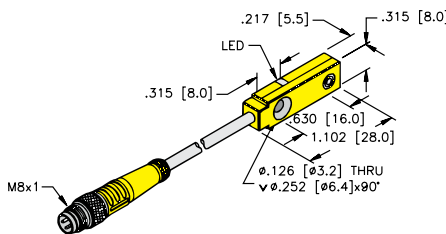
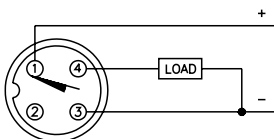
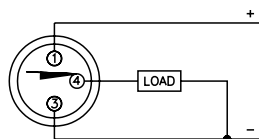
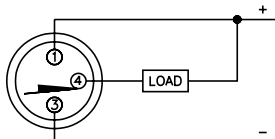
"/S1764" = Weldguard coated sensor with viton/fiberglass sleeving. Sleeve starts on sensor end, and covers all but 100 mm of cable held in place by shrink tube.

"/S1154" = Weldguard coated sensor with PTFE sleeving covering the entire cable length and captured under the connector mold body.

"/S1589" = Weldguard coating added to sensor.

Weldguard | Q4.7, Q5.5

Top Sensing Subminiature Qpak Housing

Housing Style		Dimension Drawings	
		A  4.7 mm - M12 Eurofast Quick Disconnect	
B  4.7 mm - M8 Picofast Quick Disconnect		C  5.5 mm - M12 Eurofast Quick Disconnect	
D  5.5 mm - M8 Picofast Quick Disconnect			
Wiring Diagrams/Mating Cordsets			
1  Mating Cordset: RK 4T-*		2  Mating Cordset: PKG 3M-*	
3  Mating Cordset: PKG 3M-*			
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	

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

Weldguard | Q4.7, Q5.5

Top Sensing Subminiature Qpak Housing

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI2-Q4.7-AP6X-0.3-RS4T/S1154 16140067		2	3-wire DC PNP	10-30 VDC	1000	≤100	0 to +85	IP67	Zinc	WG	N/A	YE	0.3M/TPU	A	1	A2
BI2-Q4.7-AP6X-0.5-RS4T/S1154 16140069		2	3-wire DC PNP	10-30 VDC	1000	≤100	0 to +85	IP67	Zinc	WG	N/A	YE	0.5M/TPU	A	1	A2
BI2-Q4.7-AP6X-0.2-PSG3M/S1154 1614097		2	3-wire DC PNP	10-30 VDC	1000	≤100	0 to +85	IP67	Zinc	WG	N/A	YE	0.2M/TPU	B	2	A2
BI2-Q4.7-AP6X-0.5-PSG3M/S1154 16140025		2	3-wire DC PNP	10-30 VDC	1000	≤100	0 to +85	IP67	Zinc	WG	N/A	YE	0.5M/TPU	B	2	A2
BI2-Q4.7-AP6X-0.3-RS4T/S1589 16140023		2	3-wire DC PNP	10-30 VDC	1000	≤100	0 to +85	IP67	Zinc	WG	N/A	YE	0.3M/TPU	A	1	A2
BI2-Q4.7-AP6X-0.3-PSG3M/S1589 16140001		2	3-wire DC PNP	10-30 VDC	1000	≤100	0 to +85	IP67	Zinc	WG	N/A	YE	0.3M/TPU	B	2	A2
BI2-Q5.5-AN6X-0.5-PSG3M/S1764 16131005		2	3-wire DC NPN	10-30 VDC	2000	≤150	-25 to +70	IP67	PP-GF20	WG	N/A	YE	0.5M/TPU	D	3	A2
BI2-Q5.5-AP6X-0.5-RS4T/S1764 16130001		2	3-wire DC PNP	10-30 VDC	2000	≤150	-25 to +70	IP67	PP-GF20	WG	N/A	YE	0.5M/TPU	C	1	A2
BI2-Q5.5-AP6X-0.4-RS4T/S34/S1764 1613063	WFI	2	3-wire DC PNP	10-30 VDC	2000	≤150	-25 to +70	IP67	PP-GF20	WG	N/A	YE	0.4M/TPU	C	1	A2
BI2-Q5.5-AP6X-0.2-RS4T/S34/S1764 16130011	WFI	2	3-wire DC PNP	10-30 VDC	2000	≤150	-25 to +70	IP67	PP-GF20	WG	N/A	YE	0.2M/TPU	C	1	A2
BI2-Q5.5-AP6X-0.2-PSG3M/S1154 16130019		2	3-wire DC PNP	10-30 VDC	2000	≤150	-25 to +70	IP67	PP-GF20	WG	N/A	YE	0.2M/TPU	D	2	A2

Weldguard

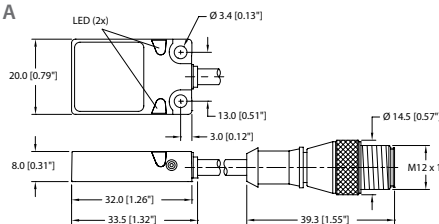
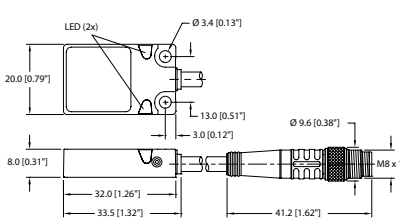
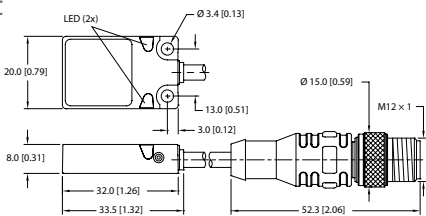
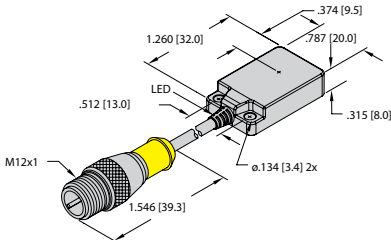
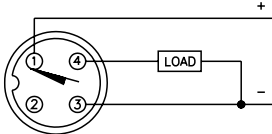
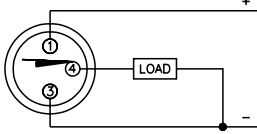
"/S1764" = Weldguard coated sensor with viton/fiberglass sleeving. Sleeve starts on sensor end, and covers all but 100 mm of cable held in place by shrink tube.

"/S1154" = Weldguard coated sensor with PTFE sleeving covering the entire cable length and captured under the connector mold body.

"/S1589" = Weldguard coating added to sensor.

Weldguard | Q08

Top Sensing Subminiature Qpak Housing

Housing Style	Dimension Drawings	
	A  8.0 mm - M12 Eurofast Quick Disconnect	B  8.0 mm - M8 Picofast Quick Disconnect
C  8.0 mm - M12 Eurofast Quick Disconnect W/ LED	D  8.0 mm - M12 Eurofast Quick Disconnect	
Wiring Diagrams/Mating Cordsets		
1  Mating Cordset: RK 4T-*, RKV 4T-*	2  Mating Cordset: PKG 3M-*	
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)		
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms	Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	

Weldguard | Q08

Top Sensing Subminiature Qpak Housing

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BI8U-Q08-AP6X2-1-RS4T/S1764 1662089	Factor 1	8	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	Zamak	WG	GN	YE	1M/TPU	A	1	A2
BI8U-Q08-AP6X2-0.5-RS4T/S1764 16620066	Factor 1	8	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	Zamak	WG	GN	YE	0.5M/TPU	A	1	A2
BI8U-Q08-AP6X2-0.5-PSG3M/S1764 16620060	Factor 1	8	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	Zamak	WG	GN	YE	0.5M/TPU	B	2	A2
BI8U-Q08-AP6X2-0.5-RS4T/S1765 1662087	Factor 1	8	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	Zamak	WG	GN	YE	0.5M/TPU	A	1	A2
BI8U-Q08-AP6X2-0.2-RS4T/S1589 1662083	Factor 1	8	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP68	Zamak	WG	GN	YE	0.2M/TPU	A	1	A2
BI7-Q08-AP6X2-0.5-RS4T/S1764 1601676		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.5M/TPU	A	1	A2
BI7-Q08-AP6X2-0.5-RS4T/S1765 16016002		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.5M/TPU	A	1	A2
BI7-Q08-AP6X2-0.5-PSG3M/S1765 1601678		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.5M/TPU	B	2	A2
BI7-Q08-AP6X2-0.5-RS4T/S1154 16016004		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.5M/TPU	A	1	A2
BI7-Q08-AP6X2-0.3-RS4T/S1154 16016006		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.3M/TPU	A	1	A2
BI7-Q08-AP6X2-0.2-PSG3M/S1154 16016005		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.2M/TPU	B	2	A2
BI7-Q08-AP6X2-0.3-RSE 4T-P7X2/S1589 1601671		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.3M/TPU	C	1	A2
BI7-Q08-AP6X2-0.2-RS4T/S1589 16016001		7	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP68	Zamak	WG	GN	YE	0.2M/TPU	A	1	A2
BI7-Q08F-AP6X-0.2-RS4T/S1154 16089164	SSF	7	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	WG	N/A	YE	0.2M/TPU	D	1	A2
BI7-Q08F-AP6X-0.2-RS4T/S1589 16089163	SSF	7	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	WG	N/A	YE	0.2M/TPU	D	1	A2
BI5U-Q08-AP6X2-0.3-RS4T/S1154 1608899	Factor 1	5	3-wire DC PNP	10-30 VDC	250	≤200	-30 to +85	IP68	Zamak	WG	GN	YE	0.3M/TPU	A	1	A2
BI5U-Q08-AP6X2-0.2-RS4T/S1589 1608975	Factor 1	5	3-wire DC PNP	10-30 VDC	250	≤200	-30 to +85	IP68	Zamak	WG	GN	YE	0.2M/TPU	A	1	A2

"/S1764" = Weldguard coated sensor with viton/fiberglass sleeving. Sleeve starts on sensor end, and covers all but 100 mm of cable held in place by shrink tube.

"/S1765" = Weldguard coated sensor with 1/4" diameter Silicone. Length of tubing is 200 mm less than total cable length.

"/S1154" = Weldguard coated sensor with PTFE sleeving covering the entire cable length and captured under the connector mold body.

"/S1589" = Weldguard coating added to sensor.



Armorguard Sensing Solutions

Added Durability Reduces Mechanical Damage

Turck's Armorguard accessories deliver enhanced mechanical protection for inductive sensors operating in demanding industrial environments. These rugged sleeves are engineered to shield the sensor face from lateral impacts, significantly reducing the risk of mechanical damage. For environments where weld slag is a concern, Armorguard can be configured with Turck's proprietary Weldguard material on the sensing face, providing additional resistance to spatter and thermal damage. By absorbing physical shock and shielding critical sensing components, Armorguard sleeves dramatically extend sensor service life and reliability.

- Available in 8, 12, 18, and 30 mm barrel diameters
- Flexible protection options tailored to a wide range of sensor installation requirements
- Can be combined with Weldguard coating on the sensing face

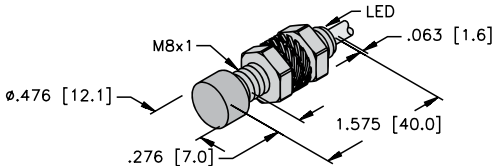
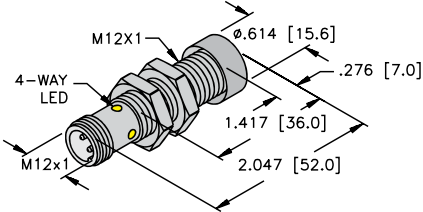
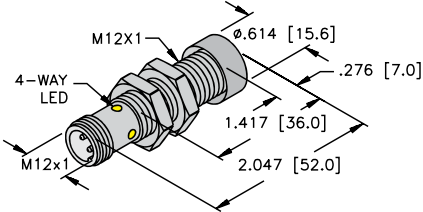
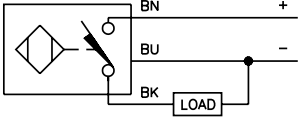
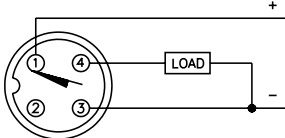


Armorguard

	Embeddable/Nonembeddable Metal Barrel			
				
Housing	8 mm	12 mm	18 mm	30 mm
Sensing Range	2 mm	3 - 4 mm	5 - 8 mm	15 mm
Pages	46	46	48	48

Armorguard | 8 mm, 12 mm

Embeddable Threaded Metal Barrels with DC Outputs

Housing Style		Dimension Drawings	
		A	 8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable
		B	 12 mm - Embeddable, M12 Eurofast Connection
Wiring Diagrams/Mating Cordsets			
1		2	 Mating Cordset: RK 4T-*
A2		3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)	
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	

Armorguard | 8 mm, 12 mm

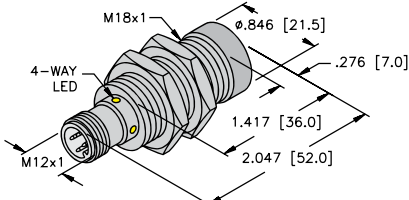
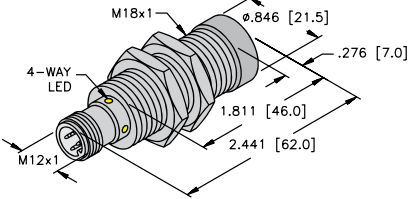
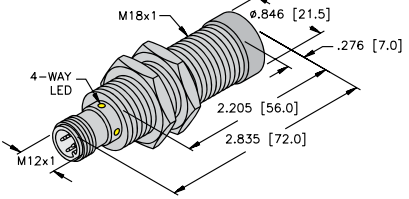
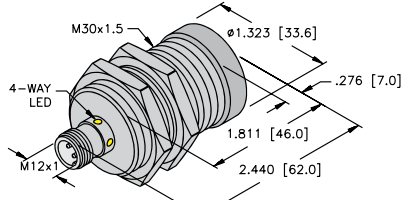
Embeddable Threaded Metal Barrels with DC Outputs

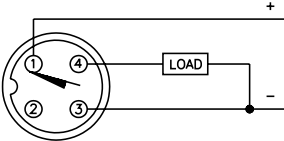
Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI2-EG08-AP6X/S1610 46020861		2	3-wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP67	SS	WG	N/A	YE	A	1	A2
BI4U-MT12-AP6X-H1141/S1610 16348092	Factor 1, PTFE	4	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP68	TC	WG	N/A	YE	B	2	A2

"/S1610" = Sensor with 7 mm tool steel ring threaded onto the barrel, with Weldguard coating on sensing face.

Armorguard | 18 mm, 30 mm

Embeddable Threaded Metal Barrels with Connector and DC Outputs

Housing Style	Dimension Drawings
	A  18 mm - Embeddable, M12 Eurofast Connection
B  18 mm - Embeddable, M12 Eurofast Connection	C  18 mm - Embeddable, Ext. Barrel Length, M12 Eurofast Connection
D  30 mm - Embeddable, M12 Eurofast Connection	

Wiring Diagrams/Mating Cordsets	
1	 Mating Cordset: RK 4T-*; RKV 4T-*

A2		3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)
Ripple: ≤10%		Power-On Effect: Per IEC 947-5-2
Differential Travel (Hysteresis): 3-15% (5% typical)		Reverse Polarity Protection: Incorporated
Voltage Drop Across Conducting Sensor: ≤1.8 V		Wire-Break Protection: Incorporated
Trigger Current for Short Circuit Protection: ≥220 mA on 200 mA Load Current		Transient Protection: Per EN 60947-5-2
≥170 mA on 150 mA Load Current		Temperature Drift: ≤±10%
≥120 mA on 100 mA Load Current		Shock: 30 g, 11 ms
Off-State (Leakage) Current: ≤0.1 mA		Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes
No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular)		Repeatability: ≤2% of Rated Operating Distance
≤20 mA (Uprox+, Uprox 3)		
Time Delay Before Availability: ≤8 ms		

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

Armorguard | 18 mm, 30 mm

Embeddable Threaded Metal Barrels with Connector and DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI8U-MT18-AP6X-H1141/S1610 16447302	Factor 1, PTFE	8	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	TC	WG	N/A	YE	B	1	A2
BI8U-MT18M-AP6X2-H1141/S1610 1644788	Factor 1, PTFE	8	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP68	TC	WG	GN	YE	A	1	A2
BI8-EM18E-AP6X-H1141/S1610 46150954		8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	SS	WG	N/A	YE	C	1	A2
BI5U-EM18-AP6X2-H1141/S395/S1610 1635198	Factor 1	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP67	SS	WG	N/A	YE	B	1	A2
BI5U-MT18-AP6X2-H1141/S395/S1610 1635293	Factor 1, PTFE	5	3-wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP67	TC	WG	GN	YE	B	1	A2
BI15-EM30-AP6X-H1141/S1610 4618589		15	3-wire DC PNP	10-30 VDC	300	≤200	-25 to +70	IP67	SS	WG	N/A	YE	D	1	A2

"/S1610" = Sensor with 7 mm tool steel ring threaded onto the barrel, with Weldguard coating on sensing face.

Armorguard



Stainless Steel Front Face Sensing Solutions

Help Prevent Wear-related Failures

Turck's stainless-steel front face sensors are engineered for the rigors of machine tool applications. In these environments, sensors must endure high mechanical stress, including abrasive contact, and exposure to aggressive chemicals. Featuring a one-piece heavy-duty stainless-steel housing, these metal face sensors provide long-lasting protection for both the barrel and internal electronics against impact and abrasion. The stainless-steel sensing face ensures durability, preventing wear-related failures that commonly occur in harsh conditions. With extended sensing ranges and exceptional mechanical integrity, Turck's stainless steel front face sensors deliver reliable, long-lasting performance in demanding industrial welding applications.

- Heavy-duty stainless-steel construction protects against impact and abrasion found in resistance welding
- Models are available with PTFE or Weldguard coatings to resist weld slag buildup for additional protection in welding applications
- The housing design incorporates limited entry points to effectively block oils and lubricants from infiltrating the sensor



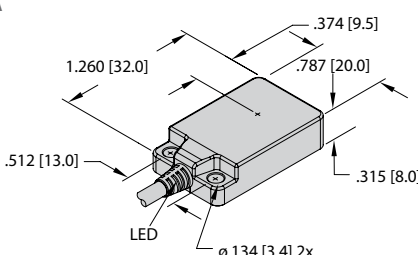
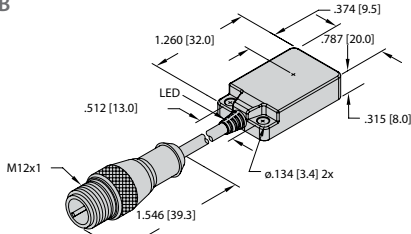
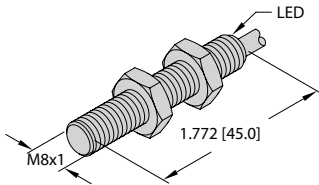
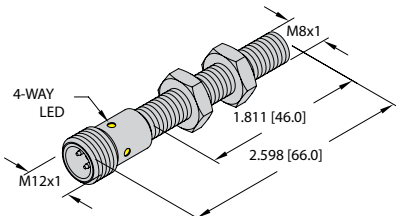
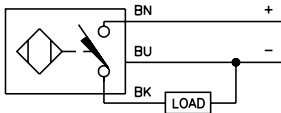
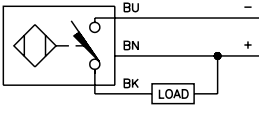
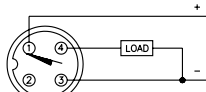
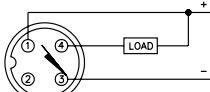
Stainless Steel Front Face

	Rectangular	Stainless Steel Front Face Barrel			
					
Housing	8 mm	8 mm	12 mm	18 mm	30 mm
Sensing Range	7 mm	1.5 - 3 mm	2 - 6 mm	5 - 10 mm	10 - 20 mm
Pages	52	52	54	56	56

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

Stainless Steel Front Face | 8 mm

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

Housing Style		Dimension Drawings	
	A  8 mm - Embeddable, Stainless Steel, Potted-In Cable	B  8 mm - Embeddable, Stainless Steel, M12 Eurofast Quick Disconnect	
C  8 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable	D  8 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Connection		
Wiring Diagrams/Mating Cordsets			
1 	2 	3  Mating Cordset: RKV 4T-*	4  Mating Cordset: RKV 4T-*
A7 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	

Stainless Steel Front Face | 8 mm

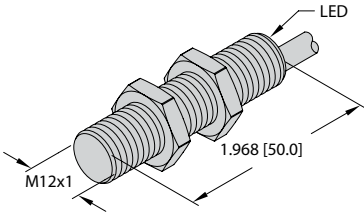
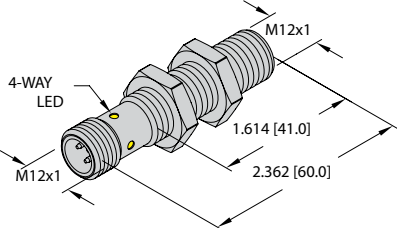
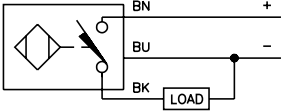
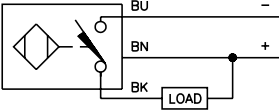
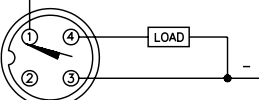
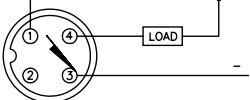
Embeddable Rectangular and Threaded Metal Barrels with 3-Wire DC Outputs

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
Bi7-Q08F-AN6X 1608914	SSF	7	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/TPU	A	2	A7
Bi7-Q08F-AP6X 1608916	SSF	7	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/TPU	A	1	A7
Bi7-Q08F-AP6X-0.2-RS4T 16089160	SSF	7	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	0.2M/TPU	B	3	A7
Bi3-EG08FE-AN6X 4614712	SSF	3	3-wire DC NPN	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	2M/TPU	C	2	A7
Bi3-EG08FE-AP6X 4614704	SSF	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	2M/TPU	C	1	A7
Bi3-EGT08FE-AP6X 46147043	SSF, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	SS	N/A	YE	2M/TPU	C	1	A7
Bi3-EG08FE-AN6X-H1341 4614711	SSF	3	3-wire DC NPN	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	--	D	4	A7
Bi3-EG08FE-AP6X-H1341 4614703	SSF	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	SS	SS	N/A	YE	--	D	3	A7
Bi3-EGT08FE-AP6X-H1341 46147030	SSF, PTFE	3	3-wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP67	TC	SS	N/A	YE	--	D	3	A7

Stainless Steel Front Face

Stainless Steel Front Face | 12 mm

Embeddable Threaded Metal Barrels with 3-Wire DC Outputs

Housing Style	Dimension Drawings
	A  12 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable
B  12 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Connection	
Wiring Diagrams/Mating Cordsets	
1 	2 
3  Mating Cordset: RKV 4T-*	4  Mating Cordset: RKV 4T-*
A7 3-wire DC Stainless Front Face Ext Range (AP, AN, RP, RN)	
Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 20% Voltage Drop Across Conducting Sensor: $\leq 2\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 220\text{ mA}$ on 200 mA Load Current No-Load Current: $\leq 10\text{ mA}$ Off-State (Leakage) Current: $\leq 0.1\text{ mA}$	Temperature Drift: $\leq \pm 10\%$ Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes Repeatability: $\leq 5\%$ of Rated Operating Distance

Stainless Steel Front Face | 12 mm

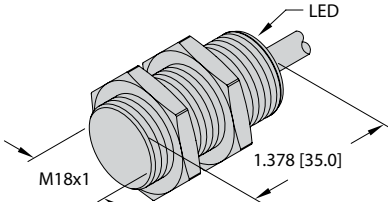
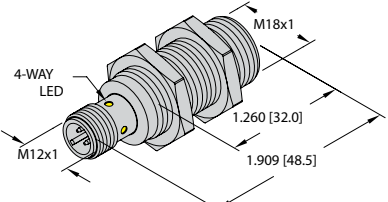
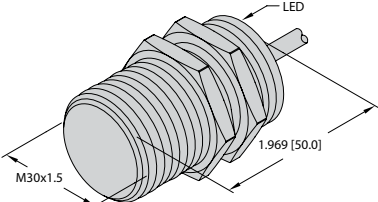
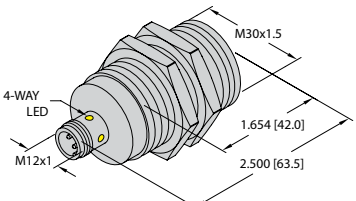
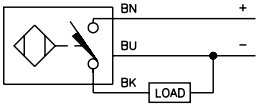
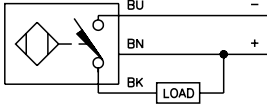
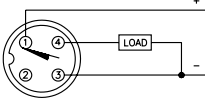
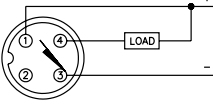
Embeddable Threaded Metal Barrels with 3-Wire DC Outputs

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
Bi6-EG12FE-AN6X 4614721	SSF	6	3-wire DC NPN	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/TPU	A	2	A7
Bi6-EG12FE-AP6X 4614720	SSF	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	A	1	A7
Bi6-EG12FE-AN6X-H1141 4614714	SSF	6	3-wire DC NPN	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	B	4	A7
Bi6-EGT12FE-AN6X-H1141 46147140	SSF, PTFE	6	3-wire DC NPN	10-30 VDC	600	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	2M/PVC	B	4	A7
Bi6-EG12FE-AP6X-H1141 4614706	SSF	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	B	3	A7
Bi6-EGT12FE-AP6X-H1141 46147060	SSF, PTFE	6	3-wire DC PNP	10-30 VDC	600	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	B	3	A7

Stainless Steel Front Face

Stainless Steel Front Face | 18 mm, 30 mm

Embeddable Threaded Metal Barrels with 3-Wire DC Outputs

Housing Style	Dimension Drawings
	A  18 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable
B  18 mm - Embeddable, Stainless Steel Barrel, M12 Eurofast Connection	C  30 mm - Embeddable, Stainless Steel Barrel, Potted-In Cable
D  30 mm - Embeddable, M12 Eurofast Connection, Stainless Steel	
Wiring Diagrams/Mating Cordsets	
1 	2 
3  Mating Cordset: RKV 4T-*	4  Mating Cordset: RKV 4T-*
A7 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

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

Stainless Steel Front Face | 18 mm, 30 mm

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
Bi10-EG18F-AN6X 4614723	SSF	10	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	A	2	A7
Bi10-EG18F-AP6X 4614722	SSF	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	A	1	A7
Bi10-EG18F-AN6X-H1141 4614716	SSF	10	3-wire DC NPN	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	B	4	A7
Bi10-EG18F-AP6X-H1141 4614708	SSF	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	B	3	A7
Bi10-EGT18F-AP6X-H1141 46147080	SSF, PTFE	10	3-wire DC PNP	10-30 VDC	200	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	B	3	A7
Bi20-EG30F-AP6X 4614724	SSF	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	2M/PVC	C	1	A7
Bi20-EG30F-AP6X-H1141 4614710	SSF	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	SS	SS	N/A	YE	--	D	3	A7
Bi20-EGT30F-AP6X-H1141 46147100	SSF, PTFE	20	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP68/69K	TC	SS	N/A	YE	--	D	3	A7

Stainless Steel Front Face

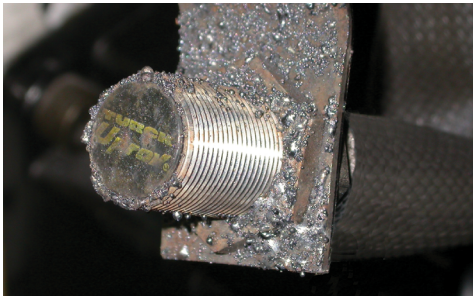


Stoneface Sensing Solutions

Reduce Downtime in MIG & TIG Welding

Turck's Stoneface sensors are engineered for abrasive and high-temperature welding environments, incorporating a rugged, glass-filled thermoset plastic sensing face that delivers superior resistance to mechanical wear. This durable material effectively shields the sensing face from abrasion, making it ideal for applications where contact with rough or sharp surfaces are common. Stoneface technology also resists weld slag accumulation, a frequent byproduct of MIG and TIG welding processes, ensuring consistent sensor performance and minimizing false trips or downtime. Turck's Stoneface sensors offer a reliable, low-maintenance solution for demanding weld cell and fabrication environments.

- For enhanced protection, select models feature a PTFE-coated barrel that actively sheds weld slag, reducing buildup and simplifying maintenance
- Offered in 12, 18 & 30 mm barrel styles
- Ideal for MIG and TIG welding applications where sensor failure is common
- Weld Field Immune variants available that are designed to operate reliably in strong electromagnetic fields

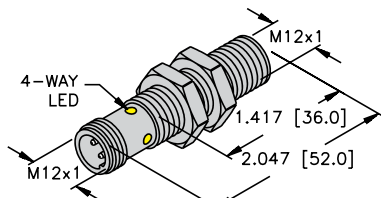
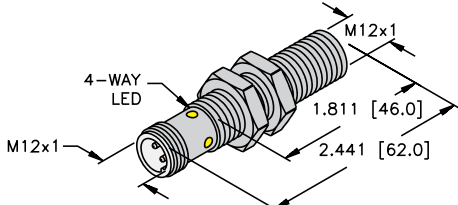
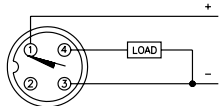
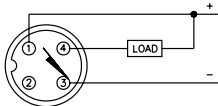
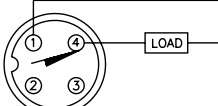
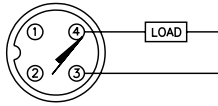


Embeddable Metal Barrel			
			
Housing	12 mm	18 mm	30 mm
Sensing Range	2 - 4 mm	5 - 8 mm	10 - 15 mm
Pages	60, 66	62, 66	64, 66

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

Stoneface | 12 mm

Embeddable Threaded Metal Barrels with Cable and DC Outputs

Housing Style		Dimension Drawings	
		A  12 mm - Embeddable, M12 Eurofast Connection	
B  12 mm - Embeddable, M12 Eurofast Connection, Extended Barrel Length			
Wiring Diagrams/Mating Cordsets			
1	 Mating Cordset: RK 4T-*; RKV 4T-*	2	 Mating Cordset: RK 4T-*; RKV 4T-*
3	 Mating Cordset: RK 4.23T-*	4	 Mating Cordset: RK 4.2T-*
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: $\leq 1.8\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 220\text{ mA}$ on 200 mA Load Current $\geq 170\text{ mA}$ on 150 mA Load Current $\geq 120\text{ mA}$ on 100 mA Load Current Off-State (Leakage) Current: $\leq 0.1\text{ mA}$ No-Load Current: $\leq 15\text{ mA}$ (Ferrite, Uprox, Rectangular) $\leq 20\text{ mA}$ (Uprox+, Uprox 3) Time Delay Before Availability: $\leq 8\text{ ms}$		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: $\leq \pm 10\%$ Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance	
A3 2-wire DC - (AD, RD, AG)			
Ripple: $\leq 10\%$ Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: Non-polarized (AD) $< 5.0\text{ V}$ Polarized (AG) $\leq 4.2\text{ V}$ Trigger Current for Short Circuit Protection: $\geq 120\text{ mA}$ Minimum Load Current: $\geq 3.0\text{ mA}$		Off-State (Leakage) Current: $\leq 0.8\text{ mA}$ Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: $\leq 2\%$ of Rated Operating Distance	

Stoneface | 12 mm

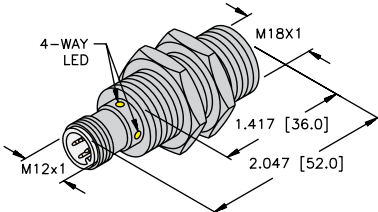
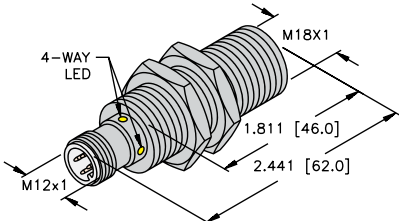
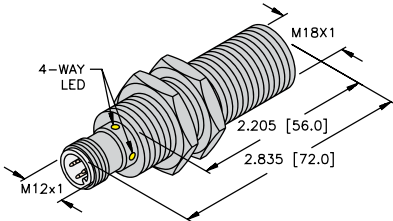
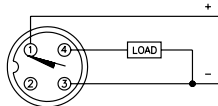
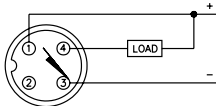
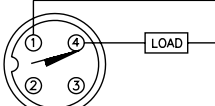
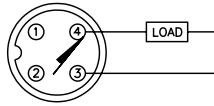
Embeddable Threaded Metal Barrels with Cable and DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI4-MT12H-AN6X-H1141 4607194	PTFE	4	3-wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	SF	N/A	YE	A	2	A2
BI4-MT12H-AP6X-H1141 4607093	PTFE	4	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	SF	N/A	YE	A	1	A2
BI4-MT12HE-AN6X-H1141 4607197	PTFE	4	3-wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	SF	N/A	YE	B	2	A2
BI4-MT12HE-AP6X-H1141 4608093	PTFE	4	3-wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP67	TC	SF	N/A	YE	B	1	A2
BI3U-EM12H-AP6X-H1141 1634312	Factor 1	3	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	SS	SF	N/A	YE	A	1	A2
BI3U-EM12HE-AN6X2-H1141 1634311	Factor 1	3	3-wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP67	SS	SF	GN	YE	B	2	A2
BI3U-EM12HE-AP6X2-H1141 1634310	Factor 1	3	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	SS	SF	GN	YE	B	1	A2
BI3U-MT12H-AP6X-H1141 1634212	Factor 1, PTFE	3	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	SF	N/A	YE	A	1	A2
BI3U-MT12HE-AN6X2-H1141 1634230	Factor 1, PTFE	3	3-wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	SF	GN	YE	B	2	A2
BI3U-MT12HE-AP6X2-H1141 1634220	Factor 1, PTFE	3	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	TC	SF	GN	YE	B	1	A2
BI3-MT12H-AD4X-H1144 44050983	PTFE	3	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	SF	N/A	YE	A	3	A3
BI3-MT12HE-AD4X-H1141 4405088	PTFE	3	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	SF	N/A	YE	B	4	A3

Stoneface

Stoneface | 18 mm

Embeddable Threaded Metal Barrels with Cable and DC Outputs

Housing Style		Dimension Drawings	
		A  18 mm - Embeddable, M12 Eurofast Connection	
B  18 mm - Embeddable, M12 Eurofast Connection		C  18 mm - Embeddable, Ext. Barrel Length, M12 Eurofast Connection	
Wiring Diagrams/Mating Cordsets			
1  Mating Cordset: RK 4T-*; RKV 4T-*	2  Mating Cordset: RKV 4T-*	3  Mating Cordset: RK 4.23T-*	4  Mating Cordset: RK 4.2T-*
A2 3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	
A3 2-wire DC - (AD, RD, AG)			
Ripple: ≤10% Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: Non-polarized (AD) <5.0 V Polarized (AG) ≤4.2 V Trigger Current for Short Circuit Protection: ≥120 mA Minimum Load Current: ≥3.0 mA		Off-State (Leakage) Current: ≤0.8 mA Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	

Stoneface | 18 mm

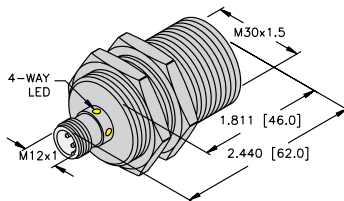
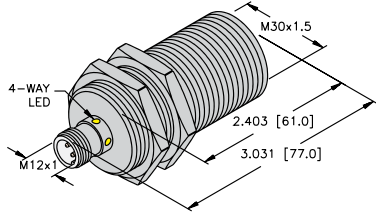
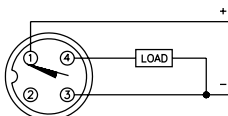
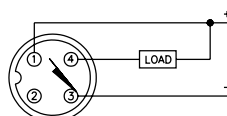
Embeddable Threaded Metal Barrels with Cable and DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI8-EM18H-AP6X-H1141 4615094		8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	SS	SF	N/A	YE	A	1	A2
BI8-EMT18H-AP6X-H1141 46150941	PTFE	8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	TC	SF	N/A	YE	A	1	A2
BI8-EM18HE-AP6X-H1141 4614100		8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	SS	SF	N/A	YE	C	1	A2
BI8-EMT18HE-AP6X-H1141 46150943	PTFE	8	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	TC	SF	N/A	YE	C	1	A2
BI7-MT18H-AD4X-H1141 44145808	PTFE	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	SF	N/A	YE	B	4	A3
BI7-EM18HE-AD4X-H1141 44145802		7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	SS	SF	N/A	YE	C	4	A3
BI7-MT18HE-AD4X-H1141 4414597	PTFE	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	SF	N/A	YE	C	4	A3
BI7-MT18HE-AD4X-H1144 4414598	PTFE	7	2-wire DC	10-65 VDC	1000	≤100	-25 to +70	IP67	TC	SF	N/A	YE	C	3	A3
BI5U-EM18H-AP6X-H1141 1635112	Factor 1	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP68	SS	SF	N/A	YE	A	2	A2
BI5U-EM18H-AN6X2-H1141/S395 1635146	Factor 1	5	3-wire DC NPN	10-30 VDC	2500	≤200	-30 to +85	IP68	SS	SF	GN	YE	B	2	A2
BI5U-EM18H-AP6X2-H1141/S395 1635158	Factor 1	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP68	SS	SF	GN	YE	B	1	A2
BI5U-MT18H-AP6X2-H1141/S395 1635220	Factor 1, PTFE	5	3-wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP68	TC	SF	GN	YE	B	1	A2
BI5-EM18H-AP6X-H1141 4614687		5	3-wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP67	SS	SF	N/A	YE	A	1	A2

Stoneface

Stoneface | 30 mm

Embeddable Threaded Metal Barrels with Cable and DC Outputs

Housing Style		Dimension Drawings	
		A	 30 mm - Embeddable, M12 Eurofast Connection
B	 30 mm - Embeddable, M12 Eurofast Connection, Extended Barrel Length		
Wiring Diagrams/Mating Cordsets			
1	 Mating Cordset: RK 4T-*; RKV 4T-*	2	 Mating Cordset: RKV 4T-*
A2			
3 and 4-wire DC - (AN, RN, AP, RP, VN, VP)			
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 ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current Off-State (Leakage) Current: ≤0.1 mA No-Load Current: ≤15 mA (Ferrite, Uprox, Rectangular) ≤20 mA (Uprox+, Uprox 3) Time Delay Before Availability: ≤8 ms		Power-On Effect: Per IEC 947-5-2 Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Transient Protection: Per EN 60947-5-2 Temperature Drift: ≤±10% Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes Repeatability: ≤2% of Rated Operating Distance	

Stoneface | 30 mm

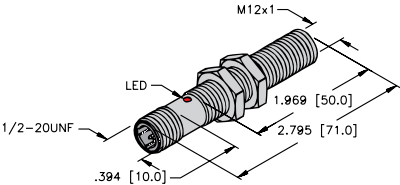
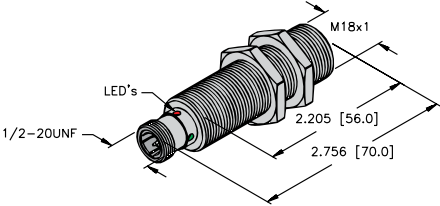
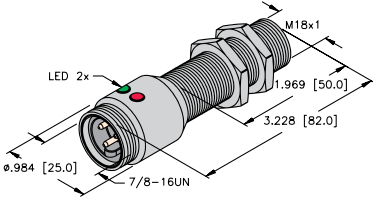
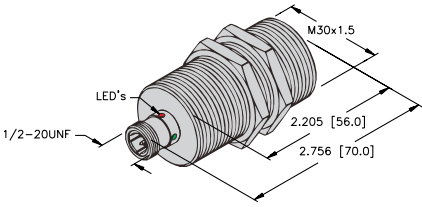
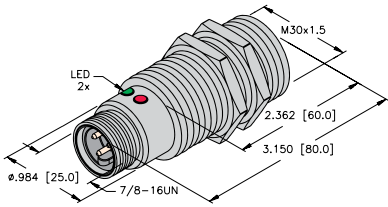
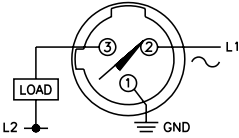
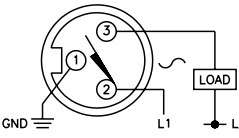
Embeddable Threaded Metal Barrels with Cable and DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI15-EMT30H-AP6X-H1141 4618570	PTFE	15	3-wire DC PNP	10-30 VDC	300	≤200	-25 to +70	IP67	TC	SF	N/A	YE	A	1	A2
BI15-EM30H-AN6X-H1141 4618692		15	3-wire DC NPN	10-30 VDC	300	≤200	-25 to +70	IP67	SS	SF	N/A	YE	A	2	A2
BI15-EM30H-AP6X-H1141 4618592		15	3-wire DC PNP	10-30 VDC	300	≤200	-25 to +70	IP67	SS	SF	N/A	YE	A	1	A2
BI10U-MT30H-AP6X2-H1141 1636220	Factor 1, PTFE	10	3-wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP67	TC	SF	GN	YE	A	1	A2
BI10U-EM30HE-AP6X2-H1141 1636415	Factor 1	10	3-wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP67	SS	SF	GN	YE	B	1	A2

Stoneface

Stoneface | 12, 18, and 30 mm

Embeddable Threaded Metal Barrels with Connector and AC/DC Outputs

Housing Style	Dimension Drawings
	A  12 mm - Embeddable, 1/2" Microfast Connection
B  18 mm - Embeddable, 1/2" Microfast Connection	C  18 mm - Embeddable, 7/8" Minifast Connection
D  30 mm - Embeddable, 1/2" Microfast Connection	E  30 mm - Embeddable, 7/8" Minifast Connection
Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: KB 3T-*	2  Mating Cordset: RKM 30-*M
A4 2-wire AC/DC w/ Short-Circuit Protection - (ADZ, RDZ, FDZ, VDZ)	
Line Frequency: ≥50... ≤60 Hz Differential Travel (Hysteresis): 3-15% (5% typical) Voltage Drop Across Conducting Sensor: ≤6.0 V Trigger Current for Short Circuit Protection: AC: ≥440 mA; DC: ≥330 mA AC: ≥120 mA; DC: ≥120 mA Continuous Load Current: AC: ≤400 mA; DC: ≤300 mA AC: ≤100 mA; DC: ≤100 mA Off-State (Leakage) Current: ≤1.7 mA (AC) ≤1.5 mA (DC)	Minimum Load Current: ≥3.0 mA Inrush Current: ≤3 A (≤20 ms, max 5 Hz) Power-On Effect: Per IEC 947-5-2 Transient Protection: Per EN 60947-5-2 Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes Repeatability: ≤2% of Rated Operating Distance

Stoneface | 12, 18, and 30 mm

Embeddable Threaded Metal Barrels with Connector and AC/DC Outputs

Part Number/ ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BI4-GT12H-ADZ32X-B3131 4205097	PTFE	4	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤100	-25 to +70	IP67	TC	SF	N/A	RD	A	1	A4
BI2-GT12H-ADZ32X-B3131/S34 4205093	PTFE, WFI	2	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤100	-25 to +70	IP67	TC	SF	N/A	RD	A	1	A4
BI5-GT18H-ADZ30X2-B3331/S34 4255289	PTFE, WFI	5	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	SF	GN	RD	B	1	A4
BI5-GT18H-ADZ30X2-B1331/S34 4255299	PTFE, WFI	5	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	SF	GN	RD	C	2	A4
BI10-GT30H-ADZ30X2-B3131/S34 4256094	PTFE, WFI	10	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	20	≤400/300	-25 to +70	IP67	TC	SF	GN	RD	D	1	A4
BI15-EG30H-ADZ30X2-B3131 4207284		15	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	10	≤400/300	-25 to +70	IP67	SS	SF	GN	RD	D	1	A4
BI15-EG30H-ADZ30X2-B1131 4207292		15	2-wire AC/DC Short-Circuit Protected	20-250 VAC/10-300 VDC	10	≤400/300	-25 to +70	IP67	SS	SF	GN	RD	E	2	A4

Stoneface



Nut Detection Sensing Solutions

Easily Detect the Presence of Weld Nuts

Turck's weld nut detection sensors offer a rugged and cost-effective solution for reliably verifying the presence of weld nuts in manufacturing environments. Designed as a practical alternative to complex and costly optical or vision-based systems, these sensors maintain consistent performance even in conditions that typically impair vision systems – such as dirt accumulation, weld spatter, and fluctuating lighting common in welding areas. Built for durability, the sensors are available with PTFE and TiN coatings to withstand harsh conditions and minimize contamination buildup.

- Simple programming and highly visible LEDs streamline setup
- Dependable detection without the added maintenance or other limitations of more costly vision systems
- Ideal for automotive manufacturing, mobile vehicle production and other industries where strong, permanent threaded connections are needed



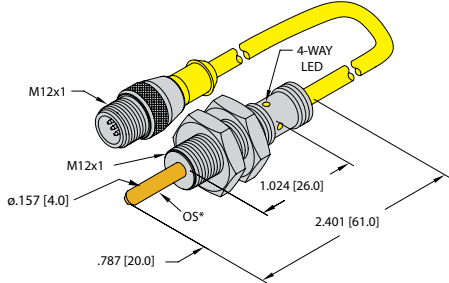
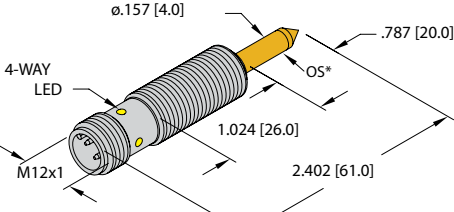
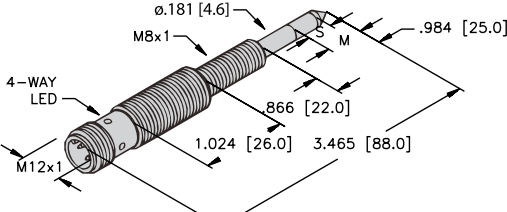
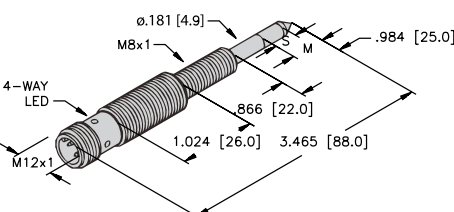
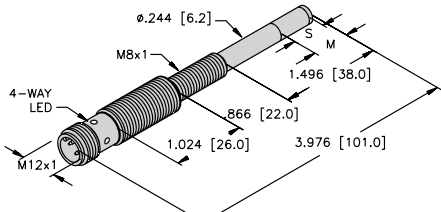
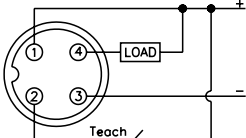
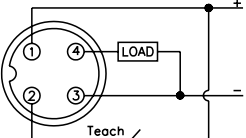
Nut Detection Sensor

Nut Detection Sensor Selection Guide			
			
Housing	12 mm		
Sensing Range	5 - 10 mm	6 - 12 mm	10 - 20 mm
Pages	70	70	70

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

Weld Nut Detection Sensor

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

Housing Style	Dimension Drawings
	A  Nut Sensor, 5-12 mm Diameter Nut, Potted-In Cable
B  Nut Sensor, 5-12 mm Diameter Nut, M12 Eurofast Connector	C  Nut Sensor, 6-12 mm Diameter Nut, M12 Eurofast Connector
D  Nut Sensor, 6-12 mm Diameter Nut, M12 Eurofast Connector	E  Nut Sensor, 10-20 mm Diameter Nut, M12 Eurofast Connector
Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: RK 4.4T-*	2  Mating Cordset: RK 4.4T-*
A8 3-wire DC Nut Detection Sensor (AP, AN)	
Ripple: ≤10% Voltage Drop Across Conducting Sensor: ≤1 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	Reverse Polarity Protection: Incorporated Wire-Break Protection: Incorporated Shock: 30 g, 11 ms Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes

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.

Weld Nut Detection Sensor

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

Part Number/ ID Number	Features	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	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	0.3M/TPE	A	2	A8
NIMFE-EM12/4.0L61-UN6X-0.3XYE-RS4/S1182 1600624	Titanium Nitride	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	0.3M/TPE	A	1	A8
NIMFE-EM12/4.0L61-UP6X-H1141/S1182 1600621	Titanium Nitride	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	B	2	A8
NIMFE-EM12/4.0L61-UN6X-H1141/S1182 1600622	Titanium Nitride	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	B	1	A8
NIMFE-M12/4.6L88-UN6X-H1141 1600610		3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	C	1	A8
NIMFE-EMT12/4.6L88-UN6X-H1141 1600618	PTFE Coated	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	1	A8
NIMFE-EM12/4.6L88-UN6X-H1141/S1182 1600617	Titanium Nitride	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	1	A8
NIMFE-M12/4.6L88-UP6X-H1141 1600608		3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	C	2	A8
NIMFE-EMT12/4.6L88-UP6X-H1141 1600619	PTFE Coated	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	2	A8
NIMFE-EM12/4.6L88-UP6X-H1141/S1182 1600620	Titanium Nitride	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	C	2	A8
NIMFE-EM12/4.9L88-UP6X-H1141/S1182 1600616	Titanium Nitride	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	D	2	A8
NIMFE-M12/6.2L101-UN6X-H1141 1600611		3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	E	1	A8
NIMFE-EMT12/6.2L101-UN6X-H1141 1600615	PTFE Coated	3-wire DC NPN	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	E	1	A8
NIMFE-M12/6.2L101-UP6X-H1141 1600609		3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	CPB	GN	YE	--	E	2	A8
NIMFE-EMT12/6.2L101-UP6X-H1141 1600613	PTFE Coated	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	E	2	A8
NIMFE-EM12/6.2L101-UP6X-H1141/S1182 1600612	Titanium Nitride	3-wire DC PNP	10-30 VDC	≤200	-25 to +70	IP67	SS	GN	YE	--	E	2	A8

"/S1182" = Titanium Nitride coated probe.

Nut Detection Sensor

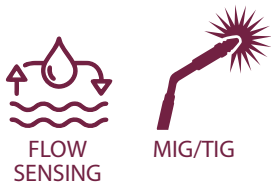
Flow Sensor Solutions

Leak and Flow Detection

Monitor the flow of liquids and gasses with Turck's flow sensors. These compact solutions are self-contained, allowing easy installation near the weld tip by fitting into standard plumbing tees. The sensors deliver precise and reliable monitoring solutions tailored for the demanding conditions of the welding industry. Constructed of durable stainless steel, these flow sensors detect the loss of coolant flow – critical for preventing damage to weld tips and associated equipment.

For MIG welding processes, Turck's inert gas flow monitors ensure the presence of essential shielding gases such as Argon and Helium and can also confirm proper operation of fume hood ventilation systems, supporting both weld quality and operator safety.

- Self-contained, no moving parts
- Fits standard plumbing tees
- Stainless steel construction



Instrumentation Selection Guide		
		
Housing	Self-Contained Monitor	Air Flow Monitor
Pages	74	74

Pressure Sensor Solutions

Improve Pressure Monitoring in Weld Cells

Engineered to deliver reliable, high-accuracy monitoring in the most demanding industrial environments, Turck's pressure sensors are built to last. Designed for both hydraulic and pneumatic system monitoring, these sensors ensure consistent control of process pressure, protecting equipment and improving system efficiency. This family of solutions also helps provide leak detection, reducing downtime. With pressure ranges available up to 8700 PSI, they are suitable for applications found in robotic welding arms, clamping systems and other material handling equipment.

- Resists electromagnetic interference
- Fully programmable with added easy-to-view display
- Pressure ranges up to 8700 PSI



PRESSURE SENSING

MIG/TIG

RESISTANCE WELDING

Instrumentation Selection Guide	
	
Housing	Pressure Sensor
Pages	76

Flow Sensors

Technical drawing of a self-contained plastic housing (PBT) showing dimensions and labels:

- 3.071 [78.0]
- 1/2 NPT
- ø.287 [7.3]
- 1.654 [42.0]
- M12x1
- 1.732 [44.0]
- 1.969 [50.0]
- LEDs
- POTENTIOMETER

Self-Contained Plastic Housing (PBT)

Technical drawing of the Self-Contained 316 Stainless Steel Housing. The drawing shows a perspective view of the device with various dimensions and labels. Labels include: POTENTIOMETER, LEDs, M12x1, 1.417 [36.0], 1/2-14NPT, ø.287 [7.3], .827 [21.0], 1.575 [40.0], 3.071 [78.0], and 1.575 [40.0]. Dimensions are given in inches and millimeters.

Self-Contained Air Flow Monitor, Nickel Plated Brass Housing

D

Technical drawing of a Self-Contained Air Flow Monitor, Delrin/PBT/Nickel Plated Brass Housing. The drawing shows a perspective view of the device with dimensions in inches and millimeters. The housing is a yellow rectangular block with a G1/4 inch port on the right side. The sensor assembly is a grey, threaded component with an M18x1 thread and an LED indicator. Dimensions include: .984 [25.0] for the housing width, 1.575 [40.0] for the housing length, .984 [25.0] for the housing height, 2.047 [52.0] for the sensor length, 2.894 [73.5] for the total length, .118 [3.0] for the sensor diameter, and M18x1 for the sensor thread. The sensor is labeled 'POTENTIOMETER' and 'LED'.

1

BN +

BU -

BK LOAD

N.O. PNP

2

Mating Cordset: RK 4T.*

N.O. PNP

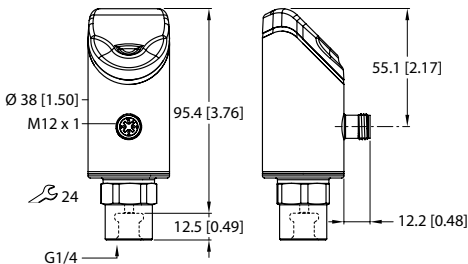
Instrumentation

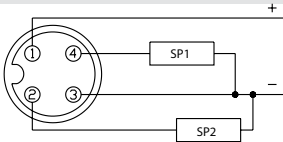
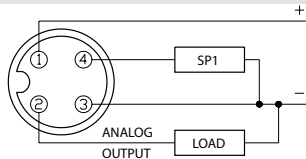
Flow Sensors

Part Number/ ID Number	Flow Detection Range (water)	Flow Detection Range (oil)	Flow Detection Range (air)	Voltage	Current Consumption (mA)	Switching Current (mA)	Pressure Rating (psi)	Process Connection	Operating Temp. (°C) (ambient)	Operating Temp. (°C) (fluid)	Protection	Cable Length (mw)	Housing Material	Sensor Material	Dimension Drawings	Wiring Diagrams
FCS-N1/2A4P-AP8X-H1141 6871032	1-150 cm/sec.	3-300 cm/sec.	--	19.2-28.8 VDC	≤60	≤400	1450	1/2 NPT	-25 to +70	-20 to +80	IP67	--	Plastic, PBT	Stainless Steel, V4A (1.4571)	A	2
FCS-N1/2A4-AP8X-H1141 6871004	1-150 cm/sec.	3-300 cm/sec.	--	19.2-28.8 VDC	≤70	≤400	1450	1/2 NPT	-25 to +80	-20 to +80	IP67	--	Stainless Steel, V4A (1.4571)	Stainless Steel, V4A (1.4571)	B	2
FCS-M18-AP8X 6870704	--	--	0.5 - 15 m/sec.	19.2-28.8 VDC	≤70	≤200	145	M18x1	-25 to +70	-25 to +70	IP67	2	Metal, CuZn	Brass, nickel-plated	C	1
FCS-M18-AP8X/D041 6870705	--	--	0.1 - 15 m/sec.	19.2-28.8 VDC	≤70	≤200	145	M18x1	-25 to +70	-25 to +70	IP67	2	Metal, CuZn	Brass, nickel-plated	D	1

Instrumentation

PS510 Programmable Pressure Sensors, Rotatable Housing

Housing Style	Dimension Drawings
	

Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: RK 4.4T-*	2  Mating Cordset: RK 4.4T-*

Performance Data	
Analogue Accuracy LHR:	±0.25% of Final Value BSL
Set point Accuracy:	±0.25% of Final Value BSL
Switching Point Distance:	0.5% of Span
Temperature Coefficient:	0.11% of Full Scale/10 K
Programmable Analog Start Point:	0-90% of Measuring Range
Programmable Analog End Point:	10-100% of Measuring Range
Switch Point Range:	(Min. + 0.005 × Range)...100% of Full Scale
Reset Point Range:	min. up to (SP - 0.005 × Range)
Programmable Output for LI2UPN8:	0-20 mA, 4-20 mA, 20-0 mA, 20-4 mA, 0-5 VDC, 1-6 VDC, 5-0 VDC, 0-10 VDC, 6-1 VDC and 1X PNP/NPN N.O./N.C or 2X PNP/NPN N.O./N.C
Programmable Output for 2UPN8:	2X PNP/NPN N.O./N.C

Electrical Data	
Operating Voltage:	18-33 VDC
Current Consumption:	≤25 mA
Analogue Load:	≤500 Ω
Switching Frequency:	≤300 Hz
Response Time:	<3 ms
Short Circuit/Reverse Polarity Protection:	Yes/Yes

Environmental Data	
Ambient Temperature:	-40 to +80 °C
Storage Temperature:	-40 to +100 °C
Medium Temperature:	-30 to +80 °C
Housing Materials:	316 Stainless Steel/Plastic/ Polyarylamide 50% GF UL 94 V-0
Wetted Materials:	316 Stainless Steel
Protection Type:	IP6K6K/6K7/6K9K
Shock Resistance:	50 g (11 ms) , EN 60068-2-27
Vibration Resistance:	20 g (10...2000 Hz) acc. to EN 60068-2-6
LED Measuring Value:	4-digit 12-segment display, rotatable by 180 °. Red or green.

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

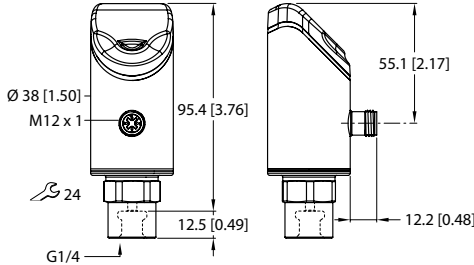
Instrumentation

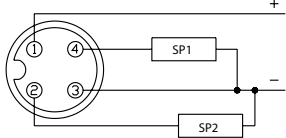
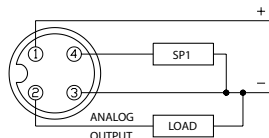
PS510 Programmable Pressure Sensors, Rotatable Housing

Part Number	Operating Pressure	Over Pressure	Burst Pressure	Wiring Diagram
PS510-100-03-2UPN8-H1141 100001718	0 - 100 bar (0 - 1450.4PSIG)	≤300 bar	≥400 bar	2
PS510-100-03-LI2UPN8-H1141 100001571	0 - 100 bar (0 - 1450.4PSIG)	≤300 bar	≥400 bar	2
PS510-10A-03-LI2UPN8-H1141 100003729	-1 - 99 bar (-14.5 - 1435.9PSIG)	≤25 bar	≥50 bar	2
PS510-10V-03-2UPN8-H1141 100001675	-1 - 10 bar (-14.5 - 145PSIG)	≤70 bar	≥140 bar	2
PS510-10V-03-LI2UPN8-H1141 100001528	-1 - 10 bar (-14.5 - 145PSIG)	≤70 bar	≥140 bar	2
PS510-16V-03-2UPN8-H1141 100001686	-1 - 16 bar (-14.5 - 232.06PSIG)	≤70 bar	≥140 bar	2
PS510-16V-03-LI2UPN8-H1141 100001539	-1 - 16 bar (-14.5 - 232.06PSIG)	≤70 bar	≥140 bar	2
PS510-250-03-2UPN8-H1141 100001728	0 - 250 bar (0 - 3626PSIG)	≤750 bar	≥1000 bar	2
PS510-250-03-LI2UPN8-H1141 100001581	0 - 250 bar (0 - 3626PSIG)	≤750 bar	≥1000 bar	2
PS510-25V-03-2UPN8-H1141 100001697	-1 - 25 bar (-14.5 - 362.6PSIG)	≤140 bar	≥280 bar	2
PS510-25V-03-LI2UPN8-H1141 100001550	-1 - 25 bar (-14.5 - 362.6PSIG)	≤140 bar	≥280 bar	2
PS510-400-03-2UPN8-H1141 100001738	0 - 400 bar (0 - 5801.5PSIG)	≤2160 bar	≥2700 bar	2
PS510-400-03-LI2UPN8-H1141 100001591	0 - 400 bar (0 - 5801.5PSIG)	≤2160 bar	≥2700 bar	2
PS510-40V-03-2UPN8-H1141 100001708	-1 - 40 bar (-14.5 - 580.16PSIG)	≤140 bar	≥280 bar	1
PS510-40V-03-LI2UPN8-H1141 100001561	-1 - 40 bar (-14.5 - 580.16PSIG)	≤140 bar	≥280 bar	1
PS510-600-03-2UPN8-H1141 100001748	0 - 600 bar (0 - 8702PSIG)	≤2160 bar	≥2700 bar	1
PS510-600-03-LI2UPN8-H1141 100001601	0 - 600 bar (0 - 8702PSIG)	≤2160 bar	≥2700 bar	1

Instrumentation

PS310 Programmable Pressure Sensors, Non-Rotatable Housing

Housing Style	Dimension Drawings
	

Wiring Diagrams/Mating Cordsets	
1  Mating Cordset: RK 4.4T-*	2  Mating Cordset: RK 4.4T-*

Performance Data	
Analog Accuracy LHR:	±0.5% of Final Value BSL
Set point Accuracy:	±0.5% of Final Value BSL
Switching Point Distance:	0.5% of Span
Temperature Coefficient:	± 0.15 % of full scale/10 K
Programmable Analog Start Point:	0-90% of Measuring Range
Programmable Analog End Point:	10-100% of Measuring Range
Switch Point Range:	(Min. + 0.005 × range)...100% of full scale
Reset Point Range:	min. up to (SP - 0.005 × range)
Programmable Output for LI2UPN8:	0-20 mA, 4-20 mA, 20-0 mA, 20-4 mA, 0-5 VDC, 1-6 VDC, 5-0 VDC, 10 VDC, 6-1 VDC and 1X PNP/NPN N.O./N.C or 2X PNP/NPN N.O./N.C
Programmable Output for 2UPNx:	2X PNP/NPN N.O./N.C

Electrical Data	
Operating Voltage:	18-33 VDC
Current Consumption:	≤25 mA
Analog Load:	≤500 Ω
Switching Frequency:	≤300 Hz
Response Time:	<3 ms
Short Circuit/Reverse Polarity Protection:	Yes/Yes

Environmental Data	
Ambient Temperature:	-40 to +80 °C
Storage Temperature:	-40 to +100 °C
Medium Temperature:	-40 to +80 °C
Housing Materials:	316 Stainless Steel/Plastic/Polyarylamide 50% GF UL 94 V-0
Wetted Materials:	316 Stainless Steel, Al2O3, FKM (Viton)
Protection Type:	IP6K6K/6K7/6K9K
Shock Resistance:	50 g (11 ms) , EN 60068-2-27
Vibration Resistance:	20 g (10...2000 Hz) acc. to EN 60068-2-6
LED Measuring Value:	4-digit 12-segment display, rotatable by 180°. Red or green

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

Instrumentation

PS310 Programmable Pressure Sensors, Non-Rotatable Housing

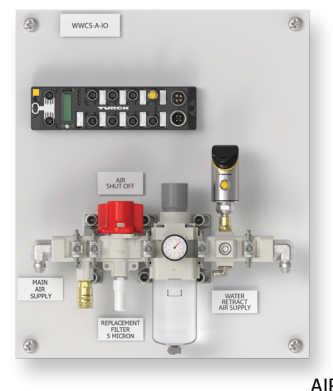
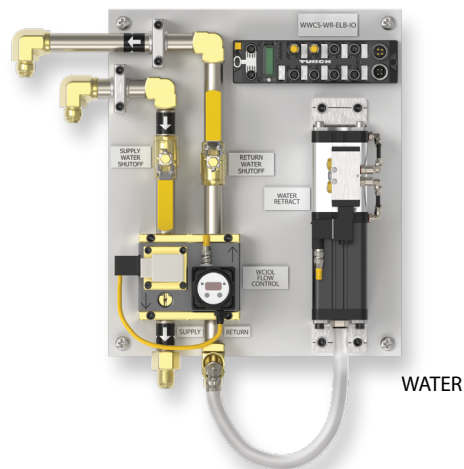
Part Number	Operating Pressure	Over Pressure	Burst Pressure	Wiring Diagram
PS310-0V-03-2UPN8-H1141 100001635	-1 - 0 bar (-14.5 - 0PSIG)	≤5.5 bar	≥5.5 bar	2
PS310-0V-03-LI2UPN8-H1141 100001488	-1 - 0 bar (-14.5 - 0PSIG)	≤5.5 bar	≥5.5 bar	2
PS310-1-03-2UPN8-H1141 100001655	0 - 1 bar (0 - 14.5PSIG)	≤5.5 bar	≥5.5 bar	2
PS310-1-03-LI2UPN8-H1141 100001508	0 - 1 bar (0 - 14.5PSIG)	≤5.5 bar	≥5.5 bar	2
PS310-1A-03-LI2UPN8-H1141 100003697	-1 - 0 bar (-14.5 - 0PSIG)	≤5.5 bar	≥5.5 bar	2
PS310-1V-03-2UPN8-H1141 100001645	-1 - 1 bar (-14.5 - 14.5PSIG)	≤5.5 bar	≥5.5 bar	2
PS310-1V-03-LI2UPN8-H1141 100001498	-1 - 1 bar (-14.5 - 14.5PSIG)	≤5.5 bar	≥5.5 bar	2
PS310-2.5V-03-LI2UPN8-H1141 100001518	-1 - 2.5 bar (-14.5 - 36.26PSIG)	≤12 bar	≥12 bar	2

Weld Water Control System - Modular Panels

Pre-Engineered Standard Solutions for Welding Cells

Improve your ability to monitor the robotic welding process and protect the welder from overheating with our pre-engineered solutions. Turck has a suite of modular solutions designed for resistance welding, MIG welding and end effector control. Our Weld Water Control System is designed to monitor and control coolant flow during production and during the tip change process. Our air/gas panels are designed to monitor MIG welding applications. Add an air panel as needed to regulate and monitor pneumatic end effectors and clamps. The modular design of these panels will allow you to easily tailor the level of monitoring and control for each robot and each cell. These easy-to-integrate systems communicate with IO-Link to help you gain more insight with remote monitoring of process parameters and application status. Weld water systems are designed around the Turck WCIOL flow sensor which communicates through an optional IO-Link block. Air/gas systems consist of a pneumatic regulator, gas flow meter, pressure sensor and optional IO-Link block.

- Modular systems that can be configured to the needs of a variety of weld cell applications
- Pre-engineered and standardized. Easy to design, easy to implement
- IO-Link provides more process data and remote monitoring capabilities
- Weld water system reduces damage from overheating and controls leakage from a tip off condition
- The available water retract option is ideal to protect the automatic tip changer on a resistance welder from flooding and contamination



FLOW
SENSING



PRESSURE
SENSING



TEMPERATURE
SENSING



RESISTANCE
WELDING



MIG/TIG



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

Weld Water Control System

Water

Part Number	Water Flowmeter	Mechanical Flow Restrictor	Water Temperature Sensor	Water Shut Off	Water Retract Module	IO-Link Master	End Connection Type	Water Connection Orientation
WWCS-W-ELB 200015562	X	X	X	X			3/4" JIC	90-Degrees
WWCS-W-ELB-IO 200015549	X	X	X	X		X	3/4" JIC	90-Degrees
WWCS-W-STR 200015561	X	X	X	X			3/4" JIC	Inline
WWCS-W-STR-IO 200015247	X	X	X	X		X	3/4" JIC	Inline
WWCS-WR-ELB 200015548	X	X	X	X	X		3/4" JIC	90-Degrees
WWCS-WR-ELB-IO 200015547	X	X	X	X	X	X	3/4" JIC	90-Degrees
WWCS-WR-STR 200015550	X	X	X	X	X		3/4" JIC	Inline
WWCS-WR-STR-IO 200015137	X	X	X	X	X	X	3/4" JIC	Inline

Air

Part Number	Air Filter Regulator	Air Pressure Sensor	Gas Flowmeter	Gas Pressure Sensor	IO-Link Master	Air End Connection Type	Gas End Connection Type
WWCS-A 200015553	X	X				1/2" JIC	N/A
WWCS-A-IO 200015552	X	X			X	1/2" JIC	N/A
WWCS-AG 200015554	X	X	X	X		1/2" JIC	3/8" FNPT
WWCS-AG-IO 200015564	X	X	X	X	X	1/2" JIC	3/8" FNPT

Connectivity Solutions for Welding

Aramid Overbraid

Aramid is an intricately woven over-braid that eliminates gaps, reduces catch points on moving parts, and allows for a smaller bend radius, creating a streamlined, space-saving solution in tight welding cells. These cables are also available in multiple configurations and are designed for easy stripping, helping reduce installation time and complexity.

- Capable of withstanding short-term heat spikes up to 200 °C



PTFE Coating

Designed with robust materials like PTFE-coated threads our cordsets resist the buildup of weld slag and minimize downtime caused by failure. For added durability, specialty high-temperature tubing can be applied over cordsets and connectors to shield against slag accumulation and heat exposure.

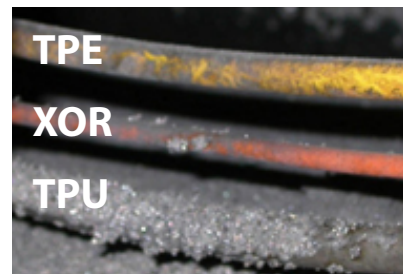
- Provide excellent resistance to weld-slag buildup



Weldlife™

For applications where CPE is too rigid, TPE (or TPR) jacket options are available, delivering flexibility without compromising durability. A wide range of Turck cables are rated for over 2+ million flex cycles, making them ideal for motion applications, while the full-length jacket coverage under the molded plug body ensures robust protection.

- Excellent resistance to weld slag buildup



Flexlife™

Engineered for robotic, motion systems, and C-tracks, Turck's Flexlife-20 cables are guaranteed* for 20 million flex cycles, whether the flexing is a tick-tock motion, torsional bend and flex, in a C-Track or a combination of these motions. Available with Turck's TPE jacket material for use both indoor and outdoor.

- High flex ratings and broad temperature range of -40 to 105 °C



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

Connectivity Solutions for Welding

	Cordset Selection Guide				
					
Style	Aramid Overbraided	Picofast	Eurofast	Microfast	Minifast
Pages	85-86	84	85-87, 92	88	89-91

Mating Cordset Selection Guide

Attributes	Weldlife Cable	Instrumentation Tray Cable		Flexlife Cable		Aramid Overbraided Cable
Material:	TPE	PVC	TPE (Weldlife)	TPE (Weldlife)	TPU	TPE with Aramid overbraid
Temp Range:	-40 to 105 °C	-40 to 105 °C	-40 to 105 °C	-40 to 105 °C	-40 to 90 °C	-40 to 105 °C (200 °C spikes)
Cold Bend:	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C
Cold Impact:	---	---	---	---	---	---
Crush and Impact:	---	---	---	---	---	---
Cut and Abrasion:	Fair/Good	Fair	Fair/Good	Fair/Good	Excellent	Good/Very Good
UV/Sunlight Resistant:	Excellent	Excellent	Excellent	Excellent	Poor/Fair	Excellent
Flame Retardant:	UL 1061/CSA FT1	UL 1685/CSA FT4	UL 1685/CSA FT4	UL 1061/CSA FT1	UL 1061/CSA FT1	UL 1061/CSA FT1
Weld Slag/Spatter:	Very Good	Poor	Very Good	Very Good	Poor	Excellent
Water:	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good
Flexibility:	Very Good	Very Good	Very Good	Excellent	Good	Very Good
Flexlife:	Good	Good	Good	Excellent	Good	Good
Oils:	Excellent	Excellent	Excellent	Excellent	Good	Excellent
Greases:	Excellent	Excellent	Excellent	Excellent	Good	Excellent
Gasoline:	Good	Fair	Good	Good	Fair	Good
Alcohols:	Very Good	Good	Very Good	Very Good	Poor/Fair	Very Good
Acids <20%:	Poor	Good	Poor	Poor	Fair	Poor
General Approvals:	UL/CSA, AWM 300 V or 600 V	UL ITC, PLTC, AWM CSA AWM CMX OUTDOOR-CMG, MSHA 300 V, 600 V	UL ITC, PLTC, AWM CSA AWM CMX OUTDOOR-CMG, MSHA 300 V, 600 V	UL/CSA, AWM 300 V or 600 V	UL/CSA, AWM 300 V or 600 V	UL/CSA, AWM 300 V or 600 V

- Attributes are general statements for materials at room temperature. Each application should be evaluated individually.
- Temperature, the percentage of chemical present, type of chemical exposure, and installation practices will all affect performance. For specific recommendations, please contact Turck.

M8 Picofast Connectivity

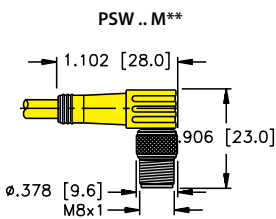
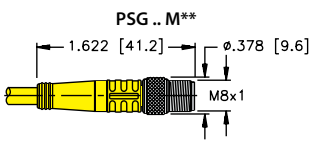
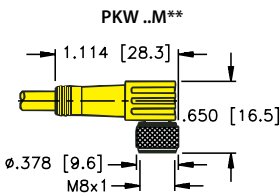
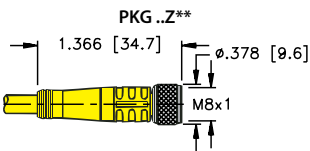
3-Wire Cordsets, Threaded Coupling Nut



- NEMA 1, 3, 4, 6P
- IEC IP67 Protection
- 125 V, 4 A



Connector Style



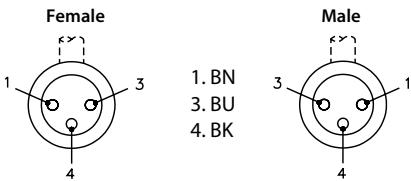
Part Number

Female	PKG 3M-*/S1587	PKW 3M-*/S1587
Male	PSG 3M-*/S1587	PSW 3M-*/S1587

Features

AWM, TPE Yellow, 3x24 AWG, 105 °C,
4.4 mm OD, Weldlife®, Weld Flash Immune

Pinout



* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters.
** Standard coupling material is nickel plated brass.."PKG..M"; "PKG..M" indicates stainless steel.

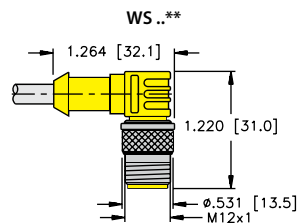
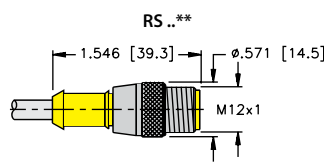
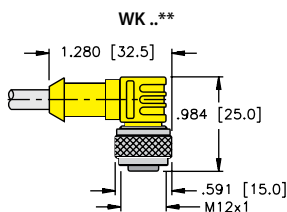
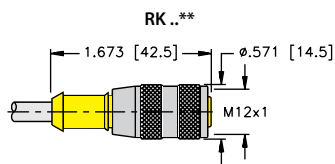
M12 Eurofast Connectivity
3-Wire Cordsets, Standard Plug Body



- NEMA 1, 3, 4, 6P
- IEC IP68 Protection
- 250 V, 4 A



Connector Style



Part Number

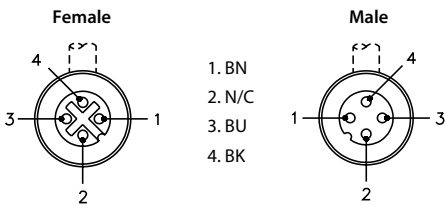
Female	RK 4T-*/S3415	WK 4T-*/S3415	RK 4T-*/S101	WK 4T-*/S101
Male	RS 4T-*/S3415	WS 4T-*/S3415	RS 4T-*/S101	WS 4T-*/S101

Features

Yellow Aramid overbraid, AWM TPE black, 3x22 AWG,
105 C, 4.8 mm OD, Weld Flash Immune Flame Resistance

AWM TPE Grey, 3x22 AWG, 105 °C,
4.8 mm OD, Flexlife-20, High Flex Over 20 Million Cycles

Pinout



* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters. Consult factory for other lengths.
** Standard coupling nut material is nickel plated brass "RK .."; "RKK .." indicates nylon and "RKV .." indicates stainless steel.
Add "/S1077" to end of part number for silicone tubing assembled to pigtail or extension cordsets up to 4 meters (0.5 meter min. on extensions).

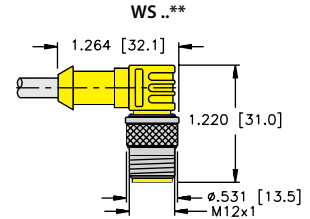
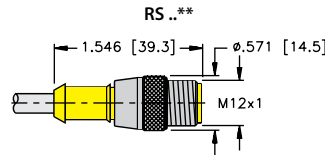
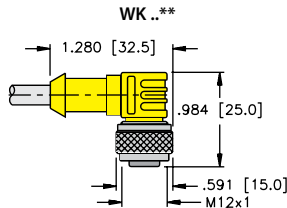
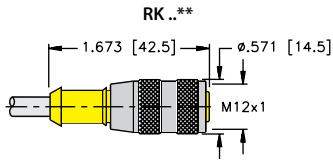
M12 Eurofast Connectivity

4-Wire Cordsets, Standard Plug Body



- NEMA 1, 3, 4, 6P
- IEC IP68 Protection
- 250 V, 4 A

Connector Style



Part Number

Female	RK 4.4T-*/S3415	WK 4.4T-*/S3415	RK 4.4T-*/S1587	WK 4.4T-*/S1587	RK 4.4T-*/S101	WK 4.4T-*/S101
Male	RS 4.4T-*/S3415	WS 4.4T-*/S3415	RS 4.4T-*/S1587	WS 4.4T-*/S1587	RS 4.4T-*/S101	WS 4.4T-*/S101

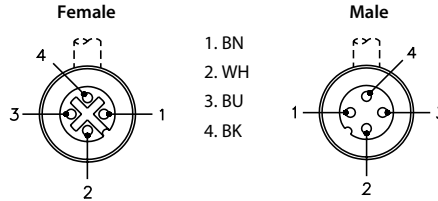
Features

Yellow Aramid overbraid, AWM TPE black,
4x22 AWG, 105 C, 5.1 mm OD,
Weld Flash Immune Flame Resistance

ITC/PLTC TPE Yellow, 4x22 AWG, 105 °C
5.3 mm OD, Weld Flash Immune, Flame Resistance

ITC/PLTC TPE Yellow, 4x22 AWG, 105 °C,
5.1 mm OD, Weld Flash Immune, Flame Resistance

Pinout



Dimension Drawings	Part Number	Features	Wiring Diagrams	Pinouts
	VBRS 4.4-2RK 4T-*/S3415	Yellow aramid overbraid, AWM TPE black, 3x22 AWG, 105 °C, 5.1 mm OD. Combine two sensors into one cable. Connects directly to Eurofast junction box.		

* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters. Consult factory for other lengths.

** Standard coupling nut material is nickel plated brass "RK .."; "RKK .." indicates nylon and "RKV .." indicates stainless steel.

Add "/S1077" to end of part number for silicone tubing assembled to pigtail or extension cordsets up to 4 meters (0.5 meter min. on extensions).

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

M12 Eurofast Connectivity

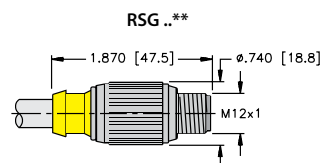
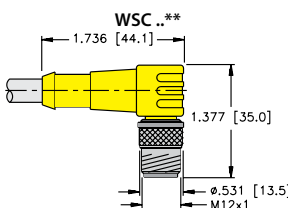
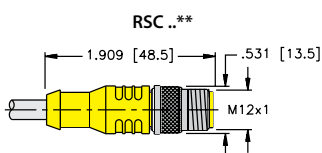
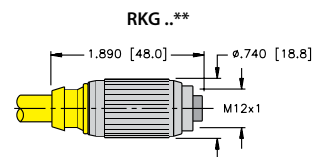
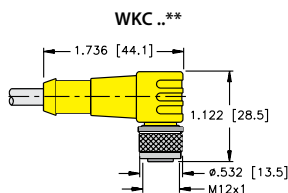
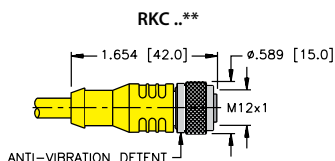
4-Wire Cordsets, "C" Style, Medium Plug Body, "G" Style, Large Plug Body



- NEMA 1, 3, 4, 6P
- IEC IP68 Protection
- 250 V, 4 A



Connector Style



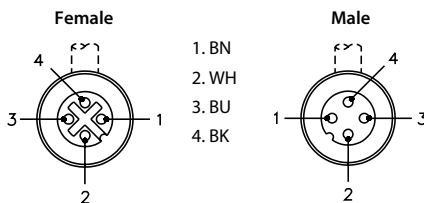
Part Number

Female	RKC 4.4T-*/S1587	WKC 4.4T-*/S1587	RKG 4.4T-*/S1587
Male	RSC 4.4T-*/S1587	WSC 4.4T-*/S1587	RSG 4.4T-*/S1587

Features

ITC/PLTC TPE Yellow, 4x18 AWG,
105 °C, 6.9 mm OD, Weld Flash Immune, Flame Resistance

Pinout



* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters. Consult factory for other lengths.

** Standard coupling nut material is nickel plated brass "RK.."; "RKK.." indicates nylon and "RKV.." indicates stainless steel.

Add "/S1077" to end of part number for silicone tubing assembled to pigtail or extension cordsets up to 4 meters (0.5 meter min. on extensions).

Add "/S1092" to end of part number for PTFE coated coupling nuts.

1/2" Microfast Connectivity

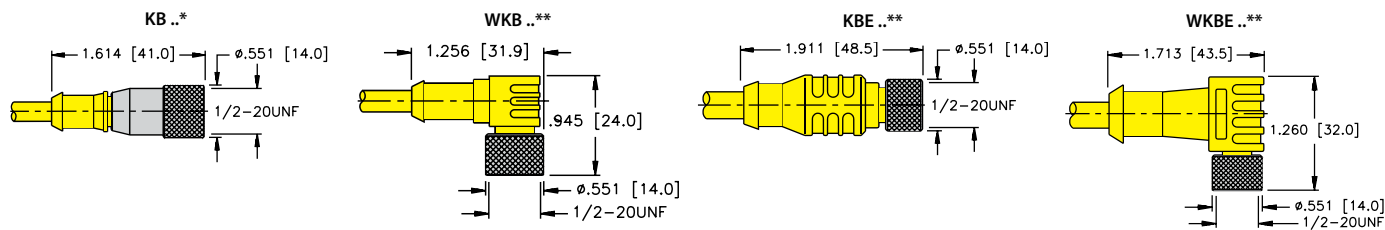
3 & 5 Wire Cordsets, Standard Duty and Large Plug Body



- NEMA 1, 3, 4, 6P
- IEC IP68 Protection
- 250 V, 4 A



Connector Style



Part Number

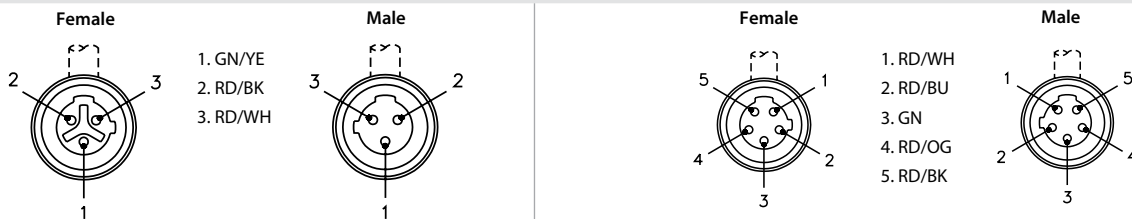
Female	KBE 3T-*/S1587	WKBE 3T-*/S1587	KBE 5T-*/S1587	WKBE 5T-*/S1587
Male	SBE 3T-*/S1587	WSBE 3T-*/S1587	SBE 5T-*/S1587	WSBE 5T-*/S1587

Features

ITC/PLTC TPE Yellow, 3x18 AWG,
105 °C, 6.2 mm OD, Weldlife, Weld Flash Immune, Flame Resistance

ITC/PLTC TPE Yellow, 5x18 AWG,
105C, 7.6mm OD, Weld Flash Immune, Flame Resistance

Pinout



* Length in meters. Standard cable lengths are 2, 4, 6, 8 and 10 meters. Consult factory for other lengths.

** Standard coupling nut material is nickel plated brass "KBE .."; "KBEV .." indicates stainless steel.

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

7/8" Minifast Connectivity Products
3, 4, and 5-Wire Cordsets, Standard & Heavy Duty



- NEMA 1, 3, 4, 6P, 12
- IEC IP68, IP69K Protection
- 300V, 9 A

Connector Style						
RKM ..** WKM ..** RSM ..** WSM ..**						
Part Number						
Female	RKM 30-*M/S101	WKM 30-*M/S101	RKM 311-*M/S1587	WKM 311-*M/S1587	RKM 511-*M/S1587	WKM 511-*M/S1587
Male	RSM 30-*M/S101	WSM 30-*M/S101	RSM 311-*M/S1587	WSM 311-*M/S1587	RSM 511-*M/S1587	WSM 511-*M/S1587
Features						
AWM TPE Yellow, 3x18 AWG , 105 °C, 5.7 mm OD, Flexlife-20, high flex over 20 million cycles, 600 V C-track			ITC/PLTC TPE Yellow, 3x18 AWG , 6.2 mm OD, Weld Flash Immune, Flame Resistance		ITC/PLTC TPE Yellow, 5x18 AWG , 7.6 mm OD, Weld Flash Immune, Flame Resistance	
Pinout						
Female			Female Male		Female Male	

* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters. Consult factory for other lengths.
** Standard coupling nut material is nickel plated brass "RKM .."; "RK .." indicates nylon, "RKV .." indicates stainless steel, and "RKVH .." indicates stainless steel hex.

7/8" Minifast Connectivity Products

3, 4, and 5-Wire Cordsets, Standard & Heavy Duty



- NEMA 1, 3, 4, 6P, 12
- IEC IP68, IP69K Protection
- 300V, 9 A

Connector Style						
RKM ..**		WKM ..**		RSM ..**		WSM ..**
Part Number						
Female	RKM 36-*M/S1587	WKM 36-*M/S1587	RKM 46-*M/S1587	WKM 46-*M/S1587	RKM 56-*M/S1587	WKM 56-*M/S1587
Male	RSM 36-*M/S1587	WSM 36-*M/S1587	RSM 46-*M/S1587	WSM 46-*M/S1587	RSM 56-*M/S1587	WSM 56-*M/S1587
Features						
	SEOOW TPE Yellow, 3x16 AWG 10 mm OD, Weld Flash Immune		SEOOW TPE Yellow, 4x16 AWG 10.8 mm OD, Weld Flash Immune		SEOOW TPE Yellow, 5x16 AWG 12.7 mm OD, Weld Flash Immune	
Pinout						
Female		Male		Female		Male
1. GN/YE 2. BK 3. WH		1. GN/YE 2. WH 3. RD 4. GN/YE		1. WH 2. RD 3. GN/YE 4. OG 5. BK		1. WH 2. RD 3. GN/YE 4. OG 5. BK

* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters. Consult factory for other lengths.

** Standard coupling nut material is nickel plated brass "RKM .."; "RK .." indicates nylon, "RKV .." indicates stainless steel, and "RKVH .." indicates stainless steel hex.

7/8" Minifast Connectivity Products
3, 4, and 5-Wire Cordsets, Standard & Heavy Duty



- NEMA 1, 3, 4, 6P, 12
- IEC IP68, IP69K Protection
- 300V, 9 A

Connector Style						
Part Number						
Female	RKM 36-*M/S3059	WKM 36-*M/S3059	RKM 461-*M/S3059	WKM 461-*M/S3059	RKM 56-*M/S3059	WKM 56-*M/S3059
Male	RSM 36-*M/S3059	WSM 36-*M/S3059	RSM 461-*M/S3059	WSM 461-*M/S3059	RSM 56-*M/S3059	WSM 56-*M/S3059
Features						
TC-ER/ITC/PLTC TPE Yellow, 3x16 AWG 8.5 mm OD, Weld Flash Imuune, Flame Resistance		TC-ER/ITC/PLTC TPE Yellow, 4x16 AWG 9.1 mm OD, Weld Flash Imuune, Flame Resistance			TC-ER/ITC/PLTC TPE Yellow, 5x16 AWG 10 mm OD, Weld Flash Imuune, Flame Resistance	
Pinout						

* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters. Consult factory for other lengths.
** Standard coupling nut material is nickel plated brass "RKM .."; "RK .." indicates nylon, "RKV .." indicates stainless steel, and "RKVH .." indicates stainless steel hex.

M12 Eurofast Connectivity

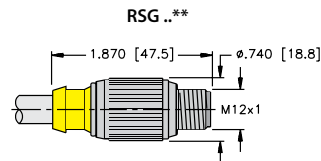
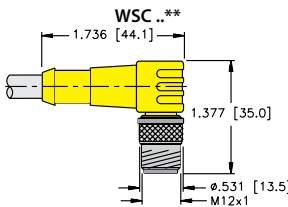
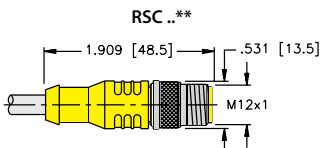
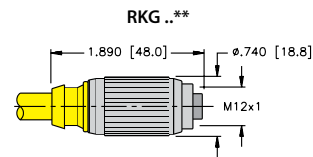
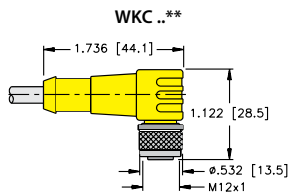
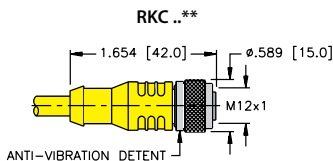
5-wire Cordsets, "C" Style, Medium Plug Body, "G" Style, Large Plug Body



- NEMA 1, 3, 4, 6P
- IEC IP68 Protection
- 250 V, 4 A



Connector Style



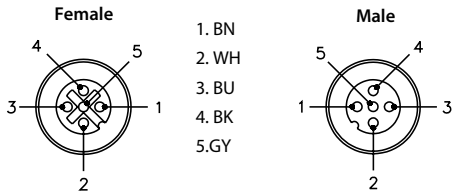
Part Number

Female	RKC 4.5T-*/S1587	WKC 4.5T-*/S1587	RKG 4.5T-*/S1587
Male	RSC 4.5T-*/S1587	WSC 4.5T-*/S1587	RSG 4.5T-*/S1587

Features

ITC/PLTC TPE Yellow, 5x18AWG
105C, 7.6mm OD, Weld Flash Immune, Flame Resistance

Pinout



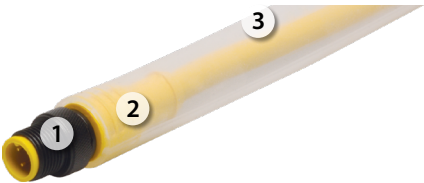
* Length in meters. Standard cable lengths are 2, 4, 5, 6, 8 and 10 meters. Consult factory for other lengths.
** Standard coupling nut material is nickel plated brass "RK .."; "RKK .." indicates nylon and "RKV .." indicates stainless steel.
Add "/S1077" to end of part number for silicone tubing assembled to pigtail or extension cordsets up to 4 meters (0.5 meter min. on extensions).
Add "/S1092" to end of part number for PTFE coated coupling nuts.



Special Cable Jackets/Accessories

Combine Multiple Solutions for Ultimate Protection

- 1. PTFE Coated Coupling Nut
- 2. TPE Mold Plug Body
- 3. Silicone Tubing

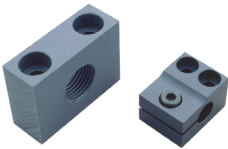


Optional Sleeves

Turck offers optional jacket sleeves such as silicone tubing and Viton coated fiberglass. Consult your sales representative for current sleeve offerings.

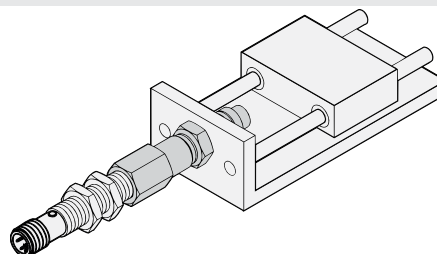
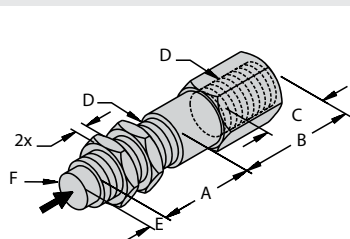


	Die Protector	Whisker Probe	Quick Mount	Cushion Mount	Mounting Brackets
					
Pages	96	96	97	97	98

	Mounting Clamps	PTFE/Ceramic Caps	Protective Covers	Lockwashers and Locknuts	Armorguard Sleeves
					
Pages	99, 104	101	102	103	104

Accessories

Die Protector



Part Number	ID Number	A	B	C	D	E	F
DP-08-25-08	A2521	0.98 [25.0]	1.25 [31.8]	0.66 [16.7]	M8x1	0.17 [4.3]	0.44 [11.1]
DP-08-50-08	A9473	1.97 [50.0]	1.25 [31.8]	0.66 [16.7]	M8x1	0.17 [4.3]	0.44 [11.1]
DP-12-25-12	A2519	0.98 [25.0]	1.25 [31.8]	0.66 [16.7]	M12x1	0.17 [4.3]	0.62 [15.7]
DP-12-50-12	A9169	1.97 [50.0]	1.25 [31.8]	0.66 [16.7]	M12x1	0.17 [4.3]	0.62 [15.7]
DP-18-25-18	A2520	0.98 [25.0]	1.25 [31.8]	0.66 [16.7]	M18x1	0.17 [4.3]	0.87 [22.1]
DP-18-75-18	A9527	2.95 [75.0]	1.25 [31.8]	0.66 [16.7]	M18x1	0.17 [4.3]	0.87 [22.1]

Inches [mm]

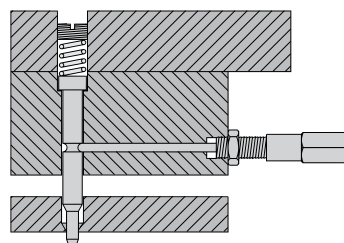
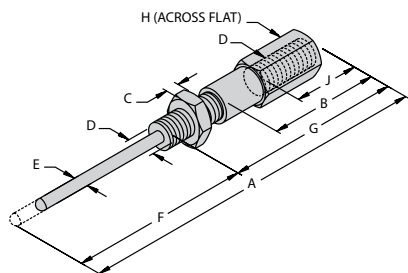
Spring rate for plunger actuation: 9 oz

Recommended Sensors for Die Protector

Die Protector	DP-08-25-08	DP-12-25-12	DP-18-25-18
Sensors	Bi1.5U-EG08-AP6X Bi2-EG08-AP6X	Bi2-G12-AP6X-H1141	Bi5-G18-AP6X (When not fully engaged)

Note: Works with all shielded NPN, PNP, quick disconnect or potted-in-cable versions of the listed part numbers.

Whisker Probe



Part Number	ID Number	A	B	C	D	E	F	G	H	J
WP-08-50-03	A2527	3.92 [99.6]	1.25 [31.8]	0.15 [3.8]	M8x1	0.13 [3.2]	2.00 [50.8]	1.95 [49.5]	0.44 [11.1]	0.86 [21.8]
WP-12-50-03	A2528	3.92 [99.6]	1.25 [31.8]	0.15 [3.8]	M12x1	0.13 [3.2]	2.00 [50.8]	1.95 [49.5]	0.44 [11.1]	0.86 [21.8]
WP-12-50-06	A2529	3.92 [99.6]	1.25 [31.8]	0.15 [3.8]	M12x1	0.25 [6.4]	2.00 [50.8]	1.95 [49.5]	0.62 [15.8]	0.71 [18.0]
WP-12-100-06	A9195	5.91 [150]	1.25 [31.8]	0.15 [3.8]	M12x1	0.25 [6.4]	4.00 [102]	1.95 [49.5]	0.62 [15.8]	0.71 [18.0]

Inches [mm]

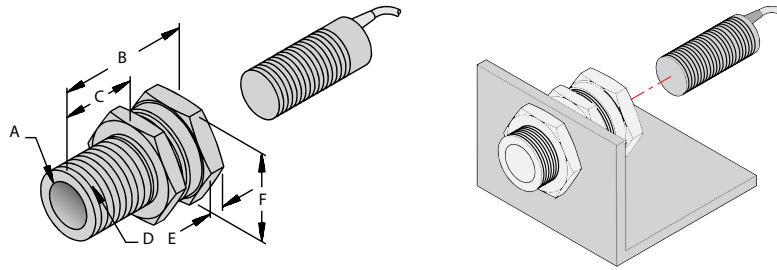
Recommended Sensors for Whisker Probe

Whisker Probe	WP-08-50-03	WP-12-50-03	WP-12-50-06
Sensors	Bi1.5-G08-AN6X Bi1.5-G08-AP6X	Bi1.5U-EG08-AP6X Bi2-EG08-AP6X	Bi2-G12-AP6X-H1141 Bi3U-M12-AP6X-H1141

Note: Works with all shielded NPN, PNP, quick disconnect or potted-in-cable versions of the listed part numbers. Not for use with Uprox3.

Accessories

Quick Mount

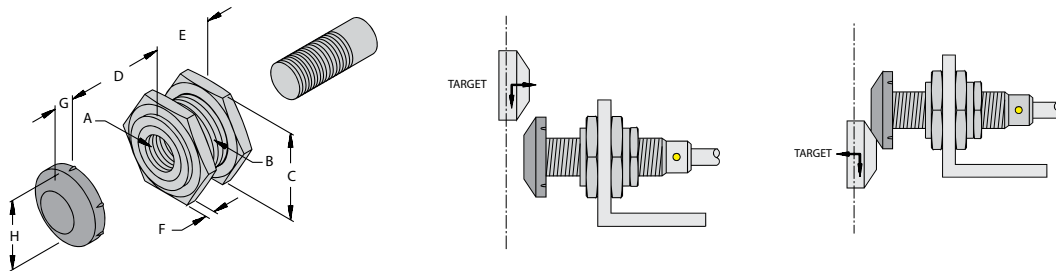


Part Number	ID Number	Features	A	B	C	D	E	F
QM-08	A2511	—	0.32 [8.18]	1.28 [32.4]	0.69 [17.5]	M12x1	0.15 [3.85]	0.67 [16.9]
QM-08L	A2512	Ext. Length	0.32 [8.18]	1.90 [48.0]	1.34 [34.0]	M12x1	0.15 [3.85]	0.67 [16.9]
QM-12	A2513	—	0.48 [12.1]	1.34 [33.7]	0.77 [19.5]	M16x1	0.16 [4.01]	0.86 [21.8]
QM-12L	A2514	Ext. Length	0.48 [12.1]	1.76 [44.8]	1.18 [30.0]	M16x1	0.16 [4.01]	0.86 [21.8]
QM-12L-T	A2542	Ext. Length, PTFE	0.48 [12.1]	1.76 [44.8]	1.18 [30.0]	M16x1	0.16 [4.01]	0.86 [21.8]
QM-18	A2515	—	0.71 [18.1]	1.52 [38.5]	0.79 [20.0]	M24x1.5	0.19 [4.95]	1.18 [30.0]
QM-18L	A2516	Ext. Length	0.71 [18.1]	2.28 [58.0]	1.57 [40.0]	M24x1.5	0.19 [4.95]	1.18 [30.0]
QM-18L-T	A2543	Ext. Length, PTFE	0.71 [18.1]	2.28 [58.0]	1.57 [40.0]	M24x1.5	0.19 [4.95]	1.18 [30.0]
QM-30	A2517	—	1.19 [30.1]	1.50 [35.0]	0.79 [20.0]	M36x1.5	0.24 [6.13]	1.61 [41.0]
QM-30L	A2518	Ext. Length	1.19 [30.1]	2.28 [58.0]	1.57 [40.0]	M36x1.5	0.24 [6.13]	1.61 [41.0]

Inches [mm]

Material: Nickel plated brass

Cushion Mount



Part Number	ID Number	A	B	C	D	E	F	G	H	Cap Part Number	Cap ID Number
		Inside Thread	Outside Thread	Across Flats	Max Allowable Overtravel						
CM-08	A2503	M8x1	M16x1.5	0.88 [22.2]	0.35 [8.89]	0.87 [22.1]	0.16 [3.94]	0.21 [5.33]	0.60 [15.2]	CAP-EN08	A6100
CM-08N	A2504	M8x1	M16x1.5	0.88 [22.2]	0.35 [8.89]	0.87 [22.1]	0.16 [3.94]	0.21 [5.33]	0.60 [15.2]	CAP-EN08N	A6200
CM-12	A2505	M12x1	M22x1.5	1.12 [28.6]	0.40 [10.0]	0.87 [22.1]	0.16 [4.06]	0.245 [6.22]	0.90 [22.9]	CAP-EN12	A6300
CM-12N	A2506	M12x1	M22x1.5	1.12 [28.6]	0.40 [10.0]	0.87 [22.1]	0.16 [4.06]	0.245 [6.22]	0.90 [22.9]	CAP-EN12N	A6300-1
CM-18	A2507	M18x1	M30x1.5	1.41 [35.8]	0.49 [12.4]	1.17 [29.7]	0.20 [5.10]	0.33 [8.38]	1.18 [30.0]	CAP-EN18	A6400
CM-18N	A2508	M18x1	M30x1.5	1.41 [35.8]	0.49 [12.4]	1.17 [29.7]	0.20 [5.10]	0.33 [8.38]	1.18 [30.0]	CAP-EN18N	A6400-1
CM-30	A2509	M30x1.5	M47x1.5	2.01 [51.0]	0.57 [14.5]	1.47 [37.3]	0.20 [5.10]	0.30 [7.62]	1.72 [43.7]	—	—
CM-30N	A2510	M30x1.5	M47x1.5	2.01 [51.0]	0.57 [14.5]	1.47 [37.3]	0.20 [5.10]	0.30 [7.62]	1.72 [43.7]	—	—

Inches [mm]

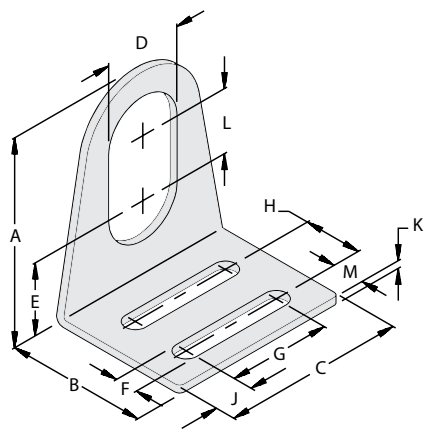
Material: Anodized aluminum

Cap: Plastic

Stainless versions available (CM-*NSS)

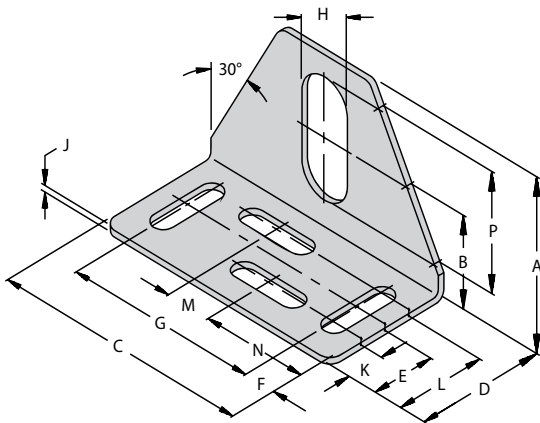
Accessories

Mounting Brackets



Part Number	ID Number	Barrel Diameter	A	B	C	D	E	F	G	H	J	K	L	M
MBSS-08	A2522	8 mm	1.00 [25.4]	1.13 [28.7]	1.25 [31.8]	0.34 [8.74]	0.31 [7.92]	0.22 [5.54]	0.63 [15.9]	0.47 [11.9]	0.31 [7.92]	0.070 [1.78]	0.37 [9.53]	0.28 [7.14]
MBSS-12	A2523	12 mm	1.50 [38.1]	1.37 [34.8]	1.50 [38.1]	0.50 [12.7]	0.55 [13.9]	0.22 [5.54]	0.75 [19.1]	0.56 [14.3]	0.37 [9.53]	0.070 [1.78]	0.50 [12.7]	0.31 [7.92]
MBSS-18	A2524	18 mm	2.00 [50.8]	1.37 [34.8]	1.75 [44.5]	0.75 [19.1]	0.22 [19.1]	0.22 [5.54]	1.00 [25.4]	0.56 [14.3]	0.37 [9.53]	0.070 [1.78]	0.62 [15.9]	0.31 [7.92]
MBSS-30	A2525	30 mm	2.50 [63.5]	1.75 [44.5]	2.25 [57.2]	1.18 [30.5]	0.91 [23.0]	0.22 [5.54]	1.37 [34.8]	0.81 [20.6]	0.44 [11.2]	0.085 [2.16]	0.75 [19.1]	0.41 [10.3]

Inches [mm]
Material: 304 stainless steel



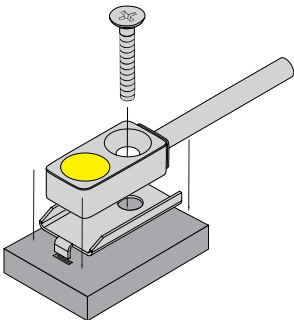
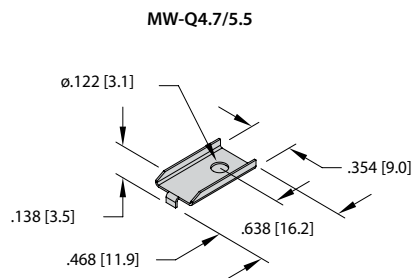
Part Number	ID Number	Barrel Diameter	A	B	C	D	E	F	G	H	J	K	L	M	N	P
MB-8	A3130-1	8 mm	1.26 [32.0]	0.66 [16.7]	2.00 [50.8]	1.00 [25.4]	0.45 [11.5]	0.30 [7.5]	1.41 [35.8]	0.33 [8.4]	0.06 [1.5]	0.24 [6.0]	0.67 [17.0]	0.35 [8.8]	0.83 [21.0]	.84 [21.4]
MB-12	A3130	12 mm	1.63 [41.5]	0.87 [22.15]	2.50 [63.5]	1.25 [31.8]	0.61 [15.5]	0.31 [7.9]	1.88 [47.8]	0.50 [12.7]	0.06 [1.5]	0.35 [9.0]	0.87 [22.0]	0.45 [11.5]	1.02 [26.0]	1.13 [28.7]
MB-18	A3135	18 mm	1.63 [41.5]	0.79 [20.0]	2.50 [63.5]	1.25 [31.8]	0.61 [15.5]	0.31 [7.9]	1.88 [47.8]	0.75 [19.1]	0.06 [1.5]	0.35 [9.0]	0.87 [22.0]	0.45 [11.5]	1.04 [26.3]	1.15 [29.1]
MB-30	A3140	30 mm	2.62 [66.5]	1.32 [33.5]	4.25 [108.0]	1.75 [44.5]	0.88 [22.4]	0.37 [9.5]	3.50 [88.9]	1.19 [30.2]	0.07 [1.8]	0.63 [16.0]	1.14 [29.0]	1.18 [30.0]	1.54 [39.0]	2.06 [52.2]

Inches [mm]
Material: Cold roll steel
Finish: Galvanized

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

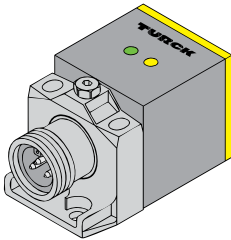
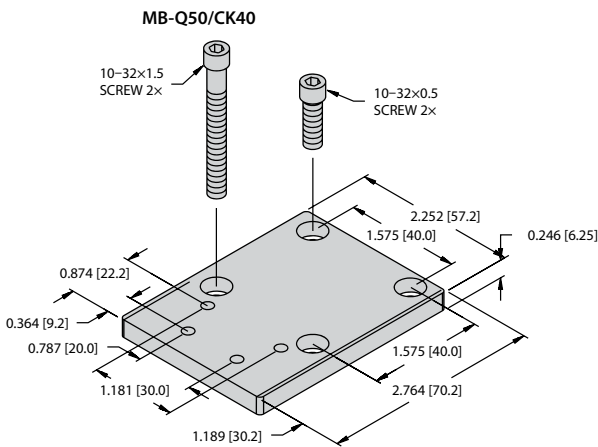
Accessories

Mounting Brackets



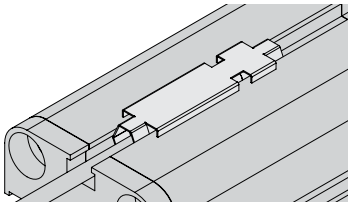
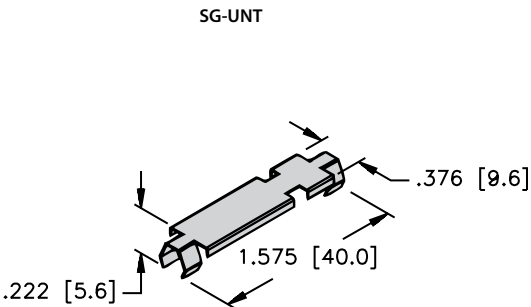
Part Number	ID Number
MW-Q4.7/Q5.5	6945013

Inches [mm]
Material: Stainless steel
*For surface mounting of Q4.7 or Q5.5 sensors



Part Number	ID Number
MB-Q50/CK40	A3148

Inches [mm]
Material: Stainless steel
*For use with Q50 or CK40 sensors

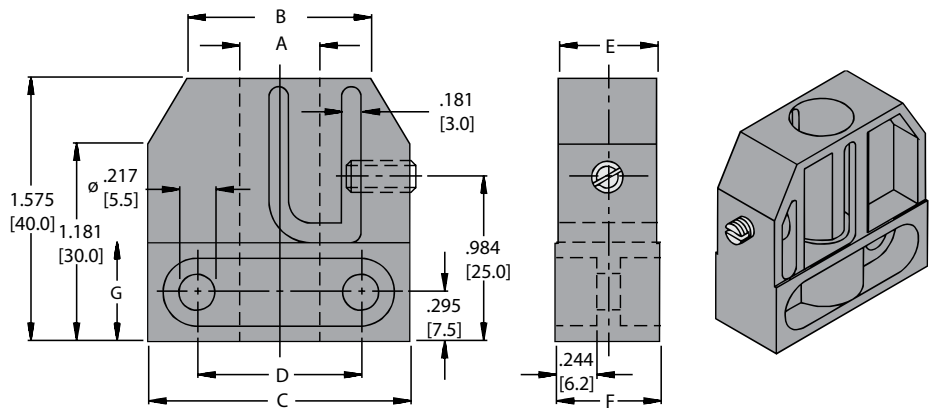


Part Number	ID Number
SG-UNT	A9800

Inches [mm]
Material: Nickel-plated steel
*For use with BIM-UNT cylinder sensors

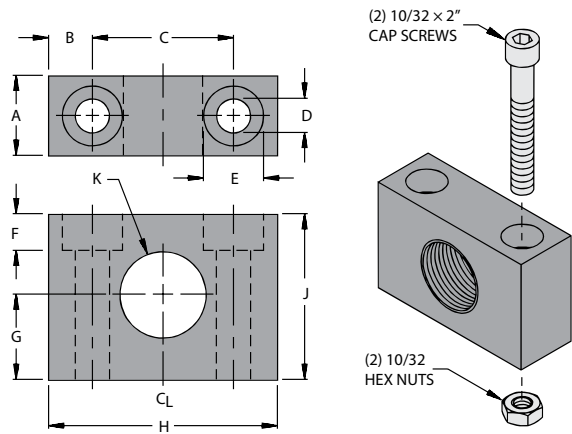
Accessories

Mounting Clamps



Part Number	ID Number	Barrel Diameter	A	B	C	D	E	F	G
BS 12	69470	12 mm	0.48 [12.2]	1.10 [28.0]	1.57 [40.0]	0.98 [25.0]	0.59 [15.0]	0.63 [16.0]	0.59 [15.0]
BS 18	69471	18 mm	0.72 [18.2]	1.30 [33.0]	1.77 [45.0]	1.18 [30.0]	0.83 [21.0]	0.87 [22.0]	0.59 [15.0]

Inches [mm]
Material: PA 66-GF
*For use with 12 and 18 mm threaded barrel sensors

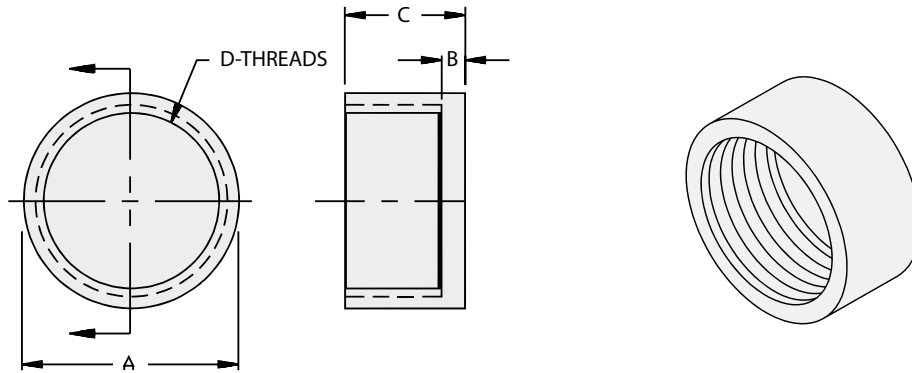


Part Number	ID Number	Barrel Diameter	A	B	C	D	E	F	G	H	J	K
MB-S12	A3150	12 mm	0.44 [11.2]	0.24 [6.2]	0.77 [19.6]	0.20 [5.0]	0.34 [8.7]	0.20 [5.0]	0.45 [11.4]	1.26 [32.0]	0.91 [23.0]	M12x1
MB-S18	A3155	18 mm	0.63 [16.0]	0.30 [7.6]	1.20 [30.5]	0.22 [5.5]	0.38 [9.6]	0.25 [6.4]	0.57 [14.5]	1.80 [45.8]	1.15 [29.3]	M18x1

Inches [mm]
Material: Delrin
*For use with 12 and 18 mm threaded barrel sensors. Mounting hardware included.

Accessories

PTFE / Ceramic Caps



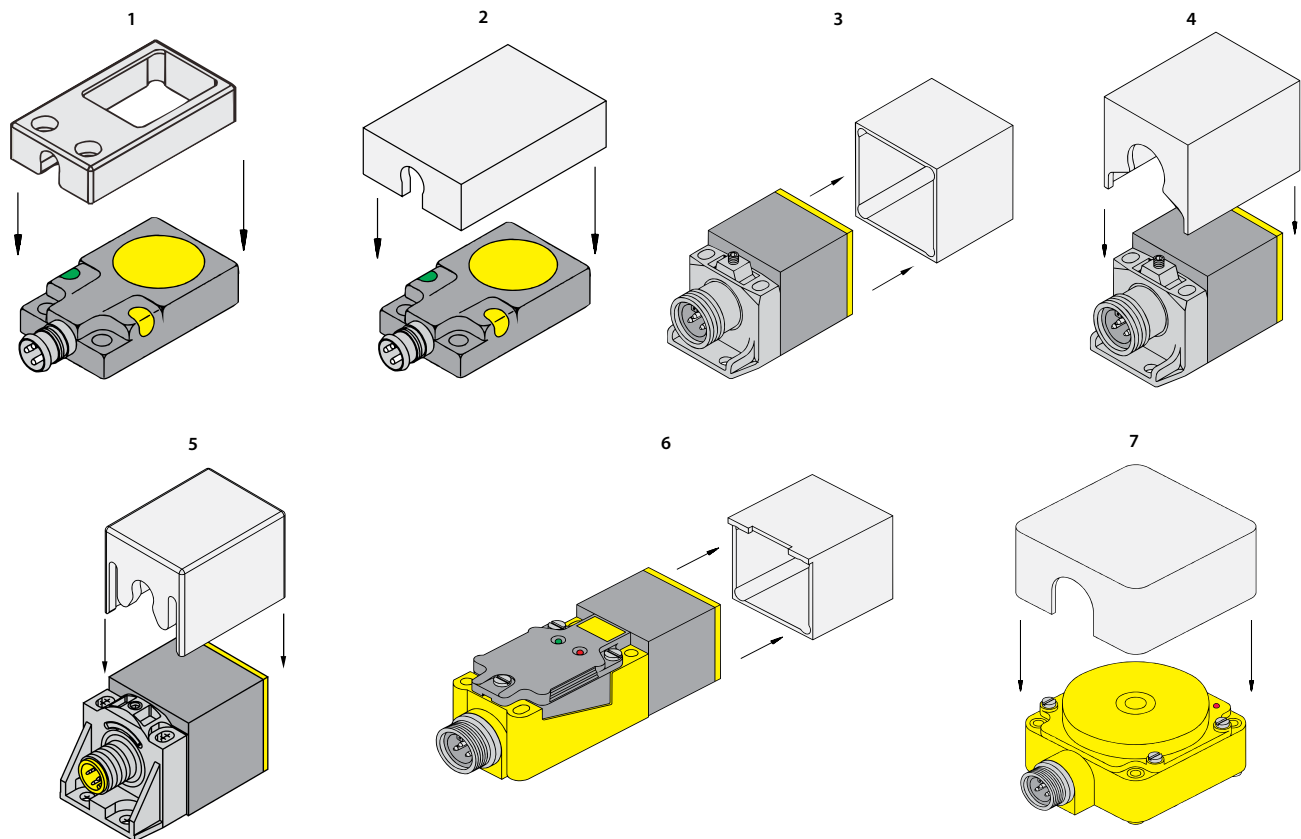
Part Number	ID Number	Barrel Diameter	Material	A	B	C	D
CAP 08-PTFE	A3055-1	8 mm Embeddable	PTFE	0.375 [9.5]	0.03 [0.7]	0.437 [11.1]	M8x1
CAP 08-DER	A9326	8 mm Embeddable	Delrin	0.375 [9.53]	0.03 [0.76]	0.437 [11.1]	M8x1
CAP 12-PTFE	6942930	12 mm Embeddable	PTFE	0.63 [16.0]	0.03 [0.7]	0.63 [16.0]	M12x1
CAP 12-CER	A2530	12 mm Embeddable	Ceramic	0.58 [14.7]	0.035 [.89]	0.35 [8.90]]	M12x1
CAP 12-DER	A9321	12 mm Embeddable	Delrin	0.58 [14.7]	0.035 [.89]	0.35 [8.90]	M12x1
CAP 12N-CER	A9129	12 mm Non-embeddable	Ceramic	0.58 [14.7]	0.035 [.89]	0.60 [15.2]	M12x1
CAP 12N-DER	A9322	12 mm Non-embeddable	Delrin	0.58 [14.7]	0.035 [.89]	0.60 [15.2]	M12x1
CAP 18-PTFE	A3055	18 mm Embeddable	PTFE	0.87 [22.0]	0.04 [1.0]	0.35 [9.0]	M18x1
CAP 18N-PTFE	A3056	18 mm Non-embeddable	PTFE	0.87 [22.0]	0.04 [1.0]	0.79 [20.0]	M18x1
CAP 18-CER	A2531	18 mm Embeddable	Ceramic	0.95 [24.1]	0.045 [1.14]	0.35 [8.90]	M18x1
CAP 18-DER	A9323	18 mm Embeddable	Delrin	0.95 [24.1]	0.045 [1.14]	0.35 [8.90]	M18x1
CAP 18N-CER	A3056-4	18 mm Non-embeddable	Ceramic	0.95 [24.1]	0.045 [1.14]	0.70 17.8	M18x1
CAP 18N-DER	A9324	18 mm Non-embeddable	Delrin	0.95 [24.1]	0.045 [1.14]	0.70 17.8	M18x1
CAP 30-PTFE	A3057	30 mm Embeddable	PTFE	1.34 [34.0]	0.05 [1.2]	0.35 [9.0]	M30x1.5
CAP 30N-PTFE	A3058	30 mm Non-embeddable	PTFE	1.34 [34.0]	0.05 [1.2]	1.14 [29.0]	M30x1.5
CAP 30-CER	A2532	30 mm Embeddable	Ceramic	1.50 [38.1]	0.08 [2.03]	0.39 [9.90]	M30x1.5
CAP 30-DER	A9325	30 mm Embeddable	Delrin	1.50 [38.1]	0.08 [2.03]	0.39 [9.90]	M30x1.5
CAP 47-PTFE	A3060	47 mm Embeddable	PTFE	2.20 [55.8]	0.06 [1.6]	0.38 [9.7]	PG 36

Inches [mm]

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

Accessories

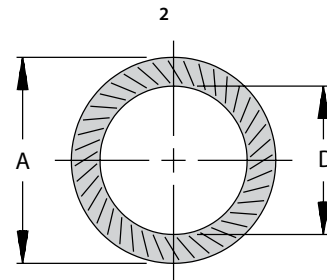
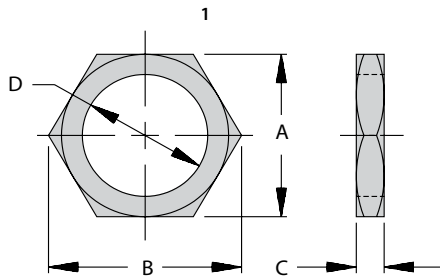
Protective Covers



Part Number	ID Number	Material	For Use With Sensor Housing	Drawing Image
MBS-Q08TS	A9492	Nickel Plated Steel	Q08	1
T-Q08-T-MCC	A5155	PTFE	Q08	2
T-Q20-T-MCC	A5156	PTFE	Q20	2
T-CK40-T-FC	A5202	PTFE	CK40	3
T-CK40-D-FC	A5160	Delrin	CK40	3
T-CK40-T-MCC	A5201	PTFE	CK40	4
T-CK40-T-MCB	A9126	PTFE	CK40	5
T-CP40-T-C	A5204	PTFE	CP40	6
T-CP80-T	A5207	PTFE	CP80	7

Accessories

Locknuts and Washers



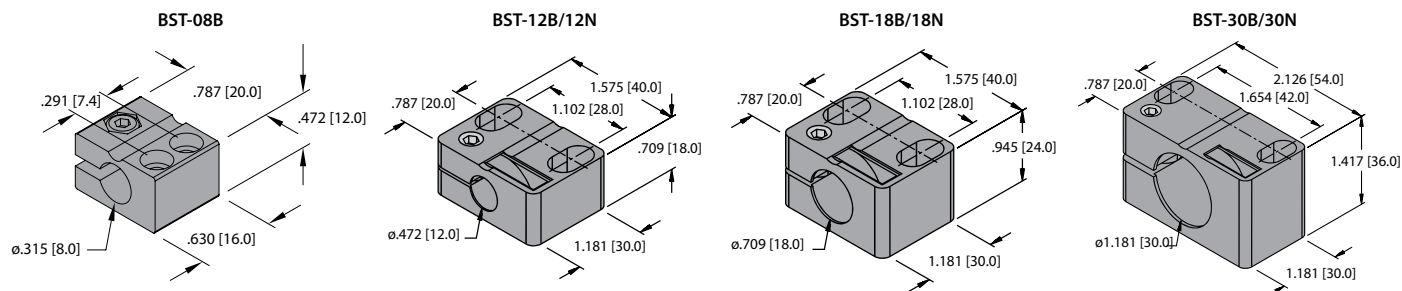
Part Number	ID Number	Barrel Diameter	Materials	A	B	C	D	Dimension Drawing
Locknut-SS08	A3123-08	8 mm	SS	0.51 [13.0]	0.58 [14.7]	0.16 [4.0]	M8x1	1
Locknut-M12	A3122	12 mm	CPB	0.67 [17.0]	0.76 [19.4]	0.16 [4.0]	M12x1	1
Locknut-MT12	A3109	12 mm	PTFE	0.67 [17.0]	0.76 [19.4]	0.16 [4.0]	M12x1	1
Locknut-SS12	A3123	12 mm	SS	0.67 [17.0]	0.76 [19.4]	0.16 [4.0]	M12x1	1
Locknut-M18	A3125	18 mm	CPB	0.94 [24.0]	1.08 [27.4]	0.16 [4.0]	M18x1	1
Locknut-MT18	A3108	18 mm	PTFE	0.94 [24.0]	1.08 [27.4]	0.16 [4.0]	M18x1	1
Locknut-SS18	A3123-0	18 mm	SS	0.94 [24.0]	1.08 [27.4]	0.16 [4.0]	M18x1	1
Locknut-M30	A3126	30 mm	CPB	1.42 [36.0]	1.63 [41.4]	0.20 [5.0]	M30x1.5	1
Locknut-SS30	A3123-1	30 mm	SS	1.42 [36.0]	1.63 [41.4]	0.20 [5.0]	M30x1.5	1
LW-08	A3124	8 mm	SS	0.55 [14]	N/A	N/A	0.32 [8.2]	2
LW-12	A3127	12 mm	SS	0.70 [17.8]	N/A	N/A	0.52 [13.2]	2
LW-18	A3128	18 mm	SS	1.06 [26.8]	N/A	N/A	0.76 [19.3]	2
LW-30	A3129	30 mm	SS	1.76 [44.8]	N/A	N/A	1.26 [32.0]	2

Inches [mm]

*For use with threaded barrel sensors

Accessories

Mounting Clamps



Part Number	ID Number	Barrel Diameter
BST-08B	6947210	8 mm
BST-12B	6947212	12 mm
BST-12N	6945200	12 mm
BST-18B	6947214	18 mm
BST-18N	6947215	18 mm
BST-30B	6947216	30 mm
BST-30N	6947217	30 mm

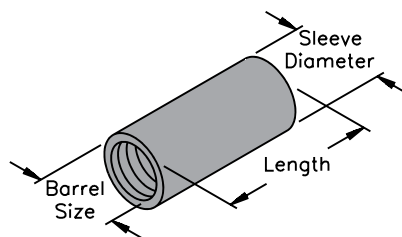
Inches [mm]

B Version comes with dead stop for flush mounted sensors

Material: PA 66-6F

*For use with threaded barrel sensors

Armorguard Sleeves



Part Number	ID Number	Barrel Size	Sleeve Diameter	Length
MBS-08TS 7MM	A0835	M8x1	Ø0.48 [12.1]	0.28 [7.0]
MBS-08TS 15MM	A0835-01			0.59 [15.0]
MBS-12TS 15MM	A3152-04	M12x1	Ø0.61 [15.6]	0.59 [15.0]
MBS-12TS 35MM	A3152-01			1.38 [35.0]
MBS-12TS 45MM	A3152-02			1.77 [45.0]
MBS-12TS 50MM	A3152-03			1.97 [50.0]
MBS-18TS 7MM	A0837	M18x1	Ø0.85 [21.5]	0.28 [7.0]
MBS-18TS 15MM	A3143-03			0.59 [15.0]
MBS-18TS 35MM	A3143-01			1.38 [35.0]
MBS-18TS 45MM	A3143-02			1.77 [45.0]
MBS-30TS 7MM	A9123	M30x1	Ø1.32 [33.6]	0.28 [7.0]

Inches [mm]

*For use with threaded barrel sensors

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

Notes



Notes



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