



**TURCK**  
*works*

Industrial  
Automation

## WELDING SOLUTIONS

- *armorguard*®
- *weldguard*®
- Stainless Steel Front Face
- *stoneface*®
- Instrumentation
- Connectivity
- Accessories

**TURCK**  
*works*

Industrial  
Automation

**weld  
guard®**

Sensors  
for Welding



Competitor #1  
Failed at 449 welds



Competitor #2  
Failed at 1,837 welds



Competitor #3  
Failed at 1,869 welds

## 34,000 WELDS AND STILL GOING...



TURCK *weldguard* CA40  
Still operating after 25,000 welds

TURCK's *weldguard* proximity sensors shed slag like water off a duck, and are highly resistant to abrasion.

They feature a rugged, hi-tech front cap offering durability tested up to 500 times greater than other proximity sensors.

For critical welding applications, choose **TURCK *weldguard*** proximity sensors.

Call us with your next application:  
**1-800-544-7769**  
email: [turckusa@turck.com](mailto:turckusa@turck.com)  
[www.turck.com](http://www.turck.com)

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.....Sense It!.....Connect It!.....Bus It!.....Solve It!

# TURCK SOLUTIONS FOR WELDING ENVIRONMENTS

Proximity sensors in welding environments are damaged and destroyed for a variety of reasons including molten metal slag from MIG/TIG welding, and weld spatter from resistance (spot) welding. To help our customers increase productivity in weld cells, **TURCK** designed and tested specialty sensors and cordsets to withstand the high heat and rigors associated with this harsh environment.



Weld slag and spatter are not the only factors that can harm your sensors in these locations. Sensors are exposed to physical damage caused by either physical impact or abrasion from the target that is being sensed. Continuously exerting this kind of stress on a sensor will cause its internal electronics to fault and/or its exterior to break, leading to replacement.



## TURCK's solution protects the sensor from impact and abrasion, extending its service life exponentially.

Common proximity sensors are non-contact, meaning they do not need to touch the actual target to sense it. However, in many applications the physical target inadvertently does touch the sensor. Friction between the target rubbing against the sensor can cause the sensing face to wear and eventually lead to sensor failure. **TURCK** has a solution for this too.



Above all, it is important to remember that every application is different, and no one solution will work to protect these components from every environmental hazard. **TURCK's** experienced engineers are eager to help you find the solution that is best for you. Simply call at 800-544-7769 and request to speak with an application engineer or visit [www.turck.com](http://www.turck.com) to find which of our 2,500 sales people is nearest you.

# TURCK SENSORS FOR WELDING ENVIRONMENTS

## weldguard

TURCK's *weldguard* sensors use a proprietary material on the sensing face that is:

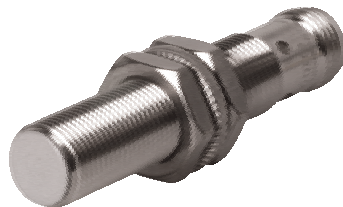
- Independently tested to over 25,000 operations without failure
- Impervious to weld spatter that creates pitting, chipping and cracking caused by resistance welding
- Resistant to pitting, chipping and cracking caused by molten metal traveling at high velocity
- A superior replacement for any type of material used on a sensing face
- Able to withstand high heat



RESISTANCE WELDING

See page 14.

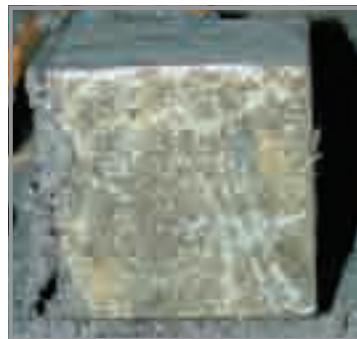
**weldguard**®



Over 25,000 operations without failure!



Competitors failed at less than 2,000 welds. TURCK *weldguard* lasted 34,256 welds.



Competitors failed between 449 and 1,869 welds. TURCK *weldguard* lasted 25,691 welds.



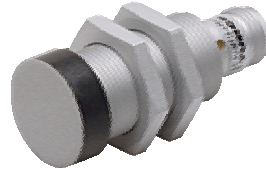
TURCK

Competition

## armorguard

TURCK's *armorguard* provides built-in durability that:

- Protects sensor face from impact
- Includes *weldguard*® material on sensing face to resist weld slag
- Extends the life of the sensor dramatically
- Available in 8, 12, 18 or 30 mm barrel diameters, as well as cube style sensors



IMPACT

Also Protects Against:  
Weld Slag and Abrasion

See page 50.

***armor  
guard***®



## armorguard ACCESSORIES

- TURCK's *armorguard* sleeves are available as an accessory to the sensor to protect the sensing face from lateral impact when not in a direct weld environment.



IMPACT

See page 91.

## STAINLESS STEEL FRONT FACE

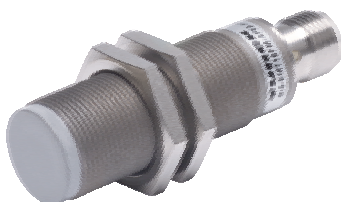
TURCK's heavy-duty stainless steel construction:

- Protects the barrel and internal electronics from damage due to impact
- Protects the sensing face from damage due to abrasion
- Available with Teflon or *weldguard*® coating for protection against weld slag
- No areas of entry, preventing oils and lubricants from seeping into the sensor
- One piece stainless steel housing



IMPACT

Also Protects Against:  
Abrasion



Stainless Steel *weldguard*  
with Teflon Coating



Stainless Steel with  
Teflon Coating



IMPACT

Also Protects Against:  
Weld Slag and Abrasion



Stainless Steel





## stoneface

TURCK's *stoneface* sensors use a glass filled thermoset plastic material on the sensing face that:

- Protects the sensing face from abrasion
- Is resistant to weld slag buildup that is often a result of MIG/TIG welding
- Is available with Teflon coated barrels to shed weld slag



MIG WELDING

Also Protects Against:  
Weld Slag and Abrasion

See page 74.

***stone***  
***face***®



## SENSOR ACCESSORIES

A variety of accessories are available to help protect sensors from weld spatter and physical damage.

- Cushion mount accessory protects sensor when used as an end stop
- Teflon and ceramic caps protect the sensor face from weld spatter



Teflon cover for  
CK40 style sensor.



Teflon and ceramic  
thread on covers for  
barrel sensors.



Teflon covers for **QPak** sensors.



WELD SLAG

See pages 92-93.



IMPACT

See page 94.



Cushion Mount

# TURCK INSTRUMENTATION

## KEEP QUALITY, CONTROL WELDS

### FLOW MONITORS FOR WELD TIP PROTECTION

Flow monitors are used in the welding industry to detect the loss of coolant to weld tips, preventing damage to equipment.

#### Digital Readout Flow/Temperature Monitors

- Provides flow/no flow monitoring for water, water/glycol (0-70%) mixtures and Galden® (HT110 and HT135)
- Inline, non-intrusive design
- Available with flow and temperature switchpoints, analog or relay outputs



See page 96.

#### Probe Style Flow Monitors

- Self contained
- Fits standard plumbing tees
- Stainless steel construction
- Compact design allows mounting near weld tip



#### Inert Gas Flow Monitors

- Verify presence of Argon, Helium and other MIG welding gases
- Verify ventilation system is working in fume hoods



### PRESSURE SENSORS FOR WELD CELL MONITORING

#### High Accuracy Pressure Sensors

- Hydraulic system monitoring
- Pneumatic system monitoring
- Material handling
- Vacuum and positive pressure ranges available

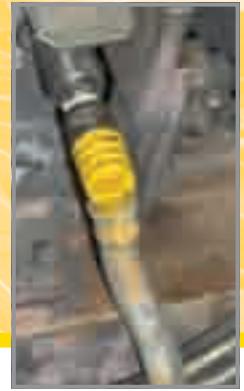


See page 105.



# TURCK CONNECTIVITY WELD SLAG PROTECTION

Depending on your application, you can choose from many different levels of protection. Plug body, coupling nuts, accessories and cable jacket are all components of the cordset that can be altered to provide weld slag protection.



## PLUG BODY & COUPLING NUTS

See pages 109-110 (notelines).



### TPE (Thermo-Plastic Elastomer) and Teflon Coating

- TPE used as mold material in cordset plug body
- Coupling nuts coated with teflon
- Provide excellent resistance to weld-slag buildup

## ACCESSORIES

### Viton Coated Fiberglass Sleeving

- Slides over the quick disconnect area
- Prevents accumulation of weld slag, dust and grease



See page 117.



See page 118.



### Silicone Tubing

- Made of translucent rubber
- Assembled on cordsets end to end up to 4 meters!

See page 118.

### Expandable Silicone Sleeving

- Provides a 'heat shrink' like fit
- Protects cable, mold and coupling nut

### Clear Weld Seal Tape

- Protects open areas between silicone tubing and mold body



### Wrap Around Weld Shield Sleeving

- Provides excellent resistance in welding environment
- Used in wide operating temperature range
- Rugged fiberglass material with hook and loop closure

See page 119.



See page 120.



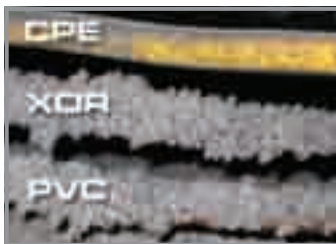
## CABLE JACKET

### CPE (Chlorinated Polyethylene) Jacket Over EPDM Rubber

- Excellent resistance to flame and temperature extremes
- Superior resistance to tears, cuts and abrasions
- **flexlife** rating of over 2 million cycles

The cable jacket most commonly used in weld environments is CPE rubber.

#### CPE - Resistance Welding



**TURCK** CPE cable still performing after 24,000 welds.

### TPE (Thermo-Plastic Elastomer)

- Excellent resistance to weld slag buildup
- Available in more configurations
- Allows for easier cable stripping
- **flexlife** rating of over 2 million cycles

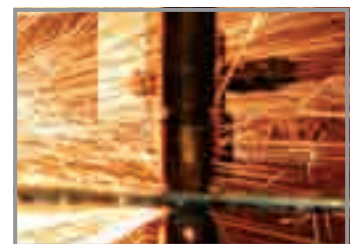
If your environment doesn't need cable quite as rugged as the CPE rubber we also offer TPE jacket material, sometimes called TPR (Thermo-Plastic Rubber).

#### TPE - Resistance Welding



**TURCK** TPE cable still performing after 6,000 welds.

#### TPE - MIG Welding



**TURCK** TPE cable is excellent for MIG welding applications.

## COMBINE ALL THREE FOR ULTIMATE PROTECTION



Teflon Coated Coupling Nut,  
TPE Mold Plug Body and Silicone Tubing

See pages 109-110 (notelines).

## ADDITIONAL SOLUTIONS

Has weld/mig slag 'fused' your sensor to the cordset coupling nut?  
Replace a short, armored "Sacrificial Cordset" instead of redressing 20' of tie wrapped cordset.

- Protects internal wires from extreme weld flash
- Provides mechanical protection
- Extreme duty plug body
- Quick replacement



See page 113.

# TURCK WELDING TIPS



- Use Teflon coated threads and **weldguard**® front faces to protect sensor surfaces wherever extreme accumulation of weld slag is common.
- Specialty tubing can be used to further protect a sensor and cordset from weld slag accumulation. Tubing that is resistant to both the accumulation of weld slag and high heat may be placed over the cordset and connector, fitting against the barrel end.

## Weld Slag Cleaning/Removal

- Clean weld slag accumulation from Teflon coatings or covers using a gloved hand, if possible. Avoid cleaning Teflon with a tool or steel brush, as this can lead to slag accumulation quickly re-attaching to the areas worn by the tool or steel brush.
- Avoid cleaning surfaces coated with **TURCK's weldguard** material. The **weldguard** material sheds weld slag, and should not require regular cleaning.
- Stainless steel faced sensors will stand up to much more frequent and abusive wire brushing or other cleaning. However, if the sensors are coated in Teflon or weldguard, the coatings will suffer damage.

## Sensor Abuse

- If contact with the sensor is a "glancing" blow across the entire sensing face and/or threads or side, use the extremely durable armorguard tool steel protective products.
- If the abuse occurs in the center of the sensing face or due impact directly on the sensing face, use a stainless steel sensor.

## 40 mm Cubed Sensors

- Always remember a cubed sensor's face orientation before removal.
- When working with popular CA40 sensors with the metal BS 2.1 or BS 2.0 brackets, use a 5/32 socket instead of the 2.5mm Allen wrench. This allows for quicker and easier removal and reinstallation.

## Cordsets

- Avoid cross threading and the occasional difficulty attaching cordsets to sensors by turning the cordset's coupling nut in reverse (counter-clockwise) for about a turn (adjust to personal preference), watching to hold it as straight as possible before turning in the clockwise direction to tighten.
- If LED visibility is a problem, use an extension cordset with LED's molded on the connector.



# Industrial Automation

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*weldguard*<sup>®</sup> Selection Guide

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Style	Rectangular	Embeddable/Nonembeddable Metal Barrel			
Housing	40 mm	8 mm	12 mm	18 mm	30 mm
Sensing Range	20 - 50 mm	1.5 - 4 mm	2 - 10 mm	5 - 14 mm	10 - 30 mm
Pages	15 - 16	17 - 22	23 - 30	31 - 42	43 - 48

*armorguard*<sup>®</sup> Selection Guide

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Style	Rectangular	Embeddable/Nonembeddable Metal Barrel			
Housing	40 mm	8 mm	12 mm	18 mm	30 mm
Sensing Range	20 mm	2 mm	3 - 4 mm	5 - 8 mm	10 - 15 mm
Pages	51 - 52	53 - 54	55 - 58	59 - 62	63 - 64

*armorguard*<sup>®</sup> Selection Guide

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Style	Stainless Steel Front Face Barrel		
Housing	12 mm	18 mm	30 mm
Sensing Range	2 mm	5 mm	10 mm
Pages	67 - 68	69 - 70	71 - 72

## stoneface® Selection Guide

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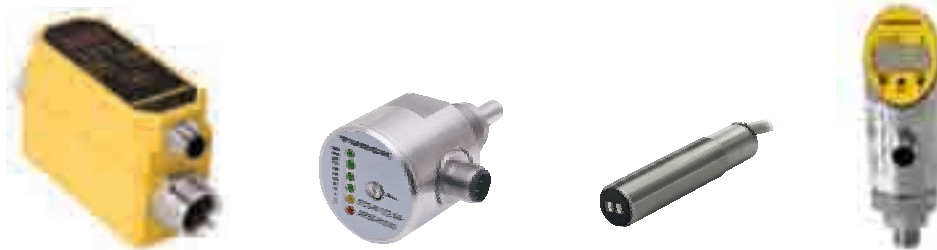
Style	Embeddable Metal Barrel		
Housing	12 mm	18 mm	30 mm
Sensing Range	2 - 4 mm	5 - 8 mm	10 - 15 mm
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## Connectivity Selection Guide

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Style	eurofast® Cordsets	microfast® Cordsets	minifast® Cordsets	Accessories
Pages	109 - 113	114	115 - 116	117 - 120

### Special Designations Key:

- .../S1589 Barrel sensors with **weldguard**® laminate.
- .../S1590 CA40 sensors with **weldguard** laminate.
- .../S1591 CA40 sensors with **weldguard** laminate encased in **armorguard**® sleeve.
- .../S1610 8/12/18/30 mm teflon or stainless steel barrel w/added 7 mm **armorguard** tool steel sleeve. Sensor then coated with **weldguard**. Sensor can be **uprox**® or ferrite core.

# TURCK

## General Specifications

### 2-Wire DC

Ripple. . . . .	≤10%
Differential Travel (Hysteresis). . . . .	3-15% (5% Typical)
Voltage Drop Across Conducting Sensor . . . . .	Non-Polarized (AD) <5.0 V Polarized (AG) <4.0 V
Trigger Current for Overload Protection. . . . .	≥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

### 3-Wire DC

Ripple. . . . .	≤10%
Differential Travel (Hysteresis). . . . .	3-15% (5% Typical)
Voltage Drop Across Conducting Sensor . . . . .	≤1.8 V - Si...K08/K10(AP71, AN7) . . . . . ≤0.7 V - Bi/Ni.../S34 . . . . . ≤1.8 V - Bi 2-Q8SE-AP/AN.. . . . . ≤2.5 V
Trigger Current for Overload Protection. . . . .	≥220 mA on 200 mA Load Current ≥170 mA on 150 mA Load Current ≥120 mA on 100 mA Load Current
Off-State (Leakage) Current . . . . .	<100 µA
No-Load Current . . . . .	<10 mA ( <b>uprox</b> ® ≤15 mA)
Time Delay Before Availability . . . . .	≤8 ms
Power-On Effect . . . . .	Per IEC 947-5-2
Reverse Polarity Protection . . . . .	Incorporated
Wire-Break Protection . . . . .	Incorporated
Transient Protection. . . . .	Per EN 60947-5-2
Shock. . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in All 3 Planes
Repeatability . . . . .	≤2% of Rated Operating Distance Bi 2-Q8SE-AP/AN... ≤5% of Rated Operating Distance

### 2-Wire AC/DC w/Short-Circuit Protection

Line Frequency . . . . .	40-60 Hz
Differential Travel (Hysteresis). . . . .	3-15% (5% Typical)
Voltage Drop Across Conducting Sensor . . . . .	≤6.0 V at 400 mA 8 and 12 mm ≤6.0 V at 100 mA
Trigger Current for Overload Protection. . . . .	AC: ≥440 mA; DC: ≥330 mA 8 and 12 mm AC: ≥120 mA; DC: ≥120 mA
Continuous Load Current . . . . .	AC: ≤400 mA; DC: ≤300 mA 8 and 12 mm AC: ≥100 mA; DC: ≥100 mA
Off-State (Leakage) Current . . . . .	≤1.7 mA (AC) ≤1.5 mA (DC)
Minimum Load Current. . . . .	≥3.0 mA
Inrush Current . . . . .	4.0 A (≤20 ms, 10% Duty Cycle)
Power-On Effect . . . . .	Per IEC 947-5-2
Transient Protection. . . . .	Per EN 60947-5-2
Shock. . . . .	30 g, 11 ms
Vibration . . . . .	55 Hz, 1 mm Amplitude in All 3 Planes

# weldguard®



TURCK's *weldguard* sensors use a proprietary material on the sensing face that is:

- Independently tested to over 25,000 operations without failure
- Impervious to weld spatter that creates pitting, chipping and cracking caused by resistance welding
- Resistant to pitting, chipping and cracking caused by molten metal traveling at high velocity
- A superior replacement for any type of material used on a sensing face
- Able to withstand high heat

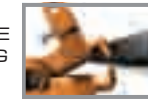


RESISTANCE  
WELDING

## weldguard Selection Guide

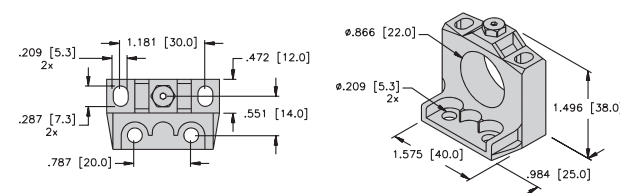


Style	Rectangular	Embeddable/Nonembeddable Metal Barrel			
Housing	40 mm	8 mm	12 mm	18 mm	30 mm
Sensing Range	20 - 50 mm	1.5 - 4 mm	2 - 10 mm	5 - 14 mm	10 - 30 mm
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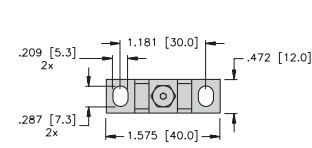


Housing Style	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord Length/Jacket	Wiring Diagram #	Wiring Diagrams
<b>CA40 - Embeddable, eurofast® Connector</b> 	Bi20U-CA40-AN6X2-H1141/S1590 W/BS2.1	M1627390-1	<i>uprox</i>	•	20	3-Wire DC NPN	10-30 VDC	250	≤200	0 to +70	IP 67	AL	WG	GN	YE	RKC 4T-*/S1587	1	Diagram 1
	Bi20U-CA40-AP6X2-H1141/S1590 W/BS2.0	M1627297	<i>uprox</i>	•	20	3-Wire DC PNP	10-30 VDC	250	≤200	0 to +70	IP 67	AL	WG	GN	YE	RKC 4T-*/S1587	2	Diagram 2
	Bi20U-CA40-AP6X2-H1141/S1590 W/BS2.1	M1627295	<i>uprox</i>	•	20			250	≤200	0 to +70	IP 67	AL	WG	GN	YE	RKC 4T-*/S1587	2	
<b>CA40 - Embeddable, minifast® Connector</b> 	Bi20-CA40-ADZ30X2-B1131/S34/S1590	M4283593	<i>WFI</i>	•	20	2-Wire AC/DC	10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	AL	WG	GN	YE	RKM 311-*/M/S600	3	Diagram 3
<b>CA40 - Embeddable, microfast® Connector</b> 	Bi20-CA40-ADZ30X2-B3131/S34/S1590	M4283594	<i>WFI</i>	•	20	2-Wire AC/DC	10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	AL	WG	GN	YE	KBE 3T-*/S600	4	Diagram 4
<b>CK40 - Embeddable/Nonembeddable, eurofast Connector</b> 	Bi30U-CK40-AP6X2-H1141/S1590 W/BS4	M1625893	<i>uprox+</i>	•	30	3-Wire DC PNP	10-30 VDC	250	≤200	-10 to +60	IP 68	PBT	WG	GN	YE	RKC 4T-*/S1587	2	
	Ni50U-CK40-AP6X2-H1141/S1590 W/BS4	M1625891	<i>uprox+</i>	•	50			250	≤200	-25 to +70	IP 68	PBT	WG	GN	YE	RKC 4T-*/S1587	2	

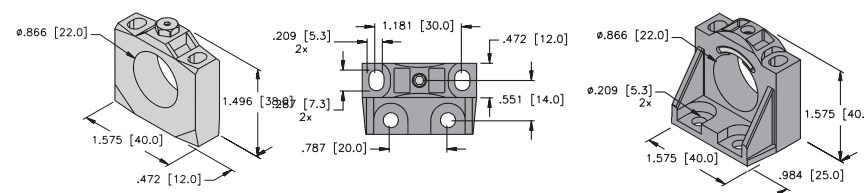
\* Length in meters.



BS 2.1 Mounting Bracket



BS 2.0 Mounting Bracket



BS 4 Mounting Bracket





Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>8 mm - Embeddable, Miniature Threaded, eurofast® Quick Disconnect, Stainless Steel Short Length Barrel</b> 	Bi 2-EG08K-AG41X-H1341/S1589	S4562090	Short Barrel	2	2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4.2T-*/S1587	1	Diagram 1
	Bi 2-EG08K-AP6X-H1341/S1589	S4669486	Short Barrel	2	3-Wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	2	Diagram 2
<b>8 mm - Embeddable, Miniature Threaded, picofast® Quick Disconnect, Stainless Steel Barrel</b> 	Bi 2-EG08-AP6X-V1131/S1589	S4602050-1		2	3-Wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	PKG 3M-*/S1587	3	Diagram 3
	Bi 2U-EGT08-AP6X-V1131/S1589	S46020701	uprox+	2			1000	≤150	-30 to +85	IP 68	SS/TC	WG	N/A	YE	PKG 3M-*/S1587	3	Diagram 4
<b>8 mm - Embeddable, Miniature Threaded, eurofast Quick Disconnect, Stainless Steel Barrel</b> 	Bi 2-EG08-AG41X-H1341/S1589	S4562095		2	2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4.2T-*/S1587	1	Diagram 5
	Bi 1.5-EG08-AD6X-H1341/S1589	S4600298		1.5	2-Wire DC	10-30 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4.2T-*/S1587	5	
	Bi 2-EG08-AN6X-H1341/S1589	S4602182		2	3-Wire DC NPN	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	4	
	Bi 2-EG08-AP6X-H1341/S1589	S4602086		2	3-Wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	2	
Bi 1.5U-EG08-AP6X-H1341/S1589	S4600540-1	uprox	1.5	2000			≤150	-30 to +85	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	2		
<b>8 mm - Embeddable, Miniature Threaded, Potted-In Cable with Molded eurofast Connector, Teflon Coated Barrel</b> 	Bi 2-EGT08-AG41X-0.2M-RS4.23T/S1589	S4602593	Molded eurofast Connector		2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	SS/TC	WG	N/A	YE	RK 4.23T-*/S1587	5	

\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
8 mm - Nonembeddable, Miniature Threaded, eurofast® Quick Disconnect, Stainless Steel Short Length Barrel 	Ni 4-EG08K-AG41X-H1341/S1589	S4561090	Short Barrel	4	2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	1	Diagram 1 
	Ni 4-EG08-AG41X-H1341/S1589	S4561091		4	2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	1	Diagram 2 
8 mm - Nonembeddable, Miniature Threaded, eurofast Quick Disconnect, Stainless Steel Barrel 	Ni 3-EG08-AN6X-H1341/S1589	S4602889		3	3-Wire DC NPN	10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	3	Diagram 3 
	Ni 3-EG08-AP6X-H1341/S1589	S4602799		3	3-Wire DC PNP	10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	2	
	Ni 4U-EG08-AP6X-H1341/S1589	S4600640-1	uprox	4	3-Wire DC PNP	10-30 VDC	2000	≤100	-30 to +85	IP 67	SS	WG	N/A	YE	RK 4T-*/S1587	2	

\* Length in meters.





Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
<b>8 mm - Embeddable, Miniature Threaded Stainless Steel Barrel, Potted-In Cable</b> 	Bi 2-EG08K-AG41X/S1589	S4562091	Short Barrel	2	2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	2	<b>Diagram 1</b>  <b>Diagram 2</b>  <b>Diagram 3</b> 
	Bi 2-EG08K-AN6X/S1589	S4669587	Short Barrel	2	3-Wire DC NPN	10-30 VDC	3000	≤150	-25 to +100	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	1	
	Bi 2-EG08K-AP6X/S1589	S46694002	Short Barrel	2	3-Wire DC PNP	10-30 VDC	3000	≤100	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	3	
<b>8 mm - Embeddable, Miniature Threaded Stainless Steel Short Length Barrel, Potted-In Cable</b> 	Bi 2-EG08-AG41X/S1589	S4562088		2	2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	2	<b>Diagram 3</b> 
	Bi 2-EG08-AN6X/S1589	S4602181		2	3-Wire DC NPN	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	1	
	Bi 2-EG08-AP6X/S1589	S4602085		2	3-Wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	3	
<b>8 mm - Nonembeddable, Miniature Threaded Stainless Steel Short Length Barrel, Potted-In Cable</b> 	Ni 4-EG08K-AP6X/S1589	S4561092	Short Barrel	4	3-Wire DC PNP	10-30 VDC	1000	≤100	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	2	
<b>8 mm - Nonembeddable, Miniature Threaded Stainless Steel Barrel, Potted-In Cable</b> 	Ni 3-EG08-AN6X/S1589	S4602888		3	3-Wire DC NPN	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	1	
	Ni 3-EG08-AP6X/S1589	S4602789		3	3-Wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	3	

\* Length in meters.

weldguard



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams	
<b>12 mm - Embeddable, eurofast® Connection, Teflon Coated Barrel</b> 	Bi 3-MT12H-AD4X-H1141/S1589	T4405082		3	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*/S1587	2	Diagram 1 	
	Bi 3-MT12H-AD4X-H1144/S1589	T4405084		3			1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	3		
	Bi 4-MT12H-AN6X-H1141/S1589	T4607188		Ext. Range	4	3-Wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	4	Diagram 2 
	Bi 4U-MT12-AN6X-H1141/S1589	M16348290		uprox+	4			2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	4	
	Bi 2-MT12H-AP6X-H1141/S34/S1589	M1669090		WFI	2	3-Wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	Diagram 3 
	Bi 3U-MT12H-AP6X-H1141/S1589	M16342121		uprox	3			3000	≤200	-30 to +85	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	
	Bi 3U-MT12H-AP6X2-H1141/S1589	M1634293		uprox	3			3000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1	
	Bi 4-MT12H-AP6X-H1141/S1589	T4607099		Ext. Range	4			2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	
	Bi 4U-MT12-AP6X-H1141/S1589	M1634809-1		uprox+	4			2000	≤200	-30 to +85	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	
	<b>12 mm - Embeddable, eurofast Connection, Extended Barrel Length, Stainless Steel Barrel</b> 	Bi 3U-EM12HE-AN6X2-H1141/S1589	M1634397		uprox	3	3-Wire DC NPN	10-30 VDC	3000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKC 4T-*/S1587	4
Bi 4-EM12HE-AN6X-H1141/S1589		T4607185		Ext. Range	4	2000			≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	4	
Bi 3U-EM12HE-AP6X2-H1141/S1589		M1634398		uprox	3	3-Wire DC PNP	10-30 VDC	1000	≤200	-30 to +85	IP 68	SS	WG	N/A	YE	RKC 4T-*/S1587	1	Diagram 4 
Bi 4-EM12HE-AP6X-H1141/S1589		T4607184		Ext. Range	4			1000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	1	
<b>12 mm - Embeddable, eurofast Connection, Extended Barrel Length, Teflon Coated Barrel</b> 	Bi 2U-MT12HE-AD4X-H1144/S1589	M4405094		uprox	2	2-Wire DC	10-65 VDC	100	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	3	Diagram 1 
	Bi 3-MT12HE-AD4X-H1141/S1589	T4405086			3			3000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*/S1587	2	
	Bi 3-MT12HE-AD4X-H1144/S1589	T4405087			3			2000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	3	
	Bi 3U-MT12HE-AN6X2-H1141/S1589	M1634290		uprox	3	3-Wire DC NPN	10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	4	Diagram 2 
	Bi 4-MT12HE-AN6X-H1141/S1589	T4607187		Ext. Range	4			2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	4	
	Bi 3U-MT12HE-AP6X2-H1141/S1589	M1634291		uprox	3	3-Wire DC PNP	10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1	Diagram 3 
Bi 4-MT12HE-AP6X-H1141/S1589	T4608094		Ext. Range	4	2000			≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1		
<b>12 mm - Embeddable, Potted-In Cable with Molded eurofast® Connector, Short Length Teflon Coated Barrel</b> 	Bi 3-GT12HK-AD4X-0.2M-RS4.23T/S1589	T4405088-1	Molded eurofast Connector	3	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	2	Diagram 1 	

\* Length in meters.



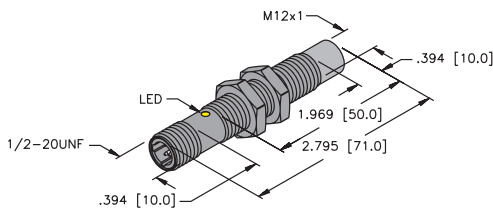
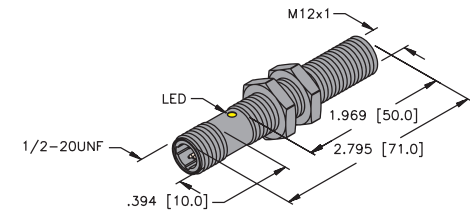
Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>12 mm - Nonembeddable, eurofast® Connection, Teflon Coated Barrel</b> 	Ni 8-MT12H-AD4X-H1141/S1589	T4411291		8	2-Wire DC	10-65 VDC	2000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4.2T-*/S1587	1	<b>Diagram 1</b> 
	Ni 10U-MT12-AP6X-H1141/S1589	M1634810-1	uprox+	10	3-Wire DC PNP		10-30 VDC	1000	≤200	-25 to +75	IP 68	TC	WG	N/A	TE	RKC 4T-*/S1587	
	Ni 8U-MT12H-AP6X2-H1141/S1589	M1644292	uprox	8		2000		≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	2	
<b>12 mm - Nonembeddable, eurofast Connection Extended Length Stainless Steel Barrel</b> 	Ni 8-EM12HE-AN6X-H1141/S1589	T4611395	Ext. Range	8	3-Wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	3	<b>Diagram 2</b> 
	Ni 8U-EM12HE-AN6X2-H1141/S1589	M1644391	uprox	8			2000	≤200	-30 to +85	IP 68	TC	WG	GN	YE	RKC 4T-*/S1587	3	
	Ni 8-EM12HE-AP6X-H1141/S1589	T4611396	Ext. Range	8	3-Wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	2	<b>Diagram 3</b> 
	Ni 8U-EM12HE-AP6X2-H1141/S1589	M1644392	uprox	8			2000	≤200	-30 to +85	IP 68	TC	WG	GN	YE	RKC 4T-*/S1587	2	
<b>12 mm - Nonembeddable, eurofast Connection Extended Length Teflon Coated Barrel</b> 	Ni 8-MT12HE-AN6X-H1141/S1589	T46113967	Ext. Range	8	3-Wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	3	
	Ni 8U-MT12HE-AN6X2-H1141/S1589	M1644393	uprox	8			2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	3	
	Ni 8-MT12HE-AP6X-H1141/S1589	T4611398	Ext. Range	8	3-Wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	2	
	Ni 8U-MT12HE-AP6X2-H1141/S1589	M1644394	uprox	8			2000	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	2	
	Ni 10U-MT12E-AP6X2-H1141/S1589	M1634994	uprox+	10			1000	≤200	-30 to +85	IP 68	TC	WG	GN	YE	RKC 4T-*/S1587	2	

\* Length in meters.

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Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams		
12 mm - Embeddable, <i>microfast</i> ® Connection, Teflon Coated Barrel	Bi 2-GT12H-ADZ32X-B3131/S34/S1589	T4205096	WFI	2	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	KBE 3T-*/S600	4	<b>Diagram 4</b> 		
	Bi 4-GT12H-ADZ32X-B3131/S1589	T4205087		4			20	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	KBE 3T-*/S600	4			
12 mm - Nonembeddable, <i>microfast</i> Connection, Teflon Coated Barrel	Ni 4-GT12H-ADZ32X-B3131/S34/S1589	T4205293	WFI	4	2-Wire AC/DC Short-Circuit Protected		20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	KBE 3T-*/S600		4	
	Ni 8-GT12H-ADZ32X-B3131/S1589	T4205480-1		8				20	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	KBE 3T-*/S600		4	



\* Length in meters.

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Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
12 mm - Embeddable, Potted-In Cable, Short Length Teflon Coated Barrel 	Bi 3-GT12HK-AD4X/S1589	T4405084-1	Short Barrel	3	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	WG	EPTR	N/A	YE	2M/PVC	1	Diagram 1 
	Bi 2-EG12HK-AN6X/S1589	T4605192	Short Barrel	2	3-Wire DC NPN	10-30 VDC	2000	≤100	-25 to +70	IP 67	SS	WG	EPTR	N/A	YE	2M/PVC	2	Diagram 2 
12 mm - Embeddable, Potted-In Cable, Short Length Stainless Steel Barrel 	Bi 2-EG12HK-AP6X/S1589	T4605194	Short Barrel	2	3-Wire DC PNP	10-30 VDC	2000	≤100	-25 to +70	IP 67	SS	WG	EPTR	N/A	YE	2M/PVC	3	Diagram 3 

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Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
18 mm - Embeddable, eurofast® Connection, Stainless Steel Barrel 	Bi 8-EM18H-AP6X2-H1141/S1589	T4615099	Ext. Range	8	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1	Diagram 1 
18 mm - Embeddable, eurofast Connection, Teflon Coated Barrel 	Bi 5-MT18-AP6X2-H1141/S34/S1589	M1655580	WFI	5	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1	Diagram 2 
	Bi 5U-MT18H-AP6X2-H1141/S1589	M1635292	uprox	5			2500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1	
	Bi 5U-MT18H-AP6X-H1141/S1589	M1635294	uprox	5			2500	≤200	-30 to +85	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	
	Bi 8U-MT18H-AP6X-H1141/S1589	M1644791	uprox+	8			1500	≤200	-30 to +85	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	
18 mm - Embeddable, eurofast Connection, Stainless Steel Barrel 	Bi 8U-MT18H-AN6X-H1141/S1589	M1644730-1	uprox+	8	3-Wire DC NPN	10-30 VDC	1500	≤200	-30 to +85	IP 68	TC	WG	N/A	YE	RKC 4T-*/S1587	2	Diagram 3 
	Bi 5U-EM18H-AN6X2-H1141/S395/S1589	M1635196	uprox	5	3-Wire DC NPN	10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKC 4T-*/S1587	2	
18 mm - Embeddable, eurofast Connection, Teflon Coated Barrel 	Bi 5U-EM18H-AP6X2-H1141/S395/S1589	M1635197	uprox	5	3-Wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKC 4T-*/S1587	1	Diagram 3 
	Bi 5U-MT18H-AN6X2-H1141/S395/S1589	M1635290	uprox	5	3-Wire DC NPN	10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	2	
18 mm - Embeddable, eurofast Connection, Medium Length Teflon Coated Barrel 	Bi 5U-MT18H-AP6X2-H1141/S395/S1589	M1635291	uprox	5	3-Wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1	Diagram 3 
	Bi 5U-MT18HM-AD4X-H1144/S1589	M4405093	uprox	5	2-Wire DC	10-65 VDC	100	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	3	

\* Length in meters.





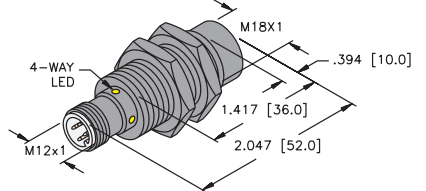
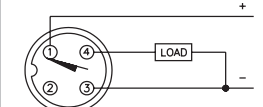
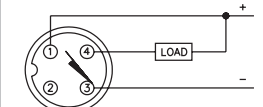
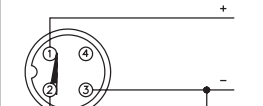
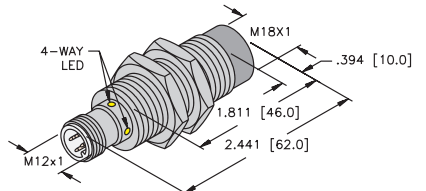
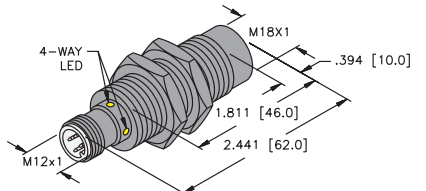
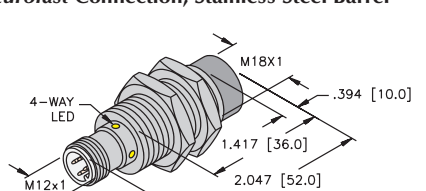
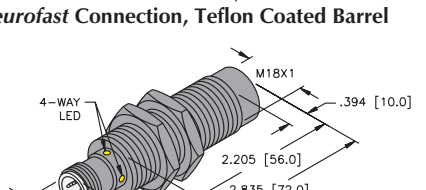
Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>18 mm - Embeddable, eurofast® Connection, Extended Length Stainless Steel Barrel</b> 	Bi 8-EM18HE-AN6X-H1141/S1589	T4615193	Ext. Range	8	3-Wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	3	Diagram 1
	Bi 8-EM18HE-AP6X-H1141/S1589	T4615096	Ext. Range	8	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	4	Diagram 2
	Bi 8-EM18HE-RP6X-H1141/S1589	T4615084	Normally Closed	8			500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	5	
<b>18 mm - Embeddable, eurofast Connection, Extended Length Teflon Coated Barrel</b> 	Bi 7-MT18HE-AD4X-H1141/S1589	T4414588		7	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*/S1587	1	Diagram 3
	Bi 7-MT18HE-AD4X-H1144/S1589	T4414599		7			1000	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	2	
<b>18 mm - Embeddable, Potted-In Cable with eurofast Connector, Medium Length Teflon Coated Barrel</b> 	Bi 5U-MT18M-AD4X-0.3M-RS4.23T/XOR/S1589	M44050490	Medium Barrel	5	2-Wire DC	10-65 VDC	100	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	2	Diagram 4
<b>18 mm - Embeddable, Potted-In Cable with eurofast Connector, Short Length Teflon Coated Barrel</b> 	Bi 7-GT18HK-AD4X-0.2M-RS4.23T/S1589	T4414592-1	Short Barrel	7	2-Wire DC	10-65 VDC	500	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S158	2	

weldguard

"/XOR" designates heat and chemical irradiated PVC jacket.

\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>18 mm - Nonembeddable, eurofast® Connection, Teflon Coated Barrel</b> 	Ni12U-MT18H-AP6X-H1141/S1589	M1645292	uprox	12	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	Diagram 1  Diagram 2  Diagram 3 
	Ni12U-MT18H-AP6X2-H1141/S1589	M1645293	uprox	12													
	Ni15U-MT18H-AP6X-H1141/S1589	M1635333-1	uprox+	15													
<b>18 mm - Nonembeddable, eurofast Connection, Stainless Steel Barrel</b> 	Ni12U-EM18H-AP6X2-H1141/S395/S1589	M1645490	uprox	12	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	2	
	Ni12U-EM18H-AN6X2-H1141/S395/S1589	M1645491	uprox	12	3-Wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	1	
	Ni12U-EM18MH-RP6X2-H1141/S1589	M1645492	uprox	12	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	WG	N/A	YE	RKC 4T-*/S1587	3	
<b>18 mm - Nonembeddable, eurofast Connection, Teflon Coated Barrel</b> 	Ni12U-MT18H-AN6X2-H1141/S395/S1589	M1645290	uprox	12	3-Wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP 68	TC	WG	GN	YE	RKC 4T-*/S1587	2	
	Ni12U-MT18H-AP6X2-H1141/S395/S1589	M1645291	uprox	12	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 68	TC	WG	GN	YE	RKC 4T-*/S1587	1	
<b>18 mm - Nonembeddable, eurofast Connection, Stainless Steel Barrel</b> 	Ni14-EM18H-AN6X-H1141/S1589	T4611494	Ext. Range	14	3-Wire DC NPN	10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	2	
	Ni14-EM18H-AP6X-H1141/S1589	T4611495	Ext. Range	14	3-Wire DC PNP	10-30 VDC	1000	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	1	
<b>18 mm - Nonembeddable, eurofast Connection, Teflon Coated Barrel</b> 	Ni14-MT18HE-AN6X-H1141/S1589	T4611496	Ext. Range	14	3-Wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	2	
	Ni14-MT18HE-AP6X-H1141/S1589	T4611497	Ext. Range	14	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	

\* Length in meters.

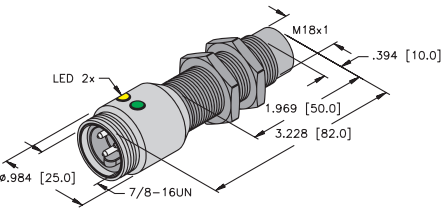
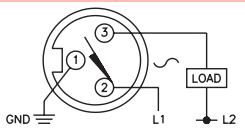
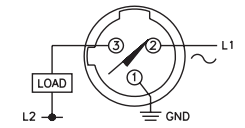
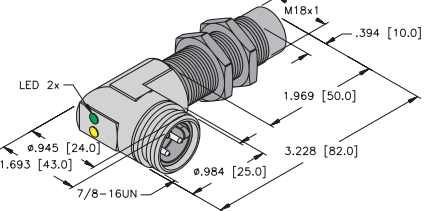
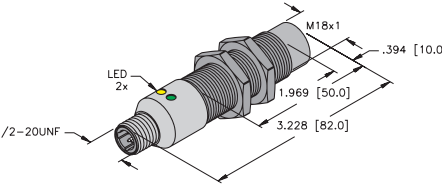


Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>18 mm - Embeddable, <i>microfast</i>® Connection, Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B3331/S34/S1589	T4255283	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*/S600	1	<b>Diagram 1</b>  <b>Diagram 2</b> 
<b>18 mm - Embeddable, <i>microfast</i> Right Angle Connection, Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B3431/S34/S1589	T425582	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*/S600	1	
<b>18 mm - Embeddable, <i>minifast</i>® Connection Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B1331/S34/S1589	T4255284	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 311-*/M/S600	2	
<b>18 mm - Embeddable, <i>minifast</i> Right Angle Connection, Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B1431/S34/S1589	T45255285	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 311-*/M/S600	2	

\* Length in meters.

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Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>18 mm - Nonembeddable, minifast® Connection, Teflon Coated Barrel</b> 	Ni 5-GT18H-ADZ30X2-B1331/S34/S1589	T4208890	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 311-*/S600	1	<b>Diagram 1</b>  <b>Diagram 2</b> 
	Ni 5-GT18H-ADZ30X2-B1331/S1589	T4205484		5			20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 311-*/S600	1	
<b>18 mm - Nonembeddable, minifast Right Angle Connection, Teflon Coated Barrel</b> 	Ni 5-GT18H-ADZ30X2-B1431/S34/S1589	T4208990	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	RKM 311-*/S600	1	
	Ni 8-GT18H-ADZ30X2-B3331/S34/S1589	T4208891	WFI	8	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	60	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*/S600	2	
Ni 14-GT18H-ADZ30X2-B3331/S1589	T4205491		14	60			≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*/S600	2		
<b>18 mm - Nonembeddable, microfast® Connection, Teflon Coated Barrel</b> 	Ni 8-GT18H-ADZ30X2-B3331/S34/S1589	T4208891	WFI	8	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	60	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*/S600	2	
	Ni 14-GT18H-ADZ30X2-B3331/S1589	T4205491		14			60	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	KBE 3T-*/S600	2	

\* Length in meters.

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Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagram
<p>18 mm - Embeddable, Potted-In Cable, Extended Barrel Length, Partial Threading Teflon Coated Barrel</p>	Bi 7-MT18HE-AD4X/S1589	T4414583		7	2-Wire DC	10-65 VDC	1000	≤200	-25 to +70	IP 67	TC	WG	EPTR	N/A	YE	2M/PVC	1	<p>Diagram 1</p>
<p>18 mm - Embeddable, Potted-In Cable, Short Barrel Length, Full Threading Teflon Coated Barrel</p>	Bi 7-GT18HK-AD4X/S1589	T4414581	Short Barrel	7	2-Wire DC	10-65 VDC	500	≤100	-25 to +70	IP 67	TC	WG	EPTR	N/A	YE	2M/PVC	1	

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Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams	
<b>30 mm - Embeddable, eurofast® Connection Stainless Steel Barrel</b> 	Bi10U-EM30H-AN6X2-H1141/S1589	M1636490	<i>uprox</i>	10	3-Wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKC 4T-*/S1587	1	<b>Diagram 1</b> 	
	Bi15-EM30H-AN6X2-H1141/S1589	T4618693	<i>Ext. Range</i>	15			300	≤200	-25 to +70	IP 67	SS	WG	GN	YE	RKC 4T-*/S1587	1		
	Bi10U-EM30H-AP6X2-H1141/S1589	M1636491	<i>uprox</i>	10	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKC 4T-*/S1587	2	<b>Diagram 2</b> 	
	Bi15-EM30H-AP6X2-H1141/S1589	T4618593	<i>Ext. Range</i>	15			3000	≤200	-25 to +70	IP 67	SS	WG	GN	YE	RKC 4T-*/S1587	2		
	Bi15U-EM30-AP6X-H1141/S1589	M1636790	<i>uprox+</i>	15			750	≤200	-30 to +85	IP 68	SS	WG	N/A	YE	RKC 4T-*/S1587	2		
	<b>30 mm - Embeddable, eurofast Connection, Teflon Coated Barrel</b> 	Bi10U-MT30H-AD4X-H1144/S1589		<i>uprox</i>	10	2-Wire DC	10-65 VDC	100	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S15870	4	<b>Diagram 3</b> 
Bi12-MT30H-AD4X-H1141/S1589		T4417097		12	500			≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.2T-*/S1587	3		
Bi12-MT30H-AD4X-H1144/S1589		T4417098			12	3-Wire DC NPN	10-30 VDC	500	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	4	<b>Diagram 4</b> 
Bi10U-MT30H-AN6X2-H1141/S1589		M1636290	<i>uprox</i>	10	2000			≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1		
Bi10-MT30-AP6X2-H1141/S34/S1589		M1669480	<i>WFI</i>	10	500			≤200	-25 to +70	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	2		
Bi10U-MT30H-AP6X2-H1141/S1589		M1636291	<i>uprox</i>	10	2000			≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	2		
Bi15-MT30-AP6X-H1141/S1589	M16367341	<i>Ext. Range</i>		750	≤200	-30 to +85	IP 68	TC	WG	N/A	YE	RKC 4T-*/S1587	2					
<b>30 mm - Embeddable, eurofast Connection, Extended Length Stainless Steel Barrel</b> 	Bi15-EM30HE-AP6X-H1141/S1589	T4618587	<i>Ext. Range</i>	15	3-Wire DC PNP	10-30 VDC	300	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	2		

\* Length in meters.

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Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>30 mm - Embeddable, Potted-In Cable with eurofast® Connector, Teflon Coated Barrel</b> 	Bi10U-MT30-AD4X-0.3M-RS4.23T/XOR/S1589	M44050500	<i>uprox</i>	10	2-Wire DC	10-65 VDC	100	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	3	Diagram 1 
	Bi12-GT30H-AD4X-0.3M-RS4.23T/S1589	T4417085		12	2-Wire DC		10-30 VDC	500	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	RK 4.23T-*/S1587	3
<b>30 mm - Nonembeddable, eurofast Connection Stainless Steel Barrel</b> 	Ni20-EM30H-AN6X-H1141/S1589	T4670599	<i>Ext. Range</i>	20	3-Wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	1	Diagram 3 
	Ni20U-EM30H-AN6X2-H1141/S1589	M1646191	<i>uprox</i>	20			1500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKC 4T-*/S1587	1	
	Ni20-EM30H-AP6X-H1141/S1589	T4670590	<i>Ext. Range</i>	20	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	SS	WG	N/A	YE	RKC 4T-*/S1587	2	
	Ni20U-EM30H-AP6X2-H1141/S1589	M1646490	<i>uprox</i>	20			1500	≤200	-30 to +85	IP 68	SS	WG	GN	YE	RKC 4T-*/S1587	2	
<b>30 mm - Nonembeddable, eurofast Connection, Teflon Coated Barrel</b> 	Ni20-MT30H-AN6X-H1141/S1589	T4670589	<i>Ext. Range</i>	20	3-Wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	1	
	Ni20U-MT30H-AN6X2-H1141/S1589	M1646290	<i>uprox</i>	20			150	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	1	
	Ni20-MT30H-AP6X-H1141/S1589	T4670588	<i>Ext. Range</i>	20	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	WG	N/A	YE	RKC 4T-*/S1587	2	
	Ni20U-MT30H-AP6X2-H1141/S1589	M1646291	<i>uprox</i>	20			1500	≤200	-30 to +85	IP 67	TC	WG	GN	YE	RKC 4T-*/S1587	2	
	Ni30U-MT30-AP6X-H1141/S1589	M16466331	<i>uprox+</i>	30			500	≤200	-30 to +85	IP 68	TC	WG	N/A	YE	RKC 4T-*/S1587	2	
	Ni30U-MT30-AP6X2-H1141/S1589	M16466351	<i>uprox+</i>	30			500	≤200	-30 to +85	IP 68	TC	WG	GN	YE	RKC 4T-*/S1587	2	

"/XOR" designates heat and chemical irradiated PVC jacket.

\* Length in meters.

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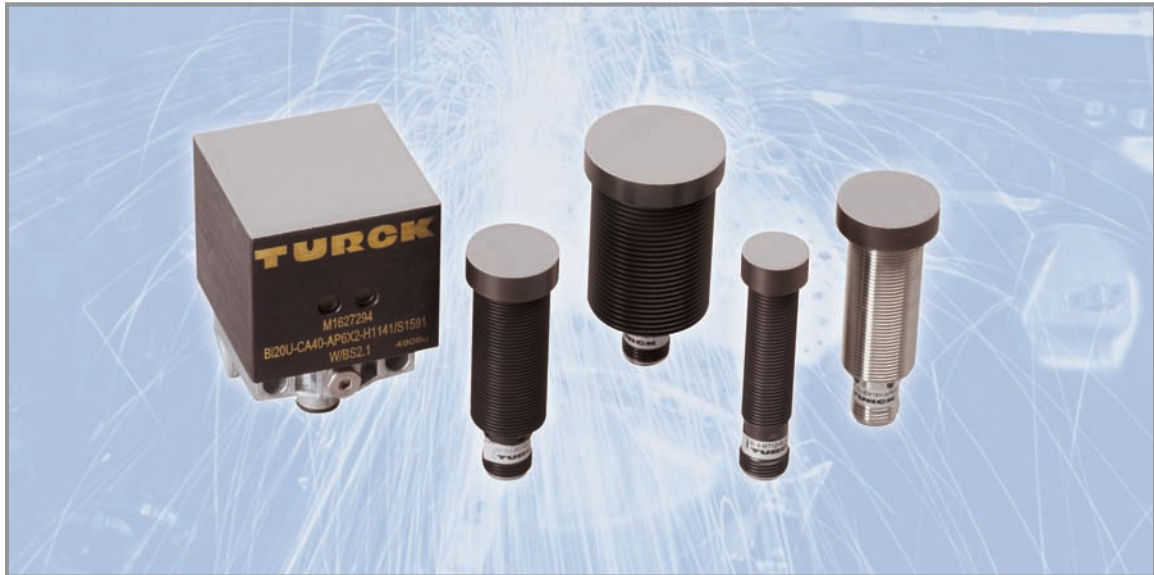
Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Cable Length/Cable Mat.	Mating Cordset	Wiring Diagram #	Wiring Diagram
<b>30 mm - Embeddable, <i>microfast</i>® Connection, Teflon Coated Barrel</b> 	Bi10-GT30H-ADZ30X2-B3131/S34/S1589	T4255281	WFI	10	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	N/A	KBE 3T-*/S600	1	<b>Diagram 1</b>  <b>Diagram 2</b> 
<b>30 mm - Embeddable, <i>minifast</i>® Connection, Teflon Coated Barrel</b> 	Bi10-GT30H-ADZ30X2-B1131/S34/S1589	T4255280	WFI	10	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	WG	GN	RD	N/A	KBE 3T-*/S600	2	<b>Diagram 3</b> 
<b>30 mm - Embeddable, Potted-In Cable, Teflon Coated Barrel</b> 	Bi12-GT30H-AD4X/S1589	T4417084		12	2-Wire DC	10-65 VDC	500	≤100	-25 to +70	IP 67	TC	WG	N/A	YE	2M/PVC	N/A	1	

weldguard



**Notes:**

# *armor guard*®



armorguard

TURCK's *armorguard* provides built-in durability that:

- Protects sensor face from impact
- Includes *weldguard*® material on sensing face to resist weld slag
- Extends the life of the sensor dramatically
- Available in 8, 12, 18 or 30 mm barrel diameters, as well as cube style sensors



Also Protects Against:  
Weld Slag and Abrasion

## *armorguard* Selection Guide

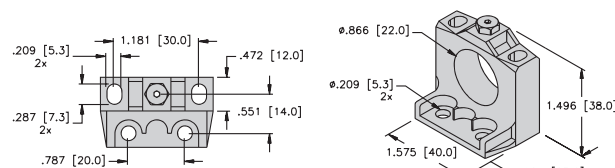


Style	Rectangular	Embeddable/Nonembeddable Metal Barrel			
Housing	40 mm	8 mm	12 mm	18 mm	30 mm
Sensing Range	20 mm	2 mm	3 - 4 mm	5 - 8 mm	10 - 15 mm
Pages	51 - 52	53 - 54	55 - 58	59 - 62	63 - 64

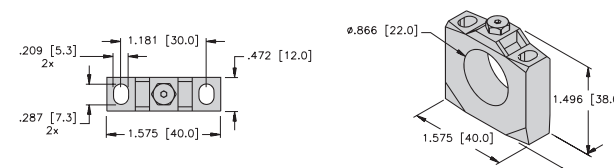


Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
<b>CA40 - Embeddable, eurofast® Connector</b> 	Bi20U-CA40-AP6X2-H1141/S1591 W/BS2.0	M1627296	<i>uprox</i>	•	20	3-Wire DC PNP	10-30 VDC	250	≤200	-0 to +70	IP 67	AG	WG	GN	YE	RKG 4T-*/S600	1	Diagram 1
	Bi20U-CA40-AP6X2-H1141/S1591 W/BS2.1	M1627294	<i>uprox</i>	•	20													Diagram 2
<b>CA40 - Embeddable, minifast® Connector</b> 	Bi20-CA40-ADZ30X2-B1131/S34/S1591 W/BS2.1	M4283595	<i>WFI</i>	•	20	2-Wire AC/DC Short-Circuit Protected	10-300 VDC 20-250 VAC	300	≤400/300	-25 to +70	IP 67	AG	WG	GN	YE	RKM 311-*/M/S600	2	Diagram 3
<b>CA40 - Embeddable, microfast® Connector</b> 	Bi20-CA40-ADZ30X2-B3131/S34/S1591 W/BS2.1	M4283596	<i>WFI</i>	•	20	2-Wire AC/DC Short-Circuit Protected	10-300 VDC 20-250 VAC	300	≤400/300	-25 to +70	IP 67	AG	WG	GN	YE	KBE 3T-*/S600	3	

\* Length in meters.



BS 2.1 Mounting Bracket



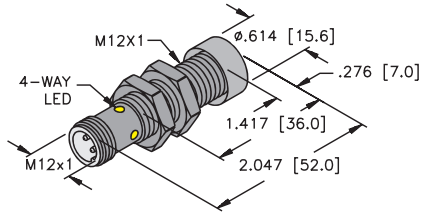
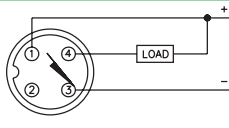
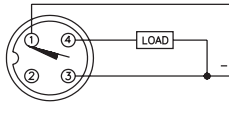
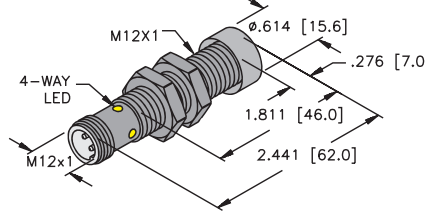
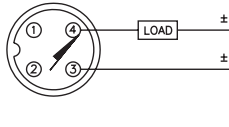
BS 2.0 Mounting Bracket



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
<b>8 mm - Embeddable, Potted-In Cable, Miniature Threaded, Stainless Steel Short Length Barrel</b> 	Bi 2-EG08K-AG41X/S1610	S4562096	Short Barrel	2	2-Wire DC	10-55 VDC	1000	≤100	-25 to +70	IP 67	AG/SS	WG	TROG	N/A	YE	2M/PUR	1	<b>Diagram 1</b>  <b>Diagram 2</b> 
<b>8 mm - Embeddable, Potted-In Cable, Miniature Threaded Stainless Steel Barrel</b> 	Bi 2-EG08-AP6X/S1610	S4602086-1		2	3-Wire DC PNP	10-30 VDC	3000	≤150	-25 to +70	IP 67	AG/SS	WG	TROG	N/A	YE	2M/PUR	2	

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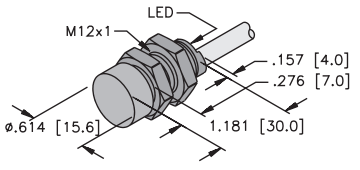
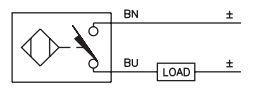


Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
12 mm - Embeddable, eurofast® Connection, Teflon Coated Barrel 	Bi 4U-MT12-AP6X-H1141/S1610	M1634809-2	uprox	4	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 68	AG/TC	WG	N/A	YE	RKC 4T-*/S1587	1	Diagram 1 
	Bi 3-MT12HE-AD4X-H1141/S1610	T4405087-1		3	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	AG/TC	WG	N/A	YE	RK 4.2T-*/S1587	3	Diagram 2 
12 mm - Embeddable, eurofast Connection, Extended Barrel Length, Teflon Coated Barrel 	Bi 3-MT12HE-AN6X2-H1141/S1610	M1634230-1		3	3-Wire DC NPN	10-30 VDC	3000	≤200	-25 to +70	IP 67	AG/TC	WG	GN	YE	RKC 4T-*/S1587	2	Diagram 3 
	Bi 3U-MT12HE-AP6X2-H1141/S1610	M1634292	uprox, Ext. Range	3	3-Wire DC PNP	10-30 VDC	3000	≤200	-30 to +85	IP 67	AG/TC	WG	GN	YE	RKC 4T-*/S1587	1	
	Bi 4-MT12HE-AP6X-H1141/S1610	T4608093-1	Ext. Range	4	3-Wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP 67	AG/TC	WG	N/A	YE	RKC 4T-*/S1587	1	

\* Length in meters.

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Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagram
12 mm - Embeddable, Potted-In Cable Teflon Coated Short Length Barrel  	Bi 3-GT12K-AD4X/S1610	T4405083-2	Ext. Range, Short Barrel	3	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	AG/TC	WG	EPTR	N/A	YE	2M/PVC	1	Diagram 1 

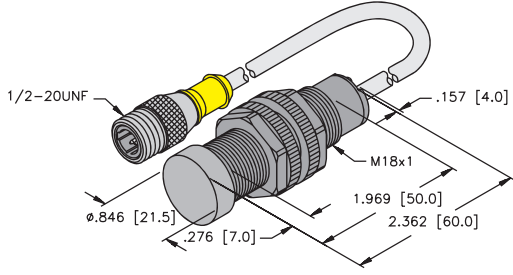
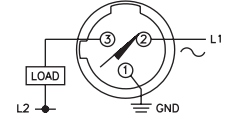
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Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagram
<b>18 mm - Embeddable, eurofast® Connection, Stainless Steel Barrel</b> 	Bi 5U-EM18H-AP6X2-H1141/S395/S1610	M1635198	<i>uprox</i>	5	3-Wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP 68	AG/TC	WG	GN	YE	RKC 4T-*/S1587	1	<b>Diagram 1</b> 
	Bi 5U-MT18H-AP6X2-H1141/S395/S1610	M1635293	<i>uprox</i>	5			2500	≤200	-30 to +85	IP 68	AG/TC	WG	GN	YE	RKC 4T-*/S1587	1	
<b>18 mm - Embeddable, eurofast Connection, Teflon Coated Barrel</b> 	Bi 8U-MT18H-AP6X-H1141/S1610	M1644730-2	<i>uprox+</i>	8	3-Wire DC PNP	10-30 VDC	1500	≤200	-30 to +85	IP 68	AG/TC	WG	N/A	YE	RKC 4T-*/S1587	1	
<b>18 mm - Embeddable, eurofast Connection, Stainless Steel Extended Length Barrel</b> 	Bi 8-EM18HE-AP6X-H1141/S1610	T4615095-1	<i>Ext. Range</i>	8	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	AG/SS	WG	N/A	YE	RKC 4T-*/S1587	1	

\* Length in meters.

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Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagram
<p>18 mm - Embeddable, Potted-In Cable with Molded <i>microfast</i>® Connector, Teflon Coated Barrel</p> 	Bi 5-GT18H-ADZ30X2-0.3-SB 3T/S1610	T4255280-1	Molded <i>microfast</i> Connector	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	150	≤400/300	-25 to +70	IP 67	AG/TC	WG	EPTR	GN	RD	KBE 3T-*/S600	1	<p>Diagram 1</p> 

\* Length in meters.







Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>30 mm - Embeddable, eurofast® Connection, Stainless Steel Barrel</b> 	Bi 15-EM30H-AP6X-H1141/S1610	T4618589		15	3-Wire DC PNP	10-30 VDC	300	≤200	-25 to +70	IP 67	AG/SS	WG	N/A	YE	RKC 4T-*/S1587	1	<b>Diagram 1</b> 
	Bi 10U-MT30H-AP6X2-H1141/S1610	M1636292	uprox	10			2000	≤200	-30 to +85	IP 68	AG/TC	WG	GN	YE	RKC 4T-*/S1587	1	
<b>30 mm - Embeddable, eurofast Connection, Stainless Steel Extended Length Barrel</b> 	Bi 15-EM30HE-AP6X-H1141/S1610	T4618589-1	Ext. Range	15	3-Wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP 67	AG/SS	WG	N/A	YE	RKC 4T-*/S1587	1	<b>Diagram 2</b>  <b>Diagram 3</b> 
<b>30 mm - Embeddable, microfast® Connection, Teflon Coated Barrel</b> 	Bi 10-GT30H-ADZ30X2-B3131/S34/S1610	T4207287-1	WFI	10	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	AG/TC	WG	GN	YE	KBE 3T-*/S600	2	
<b>30 mm - Embeddable, minifast® Connection, Teflon Coated Barrel</b> 	Bi 10-GT30H-ADZ30X2-B1131/S34/S1610	T4207287	WFI	10	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	AG/TC	WG	N/A	YE	RKM 311-*/M/S600	3	

\* Length in meters.

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**Notes:**

# STAINLESS STEEL FRONT FACE



Stainless Steel Front Face

TURCK's heavy-duty stainless steel construction:

- Protects the barrel and internal electronics from damage due to impact
- Protects the sensing face from damage due to abrasion
- Available with Teflon or **weldguard**<sup>®</sup> coating for protection against weld slag
- No areas of entry, preventing oils and lubricants from seeping into the sensor
- One piece stainless steel housing



Also Protects Against:  
Abrasion

## Stainless Steel Front Face Selection Guide



Style	Stainless Steel Front Face Barrel		
Housing	12 mm	18 mm	30 mm
Sensing Range	2 mm	5 mm	10 mm
Pages	67 - 68	69 - 70	71 - 72



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
12 mm - Embeddable, <i>eufofast</i> ® Connection, Stainless Steel Front Face 	Bi 2-EM12FE-AP6X-H1141	M4614536	Stainless Steel Body and Face	2	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS	SS	N/A	YE	RKC 4T-*/S1587	1	Diagram 1 
12 mm - Embeddable, <i>eufofast</i> Connection, Stainless Steel Front Face, Teflon Coated Barrel 	Bi 2-EMT12FE-AP6X-H1141	M4614561	Teflon Coated, Stainless Steel Body and Face	2	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS/TC	SS/TC	N/A	YE	RKC 4T-*/S1587	1	
12 mm - Embeddable, <i>eufofast</i> Connection, Stainless Steel Front Face, <i>weldguard</i> , Teflon Coated Barrel 	Bi 2-EMT12FE-AP6X-H1141/S1589	M4614596	Teflon Coated, Stainless Steel Body and Face, <i>weldguard</i>	2	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS/TC	SS/WG	N/A	YE	RKC 4T-*/S1587	1	

\* Length in meters.

Stainless Steel Front Face





Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>18 mm - Embeddable, eurofast® Connection, Stainless Steel Front Face</b> 	Bi 5-EM18FM-AP6X-H1141	M4614539	Stainless Steel Body and Face	5	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS	SS	N/A	YE	RKC 4T-*/S1587	1	<b>Diagram 1</b> 
<b>18 mm - Embeddable, eurofast Connection, Stainless Steel Front Face, Teflon Coated Barrel</b> 	Bi 5-EMT18FM-AP6X-H1141	M4614562	Teflon Coated, Stainless Steel Body and Face	5	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS/TC	SS/TC	N/A	YE	RKC 4T-*/S1587	1	
<b>18 mm - Embeddable, eurofast Connection, Stainless Steel Front Face, weldguard, Teflon Coated Barrel</b> 	Bi 5-EMT18FM-AP6X-H1141/S1589	M4614597	Teflon Coated, Stainless Steel Body and Face, weldguard	5	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68/IP 69K	SS/TC	SS/WG	N/A	YE	RKC 4T-*/S1587	1	

Stainless Steel Front Face

\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>30 mm - Embeddable, eurofast® Connection, Stainless Steel Front Face</b> 	Bi10-EM30F-AP6X-H1141	M4614537	<i>Stainless Steel Body and Face</i>	10	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS	SS	N/A	YE	RKC 4T-*/S1587	1	<b>Diagram 1</b> 
<b>30 mm - Embeddable, eurofast Connection, Stainless Steel Front Face, Teflon Coated Barrel</b> 	Bi10-EMT30F-AP6X-H1141	M4614563	<i>Teflon Coated, Stainless Steel Body and Face</i>	10	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS/TC	SS/TC	N/A	YE	RKC 4T-*/S1587	1	
<b>30 mm - Embeddable, eurofast Connection, Stainless Steel Front Face, weldguard, Teflon Coated Barrel</b> 	Bi10-EMT30F-AP6X-H1141/S1589	M4614598	<i>Teflon Coated, Stainless Steel Body and Face, weldguard</i>	10	3-Wire DC PNP	10-30 VDC	180	≤200	-25 to +80	IP 68 /IP 69K	SS/TC	SS/WG	N/A	YE	RKC 4T-*/S1587	1	

\* Length in meters.

Stainless Steel Front Face

**Notes:**

# *stoneface*®



stoneface

TURCK's *stoneface* sensors use a glass filled thermoset plastic material on the sensing face that:

- Protects the sensing face from abrasion
- Is resistant to weld slag buildup that is often a result of MIG/TIG welding
- Is available with Teflon coated barrels to shed weld slag



MIG WELDING

**Also Protects Against:**  
Weld Slag and Abrasion

## stoneface Selection Guide



Style	Embeddable Metal Barrel		
Housing	12 mm	18 mm	30 mm
Sensing Range	2 - 4 mm	5 - 8 mm	10 - 15 mm
Pages	75 - 76, 87 - 88	77 - 82, 87 - 88	83 - 84





Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams	
<b>12 mm - Embeddable, eurofast® Connection, Extended Barrel Length, Teflon Coated Barrel</b> 	Bi 3-MT12HE-AD4X-H1141	T4405088		3	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*/S1587	1	<b>Diagram 1</b> 	
	Bi 3-MT12HE-AD4X-H1144	T4405089		3			1000	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.23T-*/S1587	4		
	Bi 3U-MT12HE-AN6X2-H1141	M1634230		<i>uprox</i>	3	3-Wire DC NPN	10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RKC 4T-*/S1587	2	<b>Diagram 2</b> 
	Bi 4-MT12HE-AN6X-H1141	T4607197		<i>Ext. Range</i>	4			2000	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKC 4T-*/S1587	2	
	Bi 3U-MT12HE-AP6X2-H1141	M1634220		<i>uprox</i>	3	3-Wire DC PNP	10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RKC 4T-*/S1587	3	<b>Diagram 3</b> 
	Bi 4-MT12HE-AP6X-H1141	T4608093		<i>Ext. Range</i>	4			2000	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKC 4T-*/S1587	3	
<b>12 mm - Embeddable, eurofast Connection, Stainless Steel Barrel</b> 	Bi 3U-EM12H-AP6X-H1141	M1634312		3	3-Wire DC PNP	10-30 VDC	3000	≤200	-30 to +85	IP 68	SS	SF	N/A	YE	RKC 4T-*/S1587	3	<b>Diagram 3</b> 	
	Bi 4-MT12H-AN6X-H1141	T4607194		<i>Ext. Range</i>	4	3-Wire DC NPN	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKC 4T-*/S1587	2	<b>Diagram 4</b> 
<b>12 mm - Embeddable, eurofast Connection, Teflon Coated Barrel</b> 	Bi 3U-MT12H-AP6X-H1141	M1634212		3	3-Wire DC PNP	10-30 VDC	3000	≤200	-30 to +85	IP 67	TC	SF	N/A	YE	RKC 4T-*/S1587	3	<b>Diagram 5</b> 	
	Bi 4-MT12H-AP6X-H1141	T4607093		<i>Ext. Range</i>			4	2000	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKC 4T-*/S1587		3
	Bi 3U-EM12HE-AN6X2-H1141	M1634311		<i>uprox</i>	3	3-Wire DC NPN	10-30 VDC	3000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKC 4T-*/S1587	4	
<b>12 mm - Embeddable, eurofast Connection, Extended Length Stainless Steel Barrel</b> 	Bi 3U-EM12HE-AP6X2-H1141	M1634310		3	3-Wire DC PNP	10-30 VDC	3000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKC 4T-*/S1587	2		
	Bi 2-GT12H-ADZ32X-B3131/S34	T4205093		<i>WFI</i>	2	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	KBE 3T-*/S600	5	
Bi 4-GT12H-ADZ32X-B3131	T4205097			4	20			≤100	-25 to +70	IP 67	TC	SF	N/A	YE	KBE 3T-*/S600	5		

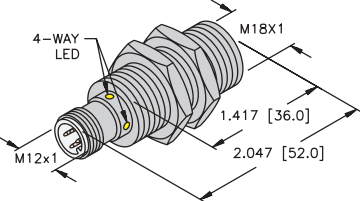
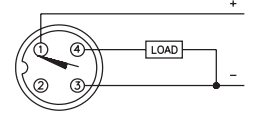
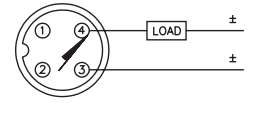
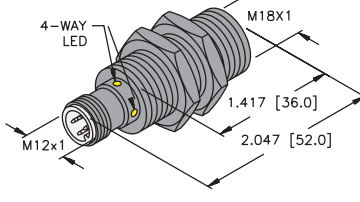
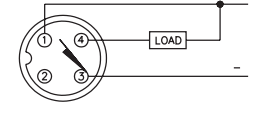
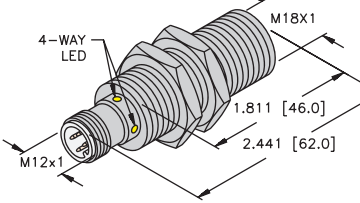
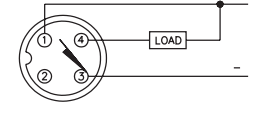
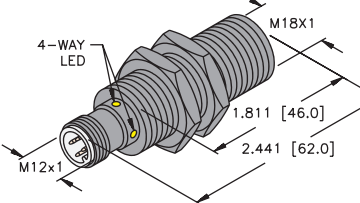
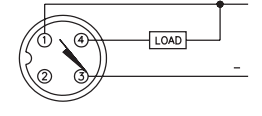
\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>18 mm - Embeddable, minifast® Connection, Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B1331/S34	T4255299	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	RKM 311-*/M/S600	1	<b>Diagram 1</b>  <b>Diagram 2</b> 
<b>18 mm - Embeddable, minifast Right Angle Connection, Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B1431/S34	T4255287		5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	RKM 311-*/M/S600	1	
<b>18 mm - Embeddable, microfast® Connection, Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B3331/S34	T4255289	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	KBE 3T-*/S600	2	
<b>18 mm - Embeddable, microfast Right Angle Connection, Teflon Coated Barrel</b> 	Bi 5-GT18H-ADZ30X2-B3431/S34	T4255288	WFI	5	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	KBE 3T-*/S600	2	

\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
18 mm - Embeddable, eurofast® Connection Stainless Steel Barrel 	Bi 5U-EM18H-AP6X-H1141	M1635112	uprox	5	3-Wire DC PNP	10-30 VDC	2500	≤200	-25 to +70	IP 68	SS	SF	N/A	YE	RKC 4T-*/S1587	1	Diagram 1 
	Bi 8-EM18H-AP6X-H1141	T4615094	Ext. Range	8			500	≤400	-25 to +70	IP 67	SS	SF	N/A	YE	RKC 4T-*/S1587	1	Diagram 2 
18 mm - Embeddable, eurofast Connection, Teflon Coated Barrel 	Bi 7-MT18H-AD4X-H1141	T4414580-1	Ext. Range	7	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*/S1587	2	Diagram 3 
18 mm - Embeddable, eurofast Connection Stainless Steel Barrel 	Bi 5U-EM18H-AN6X2-H1141/S395	M1635146	uprox	5	3-Wire DC NPN	10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKC 4T-*/S1587	3	Diagram 3 
	Bi 5U-EM18H-AP6X2-H1141/S395	M1635158	uprox	5	3-Wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKC 4T-*/S1587	1	
18 mm - Embeddable, eurofast Connection, Teflon Coated Barrel 	Bi 5U-MT18H-AN6X2-H1141/S395	T4255288	uprox	5	3-Wire DC NPN	10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RKC 4T-*/S1587	3	Diagram 3 
	Bi 5U-MT18H-AP6X2-H1141/S395	M1635220	uprox	5	3-Wire DC PNP	10-30 VDC	2500	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RKC 4T-*/S1587	1	

\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>18 mm - Embeddable, Ext. Barrel Length, eurofast® Connection, Stainless Steel Barrel</b> 	Bi 8-EM18HE-AN6X-H1141	T4615194	Ext. Range	8	3-Wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RKC 4T-*/S1587	3	Diagram 1
	Bi 8-EM18HE-AP6X-H1141	T4615095	Ext. Range	8	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RKC 4T-*/S1587	4	Diagram 2
<b>18 mm - Embeddable, Ext. Barrel Length, eurofast Connection, Teflon Coated Barrel</b> 	Bi 7-MT18HE-AD4X-H1141	T4414597		7	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*/S1587	1	Diagram 3
	Bi 7-MT18HE-AD4X-H1144	T4414598		7			1000	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.23T-*/S1587	2	
<b>18 mm - Embeddable, eurofast Connection, Teflon Coated Barrel</b> 	Bi 8-EMT18H-AN6X-H1141	T46150942		8	3-Wire DC NPN	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKC 4T-*/S1587	3	Diagram 4
	Bi 8-EMT18H-AP6X-H1141	T46150941		8	3-Wire DC PNP	10-30 VDC	500	≤200	-25 to +70	IP 67	TC	SF	N/A	YE	RKC 4T-*/S1587	4	
<b>18 mm - Embeddable, Ext. Barrel Length, eurofast Connection, Stainless Steel Barrel</b> 	Bi 7-EM18HE-AD4X-H1141	T44145802		7	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	SS	SF	N/A	YE	RKC 4T-*/S1587	1	

\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>30 mm - Embeddable, eurofast® Connection Stainless Steel Barrel</b> 	Bi10U-EM30H-AN6X2-H1141	M1636407	<i>uprox</i>	10	3-Wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKC 4T-*/S1587	1	<b>Diagram 1</b> 
	Bi15-EM30H-AN6X-H1141	T4618692	<i>Ext. Range</i>	15			300	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RKC 4T-*/S1587	1	
	Bi10U-EM30H-AP6X2-H1141	M1636406	<i>uprox</i>	10	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKC 4T-*/S1587	2	<b>Diagram 2</b> 
	Bi15-EM30H-AP6X-H1141	T4618592	<i>Ext. Range</i>	15			300	≤200	-25 to +70	IP 67	SS	SF	N/A	YE	RKC 4T-*/S1587	2	
<b>30 mm - Embeddable, eurofast Connection, Teflon Coated Barrel</b> 	Bi 12-MT30H-AD4X-H1141	T4417094		12	2-Wire DC	10-65 VDC	500	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.2T-*/S1587	3	<b>Diagram 3</b> 
	Bi 12-MT30H-AD4X-H1144	T4417095		12			500	≤100	-25 to +70	IP 67	TC	SF	N/A	YE	RK 4.23T-*/S1587	4	
	Bi10U-MT30H-AN6X2-H1141	M1636220	<i>uprox</i>	10	3-Wire DC NPN	10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RKC 4T-*/S1587	1	<b>Diagram 4</b> 
	Bi10U-MT30H-AP6X2-H1141	M1636415	<i>uprox</i>	10	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 67	TC	SF	GN	YE	RKC 4T-*/S1587	2	
<b>30 mm - Embeddable, eurofast Connection, Extended Length Stainless Steel Barrel</b> 	Bi10U-EM30HE-AP6X2-H1141	T46150942	<i>uprox</i>	10	3-Wire DC PNP	10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	SF	GN	YE	RKC 4T-*/S1587	2	

\* Length in meters.



Housing Style	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	Mating Cordset	Wiring Diagram #	Wiring Diagrams
<b>30 mm - Embeddable, <i>microfast</i>® Connection, Stainless Steel Barrel</b> 	Bi15-EG30H-ADZ30X2-B3131	T4207284		15	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	SS	SF	GN	RD	KBE 3T-*/S600	1	<b>Diagram 1</b>  <b>Diagram 2</b> 
<b>30 mm - Embeddable, <i>microfast</i> Connection, Teflon Coated Barrel</b> 	Bi10-GT30H-ADZ30X2-B3131/S34	T4256094	WFI	10	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	TC	SF	GN	RD	KBE 3T-*/S600	1	
<b>30 mm - Embeddable, <i>minifast</i>® Connection, Stainless Steel Barrel</b> 	Bi15-EG30H-ADZ30X2-B1131	T4207292	Ext. Range	15	2-Wire AC/DC Short-Circuit Protected	20-250 VAC 10-300 VDC	20	≤400/300	-25 to +70	IP 67	SS	SF	GN	RD	RKM 311M-*/S600	2	

\* Length in meters.



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
<b>12 mm - Embeddable, Potted-In Cable, Teflon Coated Barrel</b> 	Bi 4-GT12H-AP6X	T4670280		4	3-Wire DC PNP	10-30 VDC	2000	≤200	-25 to +70	IP 67	TC	SF		N/A	YE	2M/PVC	1	<b>Diagram 1</b>  <b>Diagram 2</b> 
<b>18 mm - Embeddable, Potted-In Cable, Short Length Teflon Coated Barrel</b> 	Bi 7-GT18HK-AD4X	T44145811	Short Barrel	7	2-Wire DC	10-65 VDC	1000	≤100	-25 to +70	IP 67	TC	SF		N/A	YE	2M/PVC	2	

**Notes:**



# ACCESSORIES



A variety of accessories are available to help protect sensors from weld splatter and physical damage.

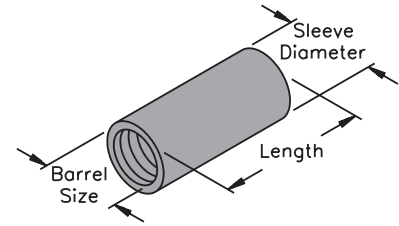
- Cushion mount accessory protects sensor when used as an end stop
- Teflon and ceramic caps protect the sensor face from weld splatter
- **armorguard**<sup>®</sup> sleeves protect against physical abuse
- Teflon coated quick mount allow for quick change mounting

# TURCK

## Sensor Accessories

### 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
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-18TS 50MM	A3143	1.97 [50.0]		
MBS-30TS 7MM	A9123	M30x1	Ø1.32 [33.6]	0.28 [7.0]
MBS-30TS 15MM	A9124			0.59 [15.0]

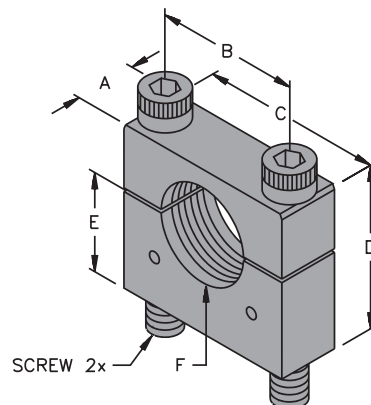


Inches [mm]

### armorguard® Mounting Bracket

Part Number	ID Number	Barrel Diameter	Dimensions						
			A	B	C	D	E	F	Screw
BS-TS12	A3152	12 mm	0.50 [12.7]	0.78 [20.0]	1.25 [31.8]	1.35 [34.3]	0.81 [20.5]	Ø0.61 [15.5]	10x24x1.75
BS-TS18	A3076	18 mm	0.50 [12.7]	1.81 [30.0]	1.50 [38.1]	1.35 [34.3]	0.81 [20.5]	Ø0.85 [21.5]	1/4-20UNC

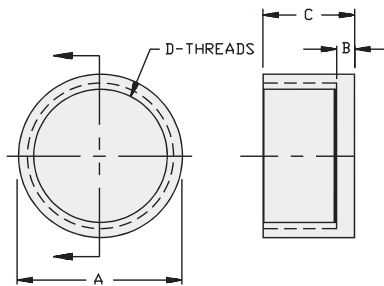
Inches [mm]



**Teflon/Ceramic Covers**

Part Number	ID Number	Barrel Diameter	Dimensions			
			A	B	C	D
CAP 08-PTFE	A3055-1	8 mm Embeddable	0.37 [9.5]	0.03 [0.7]	0.44 [11.1]	M8x1
CAP 12-PTFE*	M69662 00	12 mm Embeddable	0.63 [16.0]	0.03 [0.7]	0.63 [16.0]	M12x1
CAP 18N-PTFE*	A3056	18 mm Nonembeddable	0.87 [22.0]	0.04 [1.0]	0.79 [20.0]	M18x1
CAP 18-PTFE	A3055	18 mm Embeddable	0.87 [22.0]	0.04 [1.0]	0.35 [9.0]	M18x1
CAP 30N-PTFE	A3058	30 mm Nonembeddable	1.34 [34.0]	0.05 [1.2]	1.14 [29.0]	M30x1.5
CAP 30-PTFE	A3057	30 mm Embeddable	1.34 [34.0]	0.05 [1.2]	0.35 [9.0]	M30x1.5
CAP 47-PTFE	A3060	47 mm Embeddable	2.20 [55.8]	0.06 [1.6]	0.38 [9.7]	PG 36

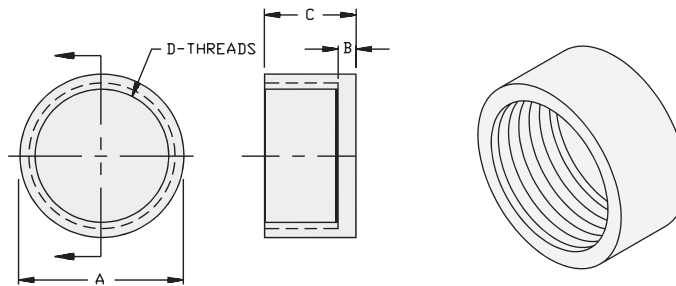
Material: PTFE  
Inches [mm]



For use with metal barrel sensors. \* Other dimensions available, please consult factory.

Part Number	ID Number	Dimensions				Max. Temp.	Density	Porosity	Thermal Conductivity (@20°C)
		A	B	C	D				
CAP 12-CER	A2530	0.63 [16.0]	0.04 [1.10]	.352 [8.94]	M12x1	4172°F (2300°C)	3.2 oz/in <sup>3</sup> (6 g/cm <sup>3</sup> )	Impervious	14 BTU • in/ft <sup>2</sup> • m • °F (2 W/m • °K)
CAP 18-CER	A2531	0.88 [22.3]	0.04 [1.10]	.352 [8.94]	M18x1				
CAP 30-CER	A2532	1.34 [34.0]	0.08 [2.00]	.352 [8.94]	M30x1.5				

Inches [mm]  
Material: Ceramic



For use with embeddable metal barrel sensors. Longer sleeves available, please consult factory.

Sensor Accessories

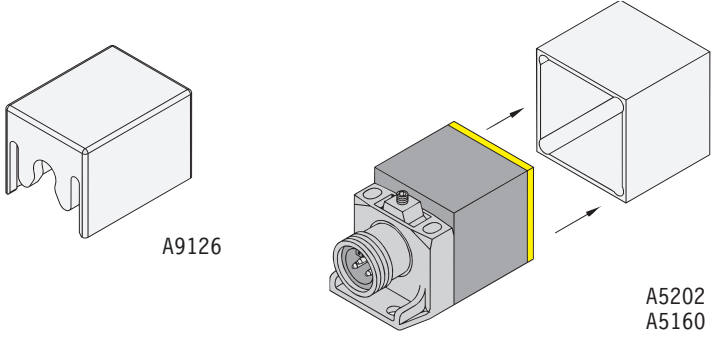
# TURCK

## Sensor Accessories

### CK40 Teflon Covers

Part Number	ID Number	Material
T-CK40-T-FC	A5202	Teflon
T-CK40-D-FC	A5160	Delrin
T-CK40-T-MCC	A5201	Teflon
T-CK40-T-MCB	A9126	Teflon

Inches [mm]

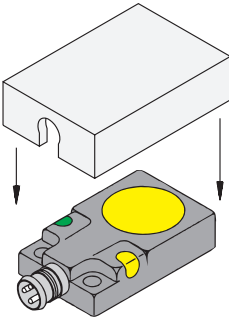


For use with **CK40** style sensors.

### QPak Teflon Covers

Part Number	ID Number
T-Q08-T-MCC	A5155
T-08-D-MC-WG*	A5153
T-Q14-T-MCC	A5154
T-Q20-T-MCC	A5156

Material: Teflon  
Inches [mm]  
\* Cover coated with **weldguard**® laminate.



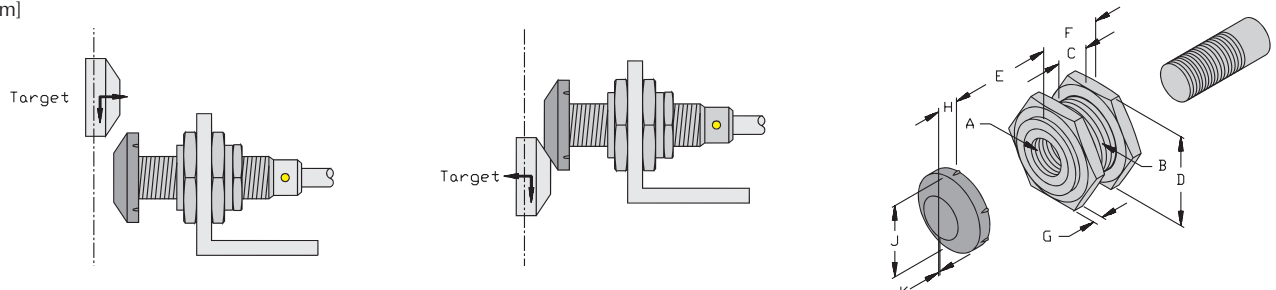
For use with **QPak** style sensors.

Other dimensions available, please consult factory.

**Cushion Mount**

Part Number	ID Number	Dimensions									
		A (Inside Thread)	B (Outside Thread)	C (Max.)	D (Across Flats)	E (Maximum Allowable Overtravel)	F	G	H	J	K
CM-08 CM-08N	A2503 A2504	M8x1	M16x1.5	.433 [11.0]	.875 [22.2]	.395 [10.0]	.750 [19.1]	.155 [3.94]	.200 [5.08]	.600 [15.2]	.0004 [.010]
CM-12 CM-12N	A2505 A2506	M12x1	M22x1.5	.433 [11.0]	1.19 [30.2]	.395 [10.0]	.750 [19.1]	.155 [3.94]	.245 [6.22]	.860 [21.8]	.010 [.250]
CM-18 CM-18N	A2507 A2508	M18x1	M30x1.5	.598 [15.2]	1.38 [35.1]	.395 [10.0]	1.00 [25.4]	0.02 [5.08]	.315 [8.00]	1.18 [30.0]	.001 [.035]
CM-30 CM-30N	A2509 A2510	M30x1.5	M47x1.5	.972 [24.7]	2.05 [52.1]	.591 [15.0]	1.37 [34.9]	0.20 [5.08]	.315 [8.00]	1.75 [44.5]	.035 [.890]

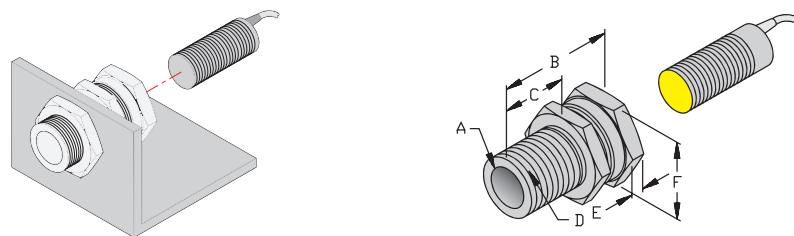
Inches [mm]



**Quick Mount, Teflon Coated**

Part Number	ID Number	Dimensions					
		A	B	C	D	E	F
QM-12L-T	A2542	0.48 [12.1]	1.76 [44.8]	1.18 [30.0]	M16x1	0.16 [4.01]	0.86 [21.8]
QM-12-T	A2545	0.48 [12.1]	1.33 [33.7]	0.77 [19.5]	M16x1	0.16 [4.01]	0.86 [21.8]
QM-18L-T	A2543	0.71 [18.1]	2.28 [58.0]	1.57 [40.0]	M24x1.5	0.19 [4.95]	1.18 [30.0]
QM-18-T	A2546	0.71 [18.1]	1.51 [38.5]	0.79 [20.0]	M24x1.5	0.19 [4.95]	1.18 [30.0]
QM-30L-T	A2544	1.19 [30.1]	2.28 [58.0]	0.79 [20.0]	M36x1.5	0.24 [6.13]	1.61 [41.0]

Inches [mm]



Sensor Accessories

**Notes:**

# INSTRUMENTATION



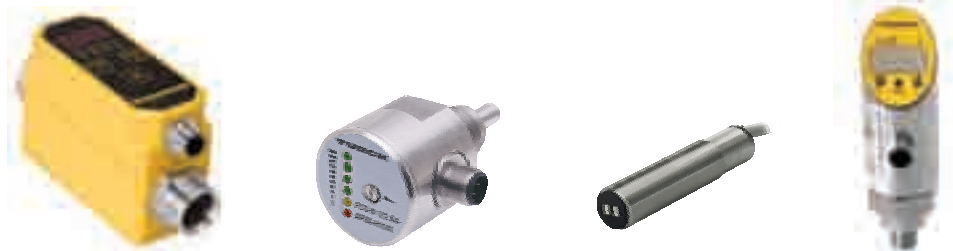
## Flow Monitors For Weld Tip Protection

- Flow monitors are used in the welding industry to detect the loss of coolant to weld tips
- Prevents damage to equipment
- Keep quality, control welds

## Pressure Sensors For Weld Cell Automation

- Pressure sensors for monitoring material transfers
- Hydraulic or pneumatic monitoring
- Mastic dispensing monitoring

## Instrumentation Selection Guide



Style	Inline Flow Monitor	Self-Contained Monitor	Air Flow Monitor	Pressure Sensor	Accessories
Pages	97 -102	103 - 104	103 - 104	105 - 106	107



Housing Style	Part Number	ID Number	Flow Detection Range (GPM)	Temperature Monitoring Range (°C)	Output 1: Flow	Output 2: Temperature or Flow	Voltage	Current Consumption (mA)	Switching Current (mA)	Pressure Rating (psi)	Fluid Connection	Operating Temp. (°C) (ambient)	Protection	Mating Cordset	Wiring Diagram #	Wiring Diagram
<b>Inline Flow Monitor, Digital Readout, 3/8" Tubing Connection</b> 	FTCI-3/8D10A4P-2UP8X-H1141	M6870806	0.2 to 4	-10 to +90	PNP N.O./N.C.	PNP N.O./N.C.	21.6-26.4 VDC	≤100	200	290	3/8" swage	0 to +60	IP 65	RK 4.4T-*	1	<b>Diagram 1</b> 
<b>Inline Flow Monitor, Digital Readout, 1/2" Tubing Connection</b> 	FTCI-1/2D10A4P-2UP8X-H1141	M6870807	0.2 to 5	-10 to +90	PNP N.O./N.C.	PNP N.O./N.C.	21.6-26.4 VDC	≤100	200	290	1/2" swage	0 to +60	IP 65	RK 4.4T-*	1	
<b>Inline Flow Monitor, Digital Readout, 3/4" Tubing Connection</b> 	FTCI-3/4D15A4P-2UP8X-H1141	M6870808	1 to 12	-10 to +90	PNP N.O./N.C.	PNP N.O./N.C.	21.6-26.4 VDC	≤100	200	290	3/4" swage	0 to +60	IP 65	RK 4.4T-*	1	

\* Length in meters.

**Compatible Fluids:** Water, Deionized Water, Ethylene Glycol (0-70%), Galden® HT110, Galden® HT135  
For DRO Flow accessories see page 107.

**Material**

Housing	PBT
Wetted Parts	316 Ti Stainless Steel
O-Ring	FKM

Instrumentation





Housing Style	Part Number	ID Number	Flow Detection Range (GPM)	Temperature Monitoring Range (°C)	Output 1 & 2: Flow	Output 3 & 4: Temperature	Voltage	Current Consumption (mA)	Switching Current (mA)	Pressure Rating (psi)	Fluid Connection	Operating Temp. (°C) (ambient)	Protection	Mating Cordset	Wiring Diagram #	Wiring Diagram
<b>Inline Flow Monitor, Digital Readout, 3/8" Tubing Connection</b> 	FTCI-3/8D10A4P-4UP8X-H1160	M6870814	0.2 to 4	-10 to +90	PNP N.O./N.C	PNP N.O./N.C	21.6-26.4 VDC	≤100	200	290	3/8" swage	0 to +60	IP 65	RKC 6T-*	1	<b>Diagram 1</b> 
<b>Inline Flow Monitor, Digital Readout, 1/2" Tubing Connection</b> 	FTCI-1/2D10A4P-4UP8X-H1160	M6870815	0.2 to 5	-10 to +90	PNP N.O./N.C	PNP N.O./N.C	21.6-26.4 VDC	≤100	200	290	1/2" swage	0 to +60	IP 65	RKC 6T-*	1	
<b>Inline Flow Monitor, Digital Readout, 3/4" Tubing Connection</b> 	FTCI-3/4D15A4P-4UP8X-H1160	M6870813	1 to 12	-10 to +90	PNP N.O./N.C	PNP N.O./N.C	21.6-26.4 VDC	≤100	200	290	3/4" swage	0 to +60	IP 65	RKC 6T-*	1	

**Compatible Fluids:** Water, Deionized Water, Ethylene Glycol (0-70%), Galden® HT110, Galden® HT135  
 For DRO Flow accessories see page 107.

\* Length in meters.

**Material**

Housing	PBT
Wetted Parts	316 Ti Stainless Steel
O-Ring	FKM



Housing Style	Part Number	ID Number	Flow Detection Range (GPM)	Temperature Monitoring Range (°C)	Output 1: Flow/ Temperature	Output 2: Flow	Voltage	Current Consumption (mA)	Switching Current (mA)	Pressure Rating (psi)	Fluid Connection	Operating Temp. (°C) (ambient)	Protection	Mating Cordset	Wiring Diagram #	Wiring Diagram
<b>Inline Flow Monitor, Digital Readout, 3/8" Tubing Connection</b> 	FTCI-3/8D10A4P-LI-UP8X-H1141	M6870809	0.2 to 4	-10 to +90	PNP N.O./N.C	Analog 4-20 mA	21.6-26.4 VDC	≤100	200	290	3/8" swage	0 to +60	IP 65	RK 4.4T-*	1	<b>Diagram 1</b> 
<b>Inline Flow Monitor, Digital Readout, 1/2" Tubing Connection</b> 	FTCI-1/2D10A4P-LI-UP8X-H1141	M6870810	0.2 to 5	-10 to +90	PNP N.O./N.C	Analog 4-20 mA	21.6-26.4 VDC	≤100	200	290	1/2" swage	0 to +60	IP 65	RK 4.4T-*	1	
<b>Inline Flow Monitor, Digital Readout, 3/4" Tubing Connection</b> 	FTCI-3/4D15A4P-LI-UP8X-H1141	M6870811	1 to 12	-10 to +90	PNP N.O./N.C	Analog 4-20 mA	21.6-26.4 VDC	≤100	200	290	3/4" swage	0 to +60	IP 65	RK 4.4T-*	1	

**Compatible Fluids:** Water, Deionized Water, Ethylene Glycol (0-70%), Galden® HT110, Galden® HT135  
 For DRO Flow accessories see page 107.

\* Length in meters.

**Material**

Housing	PBT
Wetted Parts	316 Ti Stainless Steel
O-Ring	FKM

Instrumentation

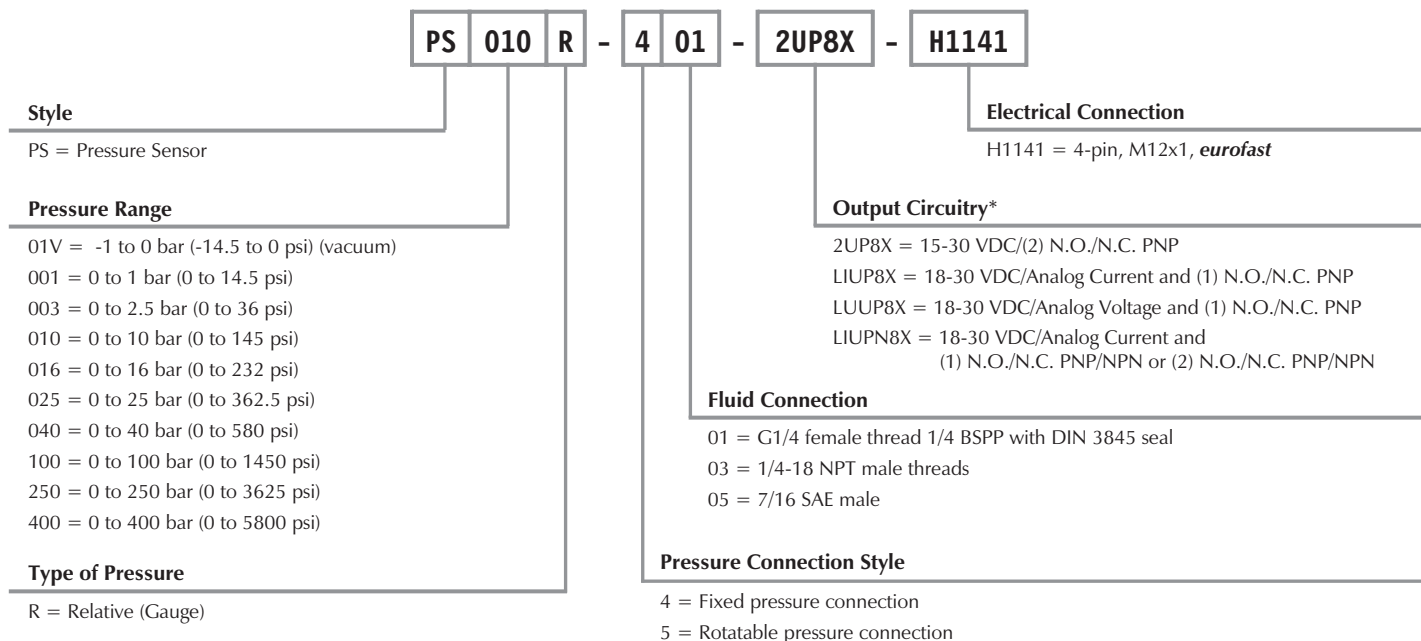


Housing Style	Part Number	ID Number	Flow Detection Range (water)	Flow Detection Range (oil)	Flow Detection Range (air)	Output	Voltage	Current Consumption (mA)	Switching Current (mA)	Pressure Rating (psi)	Fluid Connection	Operating Temp. (°C) (ambient)	Operating Temp. (°C) (fluid)	Protection	Mating Cordset	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagram
<b>Self-Contained Plastic Housing (PBT)</b> 	FCS-N1/2A4P-AP8X-H1141	M6871032	1 to 150 cm/sec.	3 to 300 cm/sec.	N/A	PNP N.O.	19.2-28.8 VDC	≤60	≤400	1450	1/2 NPT	-25 to +70	-20 to +80	IP 65	RK 4T-*	N/A	1	 
<b>Self-Contained 316 Stainless Steel Housing</b> 	FCS-N1/2A4-AP8X-H1141	M6871004	1 to 150 cm/sec.	3 to 300 cm/sec.	N/A	PNP N.O.	19.2-28.8 VDC	≤70	≤400	1450	1/2 NPT	-25 to +80	-20 to +80	IP 67	RK 4T-*	N/A	1	
<b>Self-Contained Air Flow Monitor, Nickel Plated Brass Housing</b> 	FCS-M18-AP8X	M6870704	N/A	N/A	0.1 to 15 cm/sec.	PNP N.O.	19.2-28.8 VDC	≤70	200	145	M18x1	-20 to +70	-20 to +70	IP 67	N/A	2M/PVC*	2	
<b>Self-Contained Air Flow Monitor, Delrin/PBT/Nickel Plated Brass Housing</b> 	FCS-M18-AP8X/D041	M6870705	N/A	N/A	0.1 to 15 cm/sec.	PNP N.O.	19.2-28.8 VDC	≤70	200	145	M18x1	-20 to +70	-20 to +70	IP 67	N/A	2M/PVC*	2	

\* Length in meters.



## High Accuracy Programmable Pressure Sensor Part Number Key



\* NPN versions available.

## High Accuracy Programmable Pressure Sensor Specifications

**Current Consumption** . . . ≤50 mA  
**Switching Freq (Discrete)** . . . ≤180 Hz  
**Minimum Hysteresis** . . . . ±0.5%

**Display Reaction Time:**  
**3 Selectable Modes** . . . . . Slow 600 ms update  
Normal 200 ms update  
Fast 50 ms update

**Wetted Parts** . . . . . Stainless Steel, Viton  
Al<sub>2</sub>O<sub>3</sub> Ceramic

**Programmable Analog:**  
**Analog Start Point** . . . . . Programmable from  
0-75% of measuring range  
**Analog End Point** . . . . . Programmable from  
25-100% of measuring range

**Time Delays:**  
**Switching Delay** . . . . . Switch-on and switch-off  
delay adjustable from 0 to 50  
seconds in steps of 0.1 second

**Power-On Effect** . . . . . Per IEC 947-5-2  
**Reverse Polarity Protection** . Yes  
**Transient Protection** . . . . EN 60947-5-2  
**Short-Circuit Protection** . . Yes

**Temperature Ranges:**  
**Ambient Temperature** . . . . -40° to +80°C (-40° to +176°F)  
**Medium Temperature** . . . . -25° to +85°C (-40° to +185°F)  
**Enclosure Rating** . . . . . Meets NEMA 4, 6, 12, 13 and IP 67  
**Shock** . . . . . 50 g per IEC 68-2-27  
**Vibration** . . . . . 20 g (10-200 Hz) per IEC 68-2-6  
**Burst Protection** . . . . . Patented media stop

**Accuracy:**  
**Repeatability** . . . . . ≤±0.5% of measuring range  
**Zero Shift/Span Shift** . . . . ≤±0.15% of measuring range/°C

**LED Function/Display:**  
**Measuring Value/Prog** . . . . 4-digit 7-segment display  
**Status Display** . . . . . LEDs indicate output status and  
selected measuring units

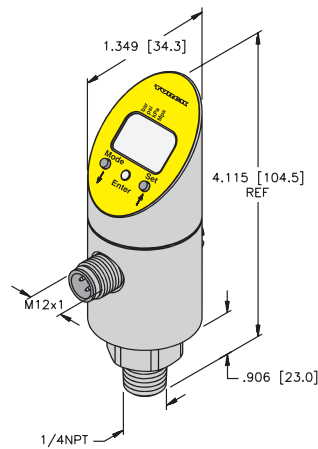
**EMC Information:**  
**EN 61000-4-2** . . . . . ESD: 4 KD CK/ 8 KV AD  
**EN 61000-4-3** . . . . . HF irradiated: 15 V/m  
**EN 61000-4-4** . . . . . Burst: 2 KV  
**EN 61000-4-5** . . . . . Surge: 500 V, 12 Ω  
**EN 61000-4-6** . . . . . HF conducted: 10 V

	LI2UPN8X	LIUP8X	LUUP8X	2UP8X
<b>Output</b>	Programmable Current: 0-20 mA, 4-20 mA, 20-0 mA, 20-4 mA and 1 PNP/NPN N.O./N.C. or 2 PNP/NPN N.O./N.C.	PNP, N.O. or N.C. and Programmable Current: 0-20 mA, 4-20 mA, 20-0 mA, 20-4 mA	PNP, N.O. or N.C. and Programmable Voltage: 0-10 V, 0-5 V, 1-6 V, 10-0 V, 5-0 V, 6-1 V	Dual PNP N.O. or N.C.
<b>Voltage</b>	18-30 VDC	18-30 VDC	18-30 VDC	15-30 VDC
<b>Set Point Accuracy (Of Full Scale)</b>	±0.5%	±0.5%	±0.5%	±0.5%
<b>Analog Accuracy** (Of Full Scale)</b>	≤±0.5%	≤±0.5%	≤±0.5%	N/A
<b>Switching Current</b>	≤200 mA	≤200 mA	≤200 mA	≤200 mA
<b>Analog Load</b>	≤500 Ω	≤500 Ω	≤500 Ω	≤500 Ω
<b>Mating Cordset</b>	RK 4.4T-*	RK 4.4T-*	RK 4.4T-*	RK 4.4T-*
<b>Wiring Diagrams</b>				

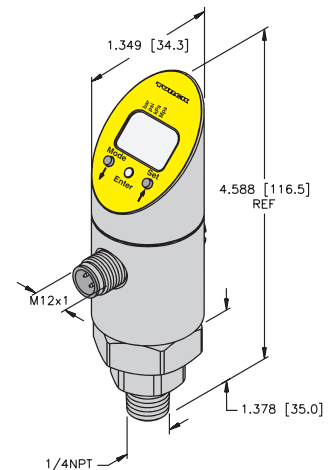
\* Length in meters.  
\*\* Accuracy includes linearity, repeatability and hysteresis.



### Fixed Housing



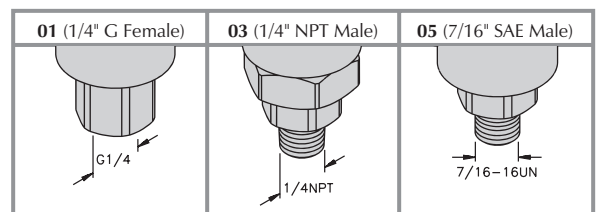
### Rotatable Housing



### Available Ranges

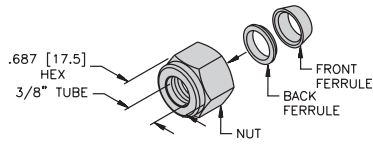
Part Number	Pressure Range (psig)	Allowable Over Pressure (psig)	Set Point Range (psig)	Re-Set Point Range (psig)
01V	-14.5 to 0	43.5	-14.5 to -0.73	-14.07 to -0.29
001	0 to 14.5	43.5	0.73 to 14.5	0.29 to 14.07
003	0 to 36	108.7	2.17 to 36	0.87 to 35.8
010	0 to 145	362.5	7.25 to 145	2.90 to 140
016	0 to 232	580	11.6 to 232	4.64 to 225
025	0 to 362	942	18.13 to 362	7.25 to 351
040	0 to 580	1450	29 to 580	11.6 to 562
100	0 to 1450	3625	72.5 to 1450	29 to 1406
250	0 to 3625	9064	181 to 3625	72.5 to 3516

### Process Connection Options

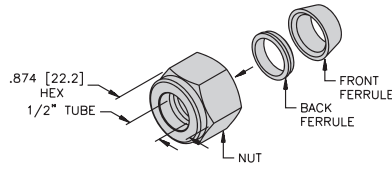


For pressure sensor accessories see page 107.

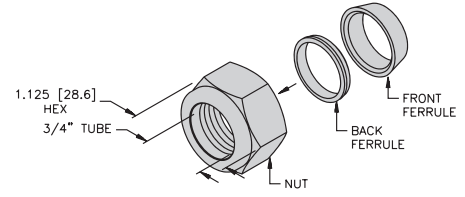
**DRO Flow Sensor Accessories**



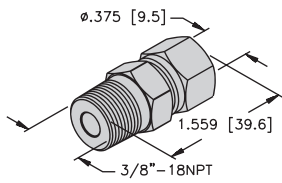
**FSV-SS 3/8 KIT (2 sets)**  
(A9183)



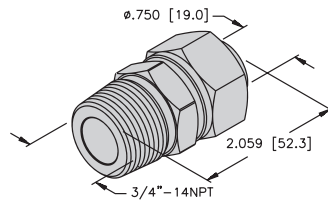
**FSV-SS 1/2 KIT (2 sets)**  
(A9184)



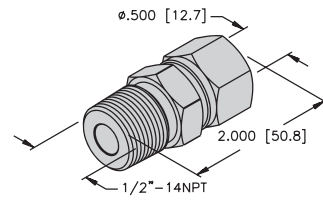
**FSV-SS 3/4 KIT (2 sets)**  
(A9185)



**FSV-SS 3/8 TS-NPT**  
(A9307)

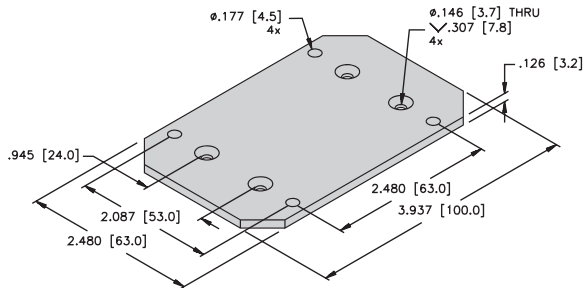


**FSV-SS 3/4 TS-NPT**  
(A9306)



**FSV-SS 1/2 TS-NPT**  
(A9305)

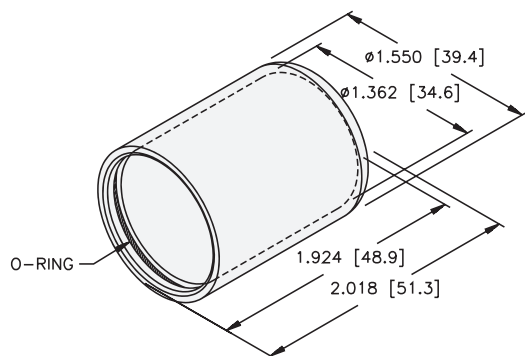
**Mounting Bracket**



**FCI-BP**  
(A9181)

**Pressure Sensor Accessories**

**Clear Cap**



**PTS-COVER**  
(A9350)

# CONNECTIVITY



## Weld Slag Protection

TURCK connectivity offers many different levels of weld slag protection. You'll find M12x1 **euofast**<sup>®</sup>, 1/2-20UNF **microfast**<sup>®</sup>, 7/8-16UN **minifast**<sup>®</sup> cordsets and the following options:

- CPE, TPE, or Armor cable jacket material
- TPE mold material for plug bodies
- Teflon coated coupling nuts
- Protective sleeving, tubing, and tape

## Connectivity Selection Guide

108 - 120



Style	<b>euofast</b> <sup>®</sup> Cordsets	<b>microfast</b> <sup>®</sup> Cordsets	<b>minifast</b> <sup>®</sup> Cordsets	Accessories
Pages	109 - 113	114	115 - 116	117 - 120

### 3 and 4-Wire *euromast*<sup>®</sup> Cordsets, Large, Robust Plug Body

- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 250 VAC/VDC, 4 A



Housing Style	Part Number	Cable	Features	Pinout	
<b>RKG ..**</b> 	RKG 4T-*/S600	<b>SJOOW, CPE Yellow</b> 3x18 AWG 105 °C 8.0 mm OD Cable #RF50654-*M	<b>Weld Flash Immune, Flame Resistance</b>	1. BN 2. N/C 3. BU 4. BK	
	WKE 4T-*/S600				
	RSG 4T-*/S600				
<b>WKE ..**</b> 	WSE 4T-*/S600	<b>SJOOW, CPE Yellow</b> 4x18 AWG 105 °C 8.0 mm OD Cable #RF50644-*M	<b>weldlife, Weld Flash Immune</b>	1. BN 2. WH 3. BU 4. BK	
	RKG 4.4T-*/S600				
	WKE 4.4T-*/S600				
<b>RSG ..**</b> 	RSG 4.4T-*/S600	<b>AWM TPE Yellow</b> 4x18 AWG 105 °C 7.3 mm OD Cable #RF50956-*M	<b>weldlife, Weld Flash Immune</b>	1. BN 2. WH 3. BU 4. BK	
	WSE 4.4T-*/S600				
	RKG 4.4T-*/S1587				
<b>WSE ..**</b> 	WKE 4.4T-*/S1587	<b>AWM TPE Yellow</b> 4x18 AWG 105 °C 7.3 mm OD Cable #RF50956-*M	<b>weldlife, Weld Flash Immune</b>	1. BN 2. WH 3. BU 4. BK	
	RSG 4.4T-*/S1587				
	WSE 4.4T-*/S1587				

\* 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 "RKG/WKE/RSG/WSE.."; "RKGV/WKEV/RSGV/WSEV.." indicates 316 stainless steel.

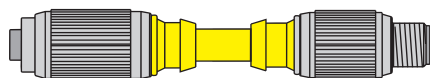
Add "/S1092" to the end of part number for teflon coated coupling nuts.

Add "/S1095" to end of part number for TPE mold body (can be used with any jacket style) and add "/S1094" for TPE mold body and TPE **weldlife** cable.

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 "/S3031" to end of part number for TPE mold body, teflon coated coupling nuts and silicone tubing.

**Extension Example:**



RKG .. - RSG ..



See pages B11-B12 in the Connectivity catalog (B2005) for more extension examples.



3 and 4-Wire *eufofast*® Cordsets, "C" Style Medium Plug Body

- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 250 VAC/VDC, 4 A



Housing Style	Part Number	Cable	Features	Pinout
<p><b>RKC ..**</b></p> <p><b>WKC ..**</b></p>	RKC 4T-*/S1587	AWM TPE Yellow 3x18 AWG 105 °C 5.3 mm OD Cable #RF51566-*M	Weld Flash Immune	
	WKC 4T-*/S1587			
	RSC 4T-*/S1587			
	WSC 4T-*/S1587			
<p><b>RSC ..**</b></p> <p><b>WSC ..**</b></p>	RKC 4.4T-*/S1587	AWM TPE Yellow 4x18 AWG 105 °C 7.3 mm OD Cable #RF50956-*M	Weld Flash Immune	
	WKC 4.4T-*/S1587			
	RSC 4.4T-*/S1587			
	WSC 4.4T-*/S1587			

\* Length in meters. Standard cable lengths are 2, 4, 6, 8 and 10 meters. Consult factory for other lengths.  
 \*\* Standard coupling nut material is nickel plated brass "RK/WK/RS/WS.."; "RKV/WKV/RSV/WSV.." indicates 316 stainless steel.  
 Add "/S1092" to the end of part number for teflon coated coupling nuts.  
 Add "/S1095" to end of part number for TPE mold body (can be used with any jacket style) and add "/S1094" for TPE mold body and TPE *weldlife* cable.  
 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 "/S3031" to end of part number for TPE mold body, teflon coated coupling nuts and silicone tubing.

Extension  
Example:



RKC 4.4T - 0.3 - RSC 4.4T /S1587

RKC .. - RSC ..

See pages B11-B12 in the Connectivity catalog (B2005) for more extension examples.

# TURCK

## Industrial Connectivity Products

### 2-Wire eurofast® Cordsets, Standard Plug Body

- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 250 VAC/VDC, 4 A



Housing Style	Part Number	Cable	Features	Pinout
<p><b>RK ..**</b></p> <p><b>WK ..**</b></p>	RK 4.2T-*/S1587	AWM TPE Yellow 2x22 AWG 105 °C 4.5 mm OD Cable #RF51560-*M	<i>weldlife, Weld Flash Immune</i>	
	WK 4.2T-*/S1587			
	RS 4.2T-*/S1587			
	WS 4.2T-*/S1587			
<p><b>RS ..**</b></p> <p><b>WS ..**</b></p>	RK 4.23T-*/S1587	AWM TPE Yellow 2x22 AWG 105 °C 4.5 mm OD Cable #RF51560-*M	<i>weldlife, Weld Flash Immune</i>	
	WK 4.23T-*/S1587			
	RS 4.23T-*/S1587			
	WS 4.23T-*/S1587			

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

\*\* Standard coupling nut material is nickel plated brass "RK/WK/RS/WS.."; "RKV/WKV/RSV/WSV.." indicates 316 stainless steel.

Add "/S1095" to end of part number for TPE mold body (can be used with any jacket style) and add "/S1094" for TPE mold body and TPE *weldlife* cable.

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).

Extension  
Example:



RK .. - RS ..



See pages B11-B12 in the Connectivity catalog (B2005) for more extension examples.

3 and 4-Wire *eufofast*® Cordsets, Standard Plug Body

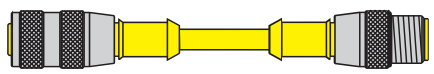
- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 250 VAC/VDC, 4 A



Housing Style	Part Number	Cable	Features	Pinout
	RK 4T-*/S1587	AWM TPE Yellow 3x22 AWG 105 °C 4.5 mm OD Cable #RF51559-*M	weldlife, Weld Flash Immune	
	WK 4T-*/S1587			
	RS 4T-*/S1587			
	WS 4T-*/S1587			
	RK 4.4T-*/S1587			
	WK 4.4T-*/S1587			
	RS 4.4T-*/S1587	AWM TPE Yellow 4x22 AWG 105 °C 5.7 mm OD Cable #RF51132-*M	weldlife, Weld Flash Immune	
	WS 4.4T-*/S1587			
	RS 4.4T-*/S1587			

\* Length in meters. Standard cable lengths are 2, 4, 6, 8 and 10 meters. Consult factory for other lengths.  
 \*\* Standard coupling nut material is nickel plated brass "RK/WK/RS/WS.."; "RKV/WKV/RSV/WSV.." indicates 316 stainless steel.  
 Add "/S1095" to end of part number for TPE mold body (can be used with any jacket style) and add "/S1094" for TPE mold body and TPE *weldlife* cable.  
 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).

Extension  
Example:



RK .. - RS ..



See pages B11-B12 in the Connectivity catalog (B2005) for more extension examples.

# TURCK

## Industrial Connectivity Products

### 3 and 4-Wire *euromast*<sup>®</sup> Cordsets, Extreme Duty Armored Plug Body

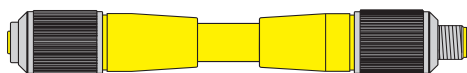
- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 250 VAC/VDC, 4 A



Housing Style	Part Number	Cable	Features	Pinout
<p><b>RKA ..**</b></p>	RKA 4A-*	Interlock Al Armor MC/ITC/PLTC PVC Yellow 3x18 AWG 90 °C 13.5 mm OD Cable #RF51040-*M	<i>Extreme Duty Armored Cable, Tray Rated Cable</i>	
	RSA 4A-*			
<p><b>RSA ..**</b></p>	RKA 4.4A-*	Interlock Al Armor MC/ITC/PLTC PVC Yellow 4x18 AWG 90 °C 13.5 mm OD Cable #RF51041-*M		
	RSA 4.4A-*			
<p><b>RKR ..**</b></p>	RKR 4.4A-*	Interlock Al Armor ITC/PLTC PVC Yellow 4x22 AWG 105 °C 11.2 mm OD Cable #RF50872-*M		
	RSR 4.4A-*			
<p><b>RSR ..**</b></p>				

\* 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.

**Sacrificial  
Extension  
Example:**



**RKA .. - RSA ..**

**RKA 4.4A - 0.5 - RSA 4.4A**

See pages B11-B12 in the Connectivity catalog (B2005) for more extension examples.

3-Wire *microfast*<sup>®</sup> Cordsets, Large Plug Body

- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 250 VAC/VDC, 4 A

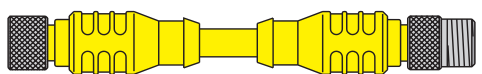


Housing Style	Part Number	Cable	Features	Pinout		
<b>KBE ..**</b> 	KBE 3T-*/S600	<b>SJOOW, CPE Yellow</b> 3x18 AWG 105 °C 8.0 mm OD Cable #RF50685-*M	<b>Weld Flash Immune, Flame Resistance, Automotive Color Code</b>			
	WKBE 3T-*/S600					
<b>WKBE ..**</b> 	SBE 3T-*/S600					
	WSBE 3T-*/S600					
<b>SBE ..**</b> 	KBE 3T-*/S1587			<b>TPE Yellow</b> 3x18 AWG 105 °C 7.3 mm OD Cable #RF50957-*M	<b>weldlife, Weld Flash Immune, Automotive Color Code</b>	
	WKBE 3T-*/S1587					
<b>WSBE..**</b> 	SBE 3T-*/S1587					
	WSBE 3T-*/S1587					

1. GN
2. RD/BK
3. RD/WH

\* 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.  
 Add "/S1095" to end of part number for TPE mold body (can be used with any jacket style) and add "/S1094" for TPE mold body and TPE **weldlife** cable.  
 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).

Extension Example:



KBE .. - SBE ..



See pages F7-F8 in the Connectivity catalog (B2005) for more extension examples.

# TURCK

## Industrial Connectivity Products

### 3-Wire *minifast*<sup>®</sup> Cordsets, Standard

- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 300 VAC/VDC, 9 A



Housing Style	Part Number	Cable	Features	Pinout
<b>RKM 31 ..**</b> 	RKM 31-*M/S600	<b>SJOOW, CPE Yellow</b> 3x18 AWG 105 °C 8.0 mm OD Cable #RF50654-*M	<b>Weld Flash</b> <b>Immune, Flame</b> <b>Resistance</b>	1. BK 2. BN 3. BU
	WKM 31-*M/S600			
	RSM 31-*M/S600			
<b>WKM 31 ..**</b> 	WSM 31-*M/S600	<b>SJOOW, CPE Yellow</b> 3x18 AWG 105 °C 8.0 mm OD Cable #RF50658-*M	<b>Weld Flash</b> <b>Immune, Flame</b> <b>Resistance,</b> <b>Automotive</b> <b>Color Code</b>	1. GN 2. RD/BK 3. RD/WH
	RKM 311-*M/S600			
<b>RSM 31 ..**</b> 	WKM 311-*M/S600	<b>TPE Yellow</b> 3x18 AWG 105 °C 7.2 mm OD Cable #RF50957-*M	<b>weldlife,</b> <b>Weld Flash</b> <b>Immune,</b> <b>Automotive</b> <b>Color Code</b>	1. GN 2. RD/BK 3. RD/WH
	RSM 311-*M/S600			
	WSM 311-*M/S600			
<b>WSM 31 ..**</b> 	RKM 311-*M/S1587	<b>TPE Yellow</b> 3x18 AWG 105 °C 7.2 mm OD Cable #RF50957-*M	<b>weldlife,</b> <b>Weld Flash</b> <b>Immune,</b> <b>Automotive</b> <b>Color Code</b>	1. GN 2. RD/BK 3. RD/WH
	WKM 311-*M/S1587			
	RSM 311-*M/S1587			
	WSM 311-*M/S1587			

\* 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 "RKM/WKM/RSM/WSM.."; "RK/WK/RS/WS.." indicates nylon and "RKV/WKV/RSV/WSV.." indicates 316 stainless steel.

Add "/S1095" to end of part number for TPE mold body (can be used with any jacket style) and add "/S1094" for TPE mold body and TPE **weldlife** cable.

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).

## 3-Wire minifast® Cordsets, Heavy Duty

- NEMA 1, 3, 4, 6P and IEC IP 68 Protection
- 600 VAC/VDC, 9 A



Housing Style	Part Number	Cable	Features	Pinout
<p><b>RKM 35 ..**</b></p>	RKM 35-*M/S600	<b>SJOOW, CPE Yellow</b> 3x16 AWG 105 °C 10.3 mm OD Cable #RF50596-*M	<b>Weld Flash Immune, Flame Resistance</b>	1. GN 2. RD 3. RD
<p><b>WKM 35 ..**</b></p>	WKM 35-*M/S600			
<p><b>RSM 35 ..**</b></p>	RSM 35-*M/S600			
<p><b>WSM 35 ..**</b></p>	WSM 35-*M/S600			

\* 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 "RKM/WKM/RSM/WSM.."; "RK/WK/RS/WS.." indicates nylon and "RKV/WKV/RSV/WSV.." indicates 316 stainless steel.  
 Add "/S1095" to end of part number for TPE mold body (can be used with any jacket style) and add "/S1094" for TPE mold body and TPE *weldlife* cable.

**Extension Example:**

**RSM .. - RKM ..**

RSM
RKM
35
-
2M
/S600

See pages E7-E8 in the Connectivity catalog (B2005) for more extension examples.

# TURCK

## Industrial Connectivity Products

### Braided Fiberglass Sleeving (Bulk)



#### Viton Coated

Part Number	Specifications	Application	Features
FFV 1/4INCH BLACK 50 FOOT ROLL† FFV 1/4INCH BLACK (10/BAG-6IN)†	Viton (fluoroelastomer) coated, braided fiberglass, black 1/4" diameter -70 to +220°C NEMA TF-1	Protective sleeving for insulation of cable.	Excellent chemical and solvent resistance, coating offers improved flexibility and protection throughout a wide operating temperature range.
FFV 3/8INCH BLACK 50 FOOT ROLL† FFV 3/8INCH BLACK (10/BAG-6IN)†	Viton (fluoroelastomer) coated, braided fiberglass, black 3/8" diameter -70 to +220°C NEMA TF-1		
FFV 1/2INCH BLACK 50 FOOT ROLL† FFV 1/2INCH BLACK (10/BAG-6IN)†	Viton (fluoroelastomer) coated, braided fiberglass, black 1/2" diameter -70 to +220°C NEMA TF-1		
FFV 5/8INCH BLACK 50 FOOT ROLL† FFV 5/8INCH BLACK (10/BAG-6IN)†	Viton (fluoroelastomer) coated, braided fiberglass, black 5/8" diameter -70 to +220°C NEMA TF-1		
FFV 1INCH BLACK 50 FOOT ROLL† FFV 1INCH BLACK (10/BAG-6IN)†	Viton (fluoroelastomer) coated, braided fiberglass, black 1" diameter -70 to +220°C NEMA TF-1		
FFV 1 1/2INCH BLACK 50 FOOT ROLL† FFV 1 1/2INCH BLACK (10/BAG-6IN)†	Viton (fluoroelastomer) coated, braided fiberglass, black 1 1/2" diameter -70 to +220°C NEMA TF-1		

#### Acryl Coated

Part Number	Specifications	Application	Features
FF 3/4INCH BLACK (10/BAG)† FF 3/4INCH BLACK 50 FOOT ROLL†	Acryl-coated braided fiberglass 3/4" diameter -70 to +240°C NEMA TF-1	Protective sleeving for insulation of cable.	Excellent chemical and solvent resistance.
FF 1/2INCH BLACK (10/BAG)† FF 1/2INCH BLACK 50 FOOT ROLL†	Acryl-coated braided fiberglass 1/2" diameter -70 to +240°C NEMA TF-1		

MSDS sent upon request.

† Sleeving part numbers only; cordset not included.



**Expandable Silicone Rubber Coated, Fiberglass Sleeving (Bulk)**



Part Number	Specifications	Application	Features
FFFS WHT ID 3/8-INCH-30M <sup>†</sup> FFFS WHT ID 3/8-INCH (10/BAG-6IN) <sup>†</sup>	Fiberglass braid, silicone rubber coating, white 3/8" diameter, -55 to +200°C NEMA TF-1	Expandable silicone coated fiberglass sleeving for protection of cable and coupling nut.	<i>"Heat shrink" like fit with abrasion, moisture, cut-through chemical and weld slag resistance.</i>
FFFS WHT ID 5/8-INCH-30M <sup>†</sup> FFFS WHT ID 5/8-INCH (10/BAG-6IN) <sup>†</sup>	Fiberglass braid, silicone rubber coating, white 5/8" diameter, -55 to +200°C NEMA TF-1		
FFFS BLK ID 3/4-INCH-30M <sup>†</sup> FFFS BLK ID 3/4-INCH (10/BAG-6IN) <sup>†</sup>	Fiberglass braid, silicone rubber coating, black 3/4" diameter, -55 to +200°C NEMA TF-1		
FFFS BLK ID 1-INCH-30M <sup>†</sup> FFFS BLK ID 1-INCH (10/BAG-6IN) <sup>†</sup>	Fiberglass braid, silicone rubber coating, black 1" diameter, -55 to +200°C NEMA TF-1		

<sup>†</sup> Sleeving part numbers only; cordset not included.

**Silicone Tubing (\*Bulk)**



Part Number	Specifications	Application	Features
ST ID 1/4-INCH-30M <sup>†</sup> ST ID 1/4-INCH (10/BAG-6IN) <sup>†</sup>	Silicone rubber tubing, translucent 1/4" diameter UL	Protective tubing for insulation of cable.	<i>Excellent weld slag resistance.</i>
ST ID 3/8-INCH-30M <sup>†</sup> ST ID 3/8-INCH (10/BAG-6IN) <sup>†</sup>	Silicone rubber tubing, translucent 3/8" diameter UL		
ST ID 1/2-INCH-30M <sup>†</sup> ST ID 1/2-INCH (10/BAG-6IN) <sup>†</sup>	Silicone rubber tubing, translucent 1/2" diameter UL		
ST ID 3/4-INCH-30M <sup>†</sup> ST ID 3/4-INCH (10/BAG-6IN) <sup>†</sup>	Silicone rubber tubing, translucent 3/4" diameter UL		

Add "/S1077" to end of part number to get silicone tubing assembled to pigtail or extension cordsets up to 4 meters (*picofast*<sup>®</sup>, *europast*<sup>®</sup>, *microfast*<sup>®</sup> and *minifast*<sup>®</sup>; 0.5 meter min. on extensions).

<sup>†</sup> Sleeving part numbers only; cordset not included.

**Weld Shield Sleeve - Hook and Loop Closure**



Part Number	Specifications	Application	Features
FFW 1INC 2FOOT	Plain weave fiberglass, neoprene coated, black 1" Bundle OD, 3.25" circumference 4" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance	Applicable sleeve for protection of cable.	<i>Sleeve offers excellent resistance to abrasion, water, most chemicals, heat, sparks, and flame in a wide operating temperature range, while being lightweight, tough and highly flexible.</i>
FFW 2INC 2FOOT	Plain weave fiberglass, neoprene coated, black 2" Bundle OD, 6" circumference 7.75" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance		
FFW 3INC 2FOOT*	Plain weave fiberglass, neoprene coated, black 3" Bundle OD, 9.4" circumference 11" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance		
FFW 4INC 2FOOT*	Plain weave fiberglass, neoprene coated, black 4" Bundle OD, 12.5" circumference 14" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance		
FFW 5INC 2FOOT	Plain weave fiberglass, neoprene coated, black 5" Bundle OD, 15.75" circumference 17.25" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance		
FFW 6INC 2FOOT	Plain weave fiberglass, neoprene coated, black 6" Bundle OD, 18.8" circumference 20.375" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance		
FFW 7INC 2FOOT	Plain weave fiberglass, neoprene coated, black 7" Bundle OD, 22" circumference 23.5" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance		
FFW 8INC 2FOOT	Plain weave fiberglass, neoprene coated, black 8" Bundle OD, 25.125" circumference 26.625" Sleeve Width Flat, Tested to ISO 6945 -40°C to +204°C Temperature Resistance		

\* 25 foot spool also available.

**Weld Seal Tape**



Part Number	Specifications	Application	Features
FST 1IN 12YARDS	Silicone rubber, Clear 1" width, 12 yard length, -40°C to +204°C	Applicable clear tape protecting open areas between silicone tubing and mold.	<i>Tape offers excellent resistance to water, most chemicals, heat, sparks, and flame in a wide operating temperature range, while being lightweight, and highly flexible.</i>

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Literature and Media questions or concerns?  
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# TURCK Welding Solutions

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Bi 4-GT12H-ADZ32X-B3131/S1589 . . . . .	27	Bi10-GT30H-ADZ30X2-B1131/S34/S1589 . . . . .	47	FFFS BLK ID 1-INCH (10/BAG-6IN) . . . . .	118
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FFV 1/2INCH BLACK (10/BAG-6IN) . . . . .	117	Ni 8-MT12HE-AN6X-H1141/S1589 . . . . .	25	RSG 4T-*/S600 . . . . .	109
FFV 1/2INCH BLACK 50 FOOT ROLL . . . . .	117	Ni 8-MT12HE-AP6X-H1141/S1589 . . . . .	25	RSM 31-*/S600 . . . . .	115
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