





**DC - 3 WIRE – WELD IMMUNE**  
**Brass, Nickel Plated (BN),**  
**Cylindrical, Threaded,**  
**10-30V DC, 200mA**  
**1 LED for Output Energized**

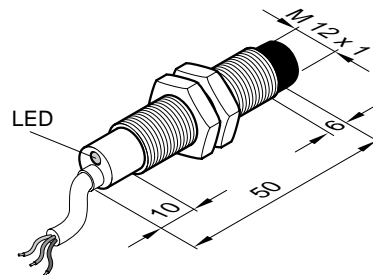
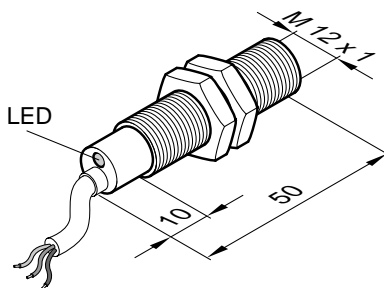
- *Circuitry that protects for electro-magnetic interference*
- *Flush models have teflon ceramic coatings to protect for weld slag*
- *Carries C $\epsilon$  mark*

- IEC(529) IP67 (NEMA 1, 3, 4, 6, 12, 13) Protection
- Short Circuit Protection
- Overload Protection
- Reverse Polarity Protection
- Wire Break Resistance
- Temperature Range: -25 to 70°C (-13 to 158°F)

			<b>M12 Flush Mount</b>		<b>M12 Non-Flush Mount</b>	
<b>Sensing Distance</b>			<b>2mm (.08 in.)</b>		<b>4mm (.16 in.)</b>	
<b>Cable or Connector Style Cat. No.</b>			<b>Cable</b>	<b>45</b>	<b>Cable</b>	<b>65</b>
<b>PNP</b>	Normally Open		9962-5840	9962-5845	9962-5900	9962-5965
	Normally Closed					
<b>NPN</b>	Normally Open					
	Normally Closed					
Ripple Voltage			≤10%	≤10%	≤10%	≤10%
Voltage Range			10V-30V	10V - 30V	10V - 30V	10V - 30V
Supply Current			≤10 mA	≤10 mA	≤10 mA	≤10 mA
Max. Load Current			200 mA	200 mA	200 mA	200 mA
Voltage Drop Across Sensor			≤2.4V	≤2.4V	≤2.4V	≤2.4V
Max. Leakage Current			≤10 μA	≤10 μA	≤10 μA	≤10 μA
Switching Frequency			15 Hz	15 Hz	15Hz	15 Hz
Hysteresis			≤15%	≤15%	≤15%	≤15%
Temperature Drift			≤10%	≤10%	≤10%	≤10%
Repeatability			.20mm (.008 in.)	.20mm (.008 in.)	.40mm (.016 in.)	.40mm (.016 in.)
Front Cap Material			Teflon	Teflon	PBTB	PBTB
Housing Material			Teflon Plated Brass	Teflon Plated Brass	Nickel Plated Brass	Nickel Plated Brass

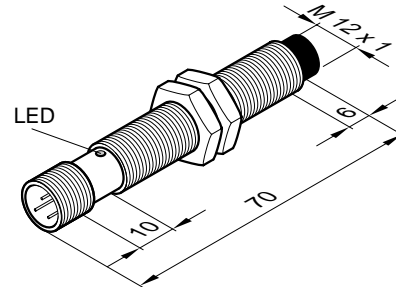
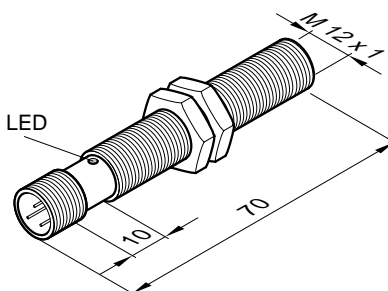
**Fixed Cable**

PVC 2m (6ft. 6in.). For 5m (16 ft. 5 in.) cable length, change the last two digits of the part number to 02. For other cable lengths and/or PUR cable, please consult Altech. Supplied with Brass, Nickel Plated (BN) locknuts.



**45/65 Style Connector**

4-pin, Micro style, 12mm (.47 in.) supplied with Brass, Nickel Plated (BN) locknuts.



### Metric/in. Conversion Table

1.0 mm = .04 in.	50.0 mm = 1.47 in.
6.0 mm = .23 in.	52.0 mm = 2.04 in.
8.0 mm = .31 in.	60.0 mm = 2.36 in.
10.0 mm = .39 in.	70.0 mm = 2.75 in.
12.0 mm = .47 in.	80.0 mm = 3.12 in.

This table converts millimeters to inches in reference to the illustrations included on these pages

### Accessories

#### 2 meter (6 ft. 6 in.) DC Cable Assemblies for Quick Disconnect Sensors

- 45/65 Connector 8000-5110 PVC, Straight
- 45/65 Connector 8000-5120 PVC, Right Angle
- 45/65 Connector 8000-5150 PVC, Right Angle, 2LED, NPN
- 45/65 Connector 8000-5160 PVC, Right Angle, 2LED, PNP

Change last digit of connector number to 5 for 5 meter cable

Refer to pages 116-121 for more cable information

Mounting Brackets – see Pages 114-115

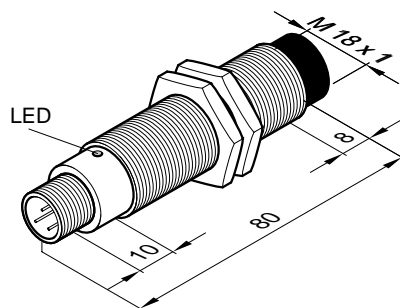
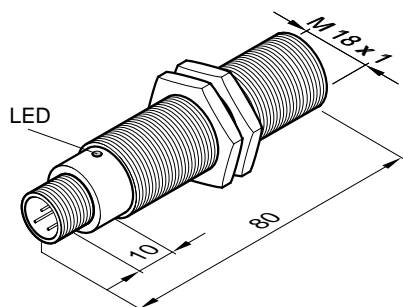
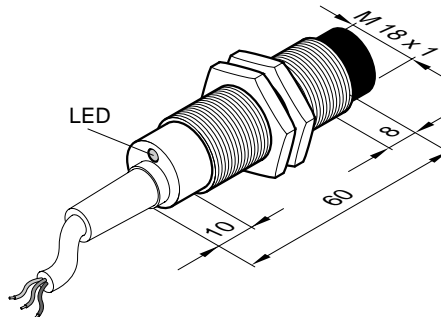
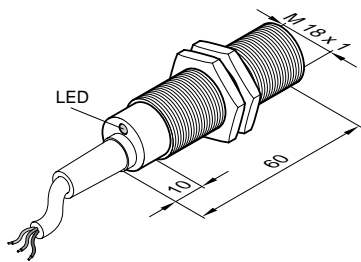
### M18 Flush Mount 5mm (.20 in.)

Cable	45
9964-5840	9964-5845
≤10%	≤10%
10V - 30V	10V - 30V
≤10 mA	≤10 mA
200 mA	200 mA
≤2.4V	≤2.4V
10 μA	10 μA
15 Hz	15 Hz
≤15%	≤15%
≤10%	≤10%
.50mm (.02 in.)	.50mm (.02 in.)
Teflon	Teflon
Teflon Plated Brass	Teflon Plated Brass

### M18 Non-Flush Mount 8mm (.31 in.)

Cable	65
9964-5900	9964-5965
≤10%	≤10%
10V - 30V	10V - 30V
≤10 mA	≤10 mA
200 mA	200 mA
≤2.4V	≤2.4V
10 μA	10 μA
15 Hz	15 Hz
≤15%	≤15%
≤10%	≤10%
.80mm (.03 in.)	.80mm (.03 in.)
PBTB	PBTB
Nickel Plated Brass	Nickel Plated Brass

Note: Sensor dimensions in mm.



### Wiring Diagrams

Note: Wire colors are applicable to cable purchased from Altech

#### PNP

