





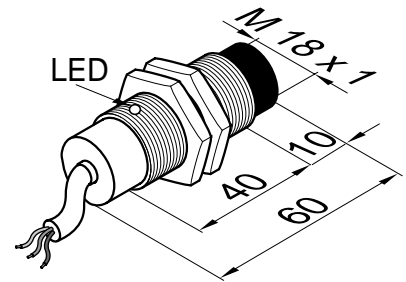
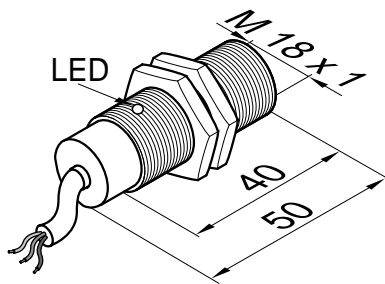
**DC - 3WIRE  
EXTENDED RANGE PLUS  
Brass, Nickel Plated (BN),  
Cylindrical, Threaded,  
10-30V DC, 200mA  
1 LED for Output Energized**

- **Up to 3 times the sensing distance**
- **Ideal for applications where large sensors will not fit**
- **Carries  $\text{C}$  mark**
- IEC(529) IP67 (NEMA 1, 3, 4, 6, 12, 13) Protection
- Sensing ranges from 3mm (.12 in.) to 40mm (1.57 in.)
- Short Circuit Protection
- Overload Protection
- Reverse Polarity Protection
- Wire Break Resistance
- Temperature Range: -25 to 70°C (-13 to 158°F)

			M18 Flush Mount		M18 Non-Flush Mount	
Sensing Distance			12mm (0.4 in.)		20mm (0.8 in.)	
Cable or Connector Style Cat. No.			Cable	65	Cable	65
<b>PNP</b>	Normally Open		9984-5000	9984-5065	9984-5200	9984-5265
	Normally Closed					
<b>NPN</b>	Normally Open					
	Normally Closed					
Ripple Voltage			≤20%	≤20%	≤20%	≤20%
Voltage Range			10V-30V	10V - 30V	10V - 30V	10V - 30V
Supply Current			≤20 mA	≤20 mA	≤20 mA	≤20 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			≤100 μA	≤100 μA	≤100 μA	≤100 μA
Switching Frequency			500 Hz	500 Hz	200 Hz	200 Hz
Hysteresis			≤10%	≤10%	≤10%	≤10%
Temperature Drift			≤10%	≤10%	≤10%	≤10%
Housing Material			Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass
Repeatability			0.6mm (.02 in.)	0.6mm (.02 in.)	1mm (.04 in.)	1mm (.04 in.)

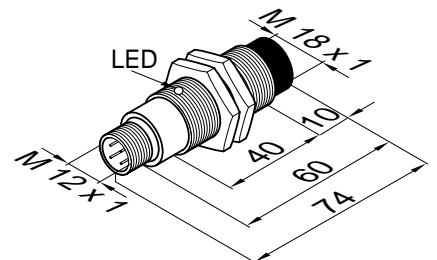
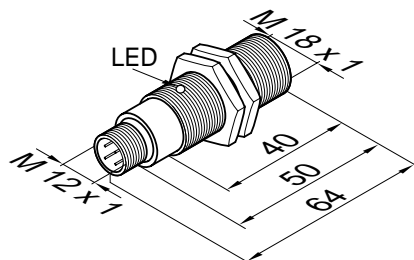
**Fixed Cable**

PVC 2m (6 ft. 6 in.). Supplied with Brass, Nickel Plated (BN) locknuts.



**65 Style Connectors**

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



### Metric/in. Conversion Table

1.0 mm = .04 in.	52.0 mm = 2.04 in.
4.0 mm = .16 in.	54.0 mm = 2.12 in.
6.0 mm = .23 in.	56.0 mm = 2.20 in.
8.0 mm = .31 in.	58.0 mm = 2.28 in.
12.0 mm = .47 in.	60.0 mm = 2.36 in.
40.0 mm = 1.57 in.	62.0 mm = 2.44 in.
44.0 mm = 1.73 in.	66.0 mm = 2.60 in.
45.0 mm = 1.77 in.	70.0 mm = 2.75 in.
50.0 mm = 1.97 in.	

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

### M30 Flush Mount

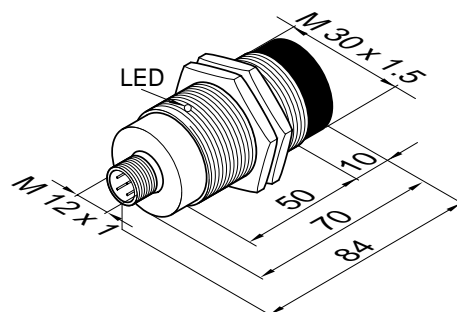
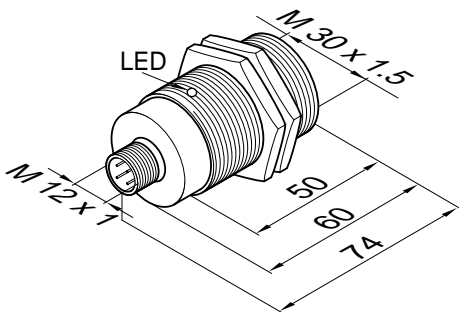
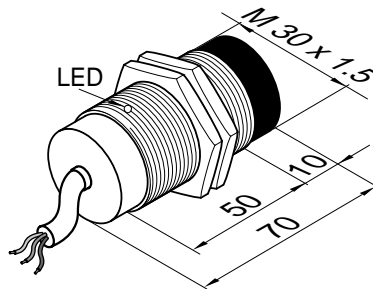
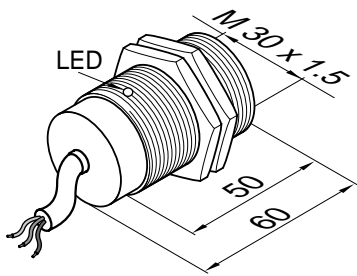
22mm (0.9 in.)

### M30 Non-Flush Mount

40mm (1.57 in.)

Cable	65	Cable	65
9986-5000	9986-5065	9986-5200	9986-5265
≤20%	≤20%	≤20%	≤20%
10V - 30V	10V - 30V	10V - 30V	10V - 30V
≤20 mA	≤20 mA	≤20 mA	≤20 mA
200 mA	200 mA	200 mA	200 mA
≤2.4V	≤2.4V	≤2.4V	≤2.04V
100 μA	100 μA	100 μA	100 μA
300 Hz	300 Hz	100 Hz	100 Hz
≤10%	≤10%	≤10%	≤15%
≤10%	≤10%	≤10%	≤10%
Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass
1.1mm (.045 in.)	1.1mm (.045 in.)	2mm (.078 in.)	2mm (.078 in.)

Note: Sensor dimensions in mm.



### Accessories

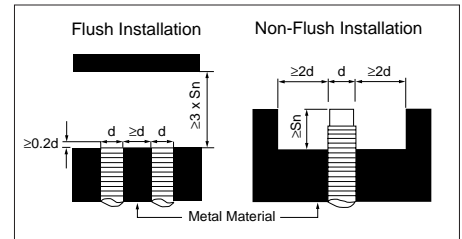
#### 2 meter (6 ft. 6 in.) DC Cable Assemblies for Quick Disconnect Sensors

65 Connector	8000-5110	PVC, Straight
65 Connector	8000-5120	PVC, Right Angle
65 Connector	8000-5150	PVC, Right Angle, 2LED NPN
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



**General Mounting** – You must maintain minimum distance between adjacent and opposite sensors in addition to non-target metals as specified in the drawings above. Flush mount sensors must extend at least 0.2 times the sensor diameter above the adjacent metal housing. Non-flush mount sensors must extend a distance greater than the sensing distance (Sn). Please contact Altech for any installation assistance

### Wiring Diagrams

Note: Wire colors are applicable to cable purchased from Altech

#### PNP

