



DC - 2 WIRE SENSORS
Brass, Nickel Plated (BN),
Cylindrical, Threaded,
M12 – 5-30V DC, 100mA
M18, M30 – 10-55V DC, 200 mA
1 LED for Output Energized

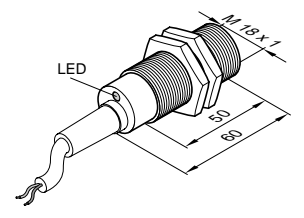
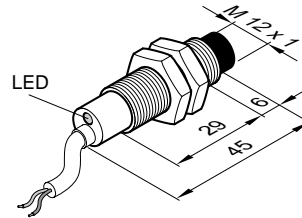
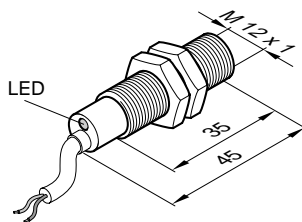
- **2 Wire devices reduce wiring requirements**
- **Economically Priced**
- **Carries C mark**

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

Sensing distance	M12 Flush Mount 2mm (.08 in.)		M12 Non-Flush Mount 4mm (.16 in.)		M18 Flush Mount 5mm (0.2 in.)
	Cable	65	Cable	65	Cable
Cable or Connector Style Cat. No.					
Normally Open 	9962-5600	9962-5665	9962-5700	9962-5765	9964-5400
Normally Closed 					
Ripple Voltage	≤10%	≤10%	≤10%	≤10%	≤10%
Voltage Range	5V-30V	5V-30V	5V-30V	5V-30V	10V-55V
Supply Current	≤3mA	≤3mA	≤3mA	≤3mA	≤5mA
Max. Load Current	100mA	100mA	100mA	100mA	200mA
Voltage Drop Across Sensor	≤5V	≤5V	≤5V	≤5V	≤6.5V
Max. Leakage Current	≤0.5mA	≤0.5mA	≤0.5mA	≤0.5mA	≤1.5mA
Switching Frequency	500Hz	500Hz	500Hz	500Hz	1000Hz
Hysteresis	≤15%	≤15%	≤15%	≤15%	≤15%
Temperature Drift	≤10%	≤10%	≤10%	≤10%	≤10%
Repeatability	.20mm (.008 in.)	.20mm (.008 in.)	.40mm (.016 in.)	.40mm (.016 in.)	.40mm (.016 in.)
Front Cap Material	PBTP	PBTP	PBTP	PBTP	PBTP

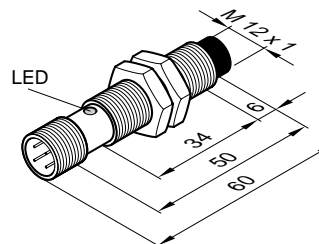
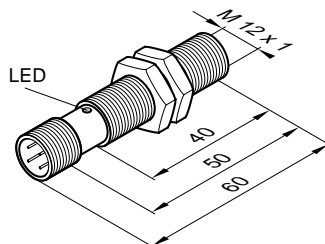
Fixed Cable

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.



65 Style Connector

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



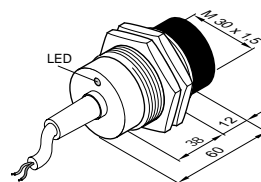
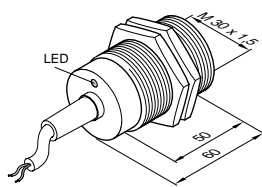
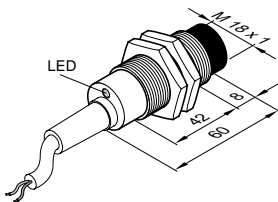
Metric/in. Conversion Table

1.5 mm = .06 in.	23.0 mm = .08 in.
2.0 mm = .08 in.	28.0 mm = 1.10 in.
4.0 mm = .16 in.	30.0 mm = 1.18 in.
5.0 mm = .20 in.	32.0 mm = 1.26 in.
6.0 mm = .23 in.	34.0 mm = 1.34 in.
8.0 mm = .31 in.	40.0 mm = 1.57 in.
10.0 mm = .39 in.	50.0 mm = 1.97 in.
12.0 mm = .47 in.	51.0 mm = 2.01 in.
15.0 mm = .59 in.	60.0 mm = 2.36 in.
18.0 mm = .70 in.	80.0 mm = 3.12 in.

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

M18 Non-Flush Mount 8mm (.31 in.)	M30 Flush Mount 10mm (.39 in.)	M30 Non-Flush Mount 15mm (.59 in.)
Cable	Cable	Cable
9964-5500	9966-5400	9966-5500
≤10%	≤10%	≤10%
10V-55V	10V-55V	10V-55V
≤5mA	≤5mA	≤5mA
200mA	200mA	200mA
≤6.5V	≤6.5V	≤6.5V
≤1.5mA	≤1.5mA	≤1.5mA
500Hz	500Hz	300Hz
≤15%	≤15%	≤15%
≤10%	≤10%	≤10%
.80mm (.03 in.)	1mm (.039 in.)	1.5mm (.059 in.)
PBTP	PBTP	PBTP

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

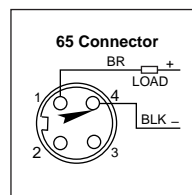
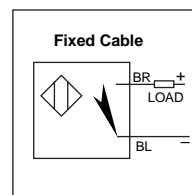
Change last digit of connector number to 5 for 5 meter cable

Refer to pages 116-121 for more cable information

Mounting Brackets – see Pages 114-115

Wiring Diagrams



Note: Wire colors are applicable to cable purchased from Altech



**AC - 2 WIRE
STANDARD SERIES
Brass, Nickel Plated (BN),
Cylindrical, Threaded,
90-250V AC, 180 mA,
1 LED for Output Energized**

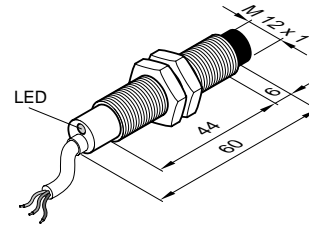
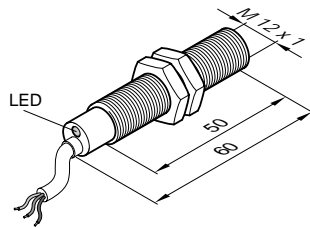
- **Most complete range of Fixed Cable and Quick Disconnect Styles**
- **Available in normally open (N.O.) and normally closed (N.C.) output configuration**
- **This series features the 360° LED viewing connector type "67"**
- **Carries C mark**

- IEC (529) IP67 (NEMA 1, 3, 4, 6, 12, 13) Protection
- Temperature Range: -25 to 70°C (-13 to 158°F)

Sensing Distance	M12 Flush Mount 2mm (.08 in.)				M12 Non-Flush Mount 4mm (.16 in.)				
	Cable or Connector Style Cat. No.	Cable	62	66/67	68	Cable	62	66/67	68
Normally Open 		9952-0500	9952-0562	9952-0566 9952-0567	9952-0568	9952-0400	9952-0462	9952-0466 9952-0467	9952-0468
Normally Closed 		9952-0900		9952-0966 9952-0967	9952-0968	9952-0800		9952-0866 9952-0867	9952-0868
Voltage Range		90V-250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V
Operating Frequency		50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Supply Current		5 mA	5 mA	5 mA	5 mA	5 mA	5 mA	5 mA	5 mA
Max. Load Current		180 mA	100 mA	180 mA	180 mA	180 mA	180 mA	180 mA	180 mA
Voltage Drop Across Sensor		≤8V	≤8V	≤8V	≤8V	≤8V	≤8V	≤8V	≤8V
Max. Leakage Current		≤3mA/220V ≤1.5mA/110V	≤3mA/220V ≤1.5mA/110V	≤3mA/220V ≤1.5mA/110V	≤3mA/220V ≤1.5mA/110V	≤3mA/220V ≤1.5mA/110V	≤3mA/220V ≤1.5mA/110V	≤3mA/220V ≤1.5mA/110V	≤3mA/220V ≤1.5mA/110V
Short Term Current (20ms 1Hz)		1A	1A	1A	1A	1A	1A	1A	1A
Switching Frequency		15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V
Hysteresis		≤15%	≤15%	≤15%	≤15%	≤15%	≤15%	≤15%	≤15%
Temperature Drift		≤10%	≤10%	≤10%	≤10%	≤10%	≤10%	≤10%	≤10%
Repeatability		2mm (.008in.)	.2mm (.008in.)	2mm (.008in.)	2mm (.008in.)	.4mm (.016in.)	.4mm (.016in.)	.4mm (.016in.)	.4mm (.016in.)
Front Cap Material		PBTP	PBTP	PBTP	PBTP	PBTB	PBTB	PBTB	PBTB

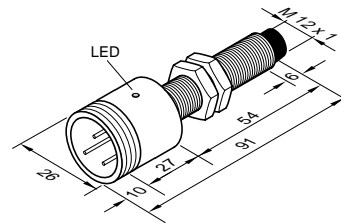
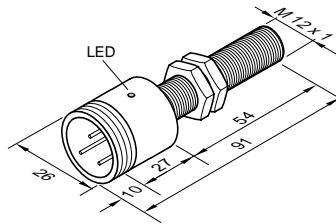
Fixed Cable

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.



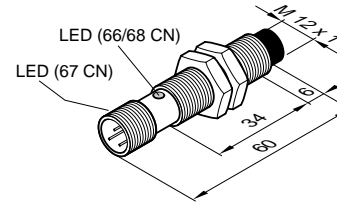
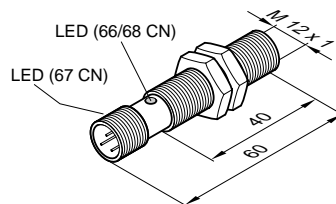
62 Style Connector

3-pin, Mini style, 25mm (1.0 in.) supplied with Brass, Nickel Plated (BN) locknuts.



66/67/68 Style Connectors

The 66/67 connectors are 4-pin, (68 connector, 3-pin), Micro style, 12mm (.47 in.) supplied with Brass, Nickel Plated (BN) locknuts. The 67 Connector is clear, offering 360° LED viewing.



Metric/in. Conversion Table

1.0 mm = .04 in.	29.0 mm = 1.14 in.
5.0 mm = .20 in.	34.0 mm = 1.34 in.
6.0 mm = .23 in.	35.0 mm = 1.37 in.
8.0 mm = .31 in.	40.0 mm = 1.57 in.
12.0 mm = .47 in.	43.0 mm = 1.69 in.
23.0 mm = .90 in.	50.0 mm = 1.47 in.
28.0 mm = 1.10 in.	60.0 mm = 2.36 in.

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

Accessories

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

62 Connector	8000-5030	PVC, Straight
66/67 Connector	8000-5060	PVC, Right Angle
66/67 Connector	8000-5070	PVC, Straight
68 Connector	8000-5130	PVC Straight
68 Connector	8000-5140	Right Angle

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

Refer to pages 116-121 for more cable information

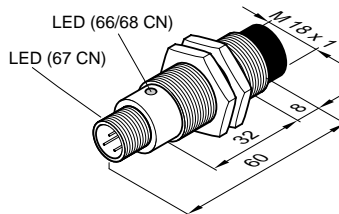
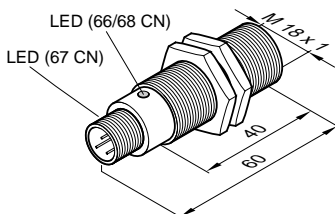
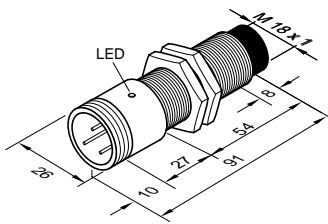
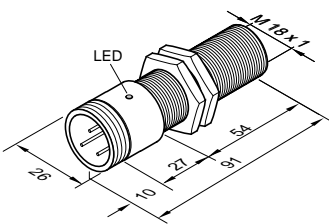
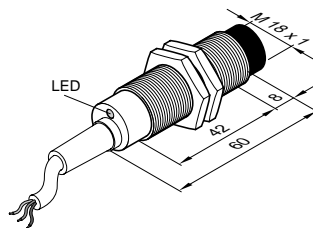
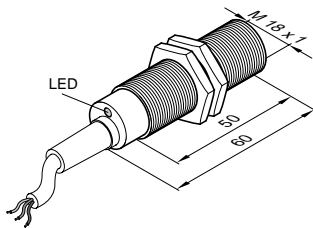
Mounting Brackets – see Pages 114-115

M18 Flush Mount 5mm (.02 in.)

M18 Non-Flush Mount 8mm (.031 in.)

Cable	62	66/67	68	Cable	62	66/67	68
9954-2200	9954-2262	9954-2266 9954-2267	9954-2268	9954-1900	9954-1962	9954-1966 9954-1967	9954-1968
9954-2600		9954-2666 9954-2667	9954-2668	9954-2500			9954-2568
90V - 250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V	90V - 250V
50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
5 mA	5 mA	5 mA	5 mA	5 mA	5 mA	5 mA	5 mA
180 mA	180 mA	180 mA	180 mA	180 mA	180 mA	180 mA	180 mA
≤8V	≤8V	≤8V	≤8V	≤8V	≤8V	≤8V	≤8V
≤3mA/220V	≤3mA/220V	≤3mA/220V	≤3mA/220V	≤3mA/220V	≤3mA/220V	≤3mA/220V	≤3mA/220V
≤1.5mA/110V	≤1.5mA/110V	≤1.5mA/110V	≤1.5mA/110V	≤1.5mA/110V	≤1.5mA/110V	≤1.5mA/110V	≤1.5mA/110V
1A	1A	1A	1A	1A	1A	1A	1A
15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V	15Hz/220V
≤15%	≤15%	≤15%	≤15%	≤15%	≤15%	≤15%	≤15%
≤10%	≤10%	≤10%	≤10%	≤10%	≤10%	≤10%	≤10%
.5mm (.02in.)	.5mm (.02in.)	.5mm (.02in.)	.5mm (.02in.)	.8mm (.031in.)	.8mm (.031in.)	.8mm (.031in.)	.8mm (.031in.)
PBTB	PBTB	PBTB	PBTB	PBTB	PBTB	PBTB	PBTB

Note: Sensor dimensions in mm.



Wiring Diagrams

Note: Wire colors are applicable to cable purchased from Altech

