## DC - 3 WIRE – STANDARD
Brass, Nickel Plated (BN), Cylindrical, Threaded, 10-30V DC, 200mA, 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**
- **Industry standard 10-30V DC operating voltage and 200mA output current**
- **Carries CE 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)

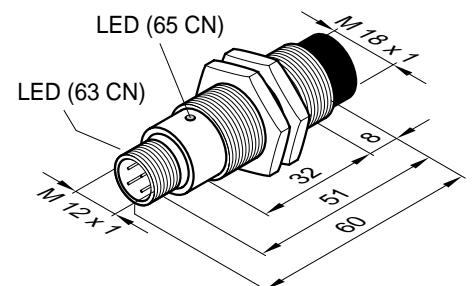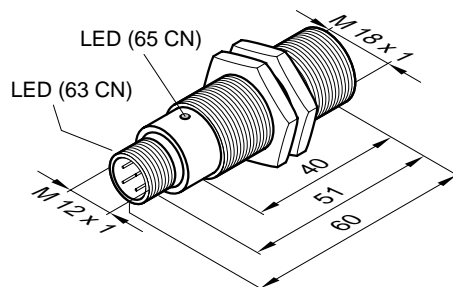|		M18 Flush Mount			M18 Non-Flush Mount		
Sensing Distance		**5mm (.20 in.)**			**8mm (.31 in.)**		
Cable or Connector Style Cat. No.		Cable	63	65	Cable	63	65
PNP Normally Open		9964-4000	9964-4063	9964-4065	9964-4200	9964-4263	9964-4265
Normally Closed		9964-4400		9964-4465	9964-4600		9964-4665
NPN Normally Open		9964-4100	9964-4163	9964-4165	9964-4300	9964-4363	9964-4365
Normally Closed		9964-4500		9964-4565	9964-4700		9964-4765
Ripple Voltage		≤10%	≤10%	≤10%	≤10%	≤10%	≤10%
Voltage Range		10V - 30V	10V - 30V	10V - 30V	10V - 30V	10V - 30V	10V - 30V
Supply Current		≤10 mA	≤10 mA	≤10 mA	≤10 mA	≤10 mA	≤10 mA
Max. Load Current		200 mA	200 mA	200 mA	200 mA	200 mA	200 mA
Voltage Drop Across Sensor		≤2.4V	≤2.4V	≤2.4V	≤2.4V	≤2.4V	≤2.4V
Max. Leakage Currrent		≤10 µA	≤10 µA	≤10 µA	≤10 µA	≤10 µA	≤10 µA
Switching Frequency		1000 Hz	1000 Hz	1000 Hz	500 Hz	500 Hz	500 Hz
Hysterisis		≤15%	≤15%	≤15%	≤15%	≤15%	≤15%
Temperature Drift		≤10%	≤10%	≤10%	≤10%	≤10%	≤10%
Repeatability		.25mm (.01 in.)	.25mm (.01 in.)	.25mm (.01 in.)	.40mm (.016 in.)	.40mm (.016 in.)	.40mm (.016 in.)
Front Cap Material		PBTP	PBTP	PBTP	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.
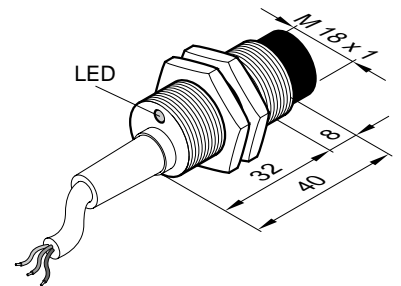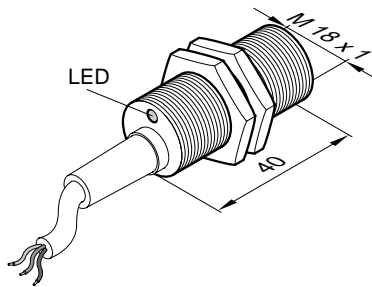
63 and 65 Style Connectors
4-pin, Micro style, 12mm (.47 in.) supplied with Brass, Nickel Plated (BN) locknuts. The 63 Connector is clear, offering 360° LED viewing.

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![Altech logo]

Metric/in. Conversion Table

1.5 mm = .06 in.	23.0 mm = .91 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

Accessories

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

63/65 Connectors, 4 PIN – 3 Wire cable (PIN 1, 3, 4) :
63/65 Connector 8000-5110   PVC, Straight
63/65 Connector 8000-5120   PVC, Right Angle
63/65 Connector 8000-5150   PVC, Right Angle, 2LED, NPN
63/65 Connector 8000-5160   PVC, Right Angle, 2LED, PNP
63/65 Connectors, 4PIN – 4 Wire cable (PIN 1, 2, 3, 4) :
63/65 Connectors 8000-5280   PVC, Right Angle

Change last digit of connector number to 5 for 5 meter cable
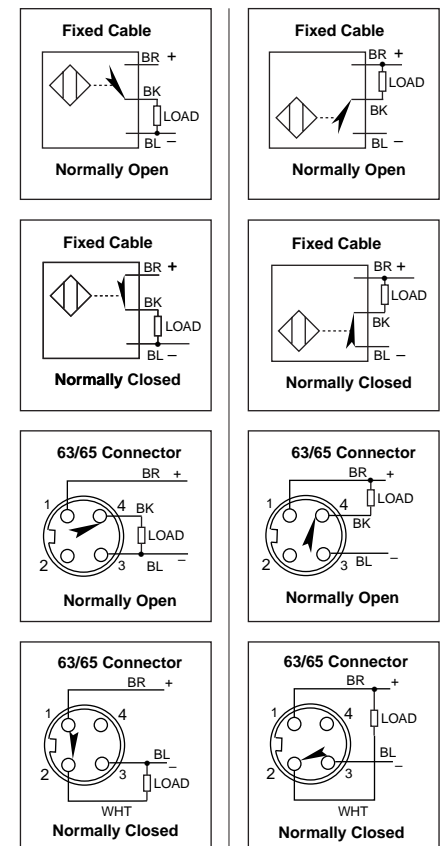
Refer to pages 116-121 for more cable information

Mounting Brackets – see Pages 114-115

M30 Flush Mount
10mm (.39 in.)

M30 Non-Flush Mount
15mm (.59 in.)

Cable	63	65	Cable	63	65
9966-4000	9966-4063	9966-4065	9966-4200	9966-4263	9966-4265
9966-4400		9966-4465	9966-4600		9966-4665
9966-4100	9966-4163	9966-4165	9966-4300		9966-4365
9966-4500		9966-4565	9966-4700		9966-4765
≤10%	≤10%	≤10%	≤10%	≤10%	≤10%
10V - 30V	10V - 30V	10V - 30V	10V - 30V	10V - 30V	10V - 30V
≤10 mA	≤10 mA	≤10 mA	≤10 mA	≤10 mA	≤10 mA
200 mA	200 mA	200 mA	200 mA	200 mA	200 mA
≤2.4V	≤2.4V	≤2.4V	≤2.4V	≤2.4V	≤2.4V
≥10 µA	≥10 µA	≥10 µA	≥10µA	≥10µA	≥10µA
500 Hz	500 Hz	500 Hz	300 Hz	300 Hz	300 Hz
≤15%	≤15%	≤15%	≤15%	≤15%	≤15%
≤10%	≤10%	≤10%	≤10%	≤10%	≤10%
.50mm (.02 in.)	.50mm (.02 in.)	.50mm (.02 in.)	.75mm (.03 in.)	.75mm (.03 in.)	.75mm (.03 in.)
PBTB	PBTB	PBTB	PBTB	PBTB	PBTB

Note: Sensor dimensions in mm.

Wiring Diagrams

Note: Wire colors are applicable to cable purchased from Altech
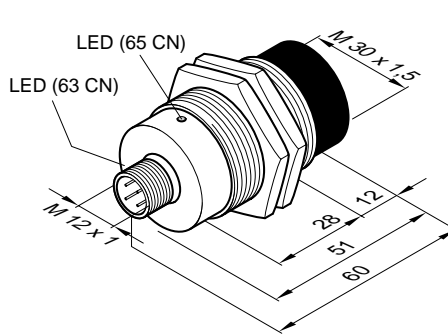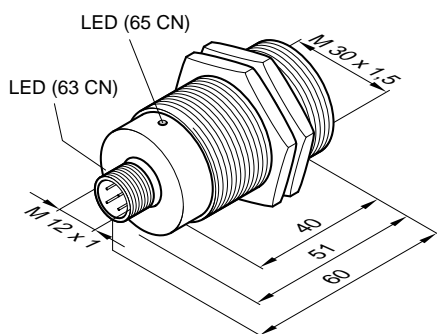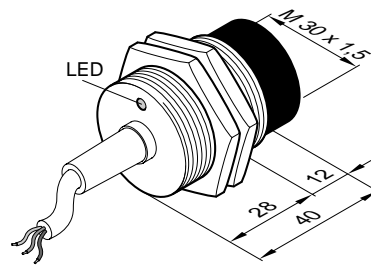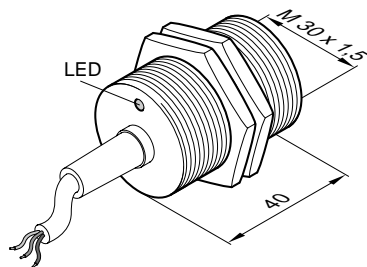
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