

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

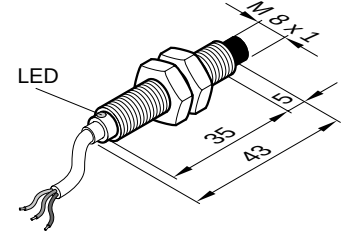
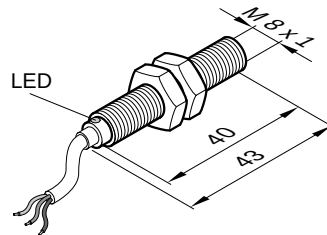
- *Most complete range of Fixed Cable and Quick Disconnect Styles*
- *Available in normally open (N.O.) and normally closed (N.C.) output configuration*
- *Industry standard 10-30V DC operating voltage and 200mA output current*
- *Carries  $\text{C}\epsilon$  mark*

- 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)

| M8 Flush Mount                    |                 |                                                                                   |                  |                  | M8 Non-Flush Mount |                  |                  |                  |                  |                  |
|-----------------------------------|-----------------|-----------------------------------------------------------------------------------|------------------|------------------|--------------------|------------------|------------------|------------------|------------------|------------------|
| Sensing Distance                  |                 |                                                                                   | 1.5mm (.06 in.)  |                  | 2mm (.08 in.)      |                  |                  |                  |                  |                  |
| Cable or Connector Style Cat. No. |                 |                                                                                   | Cable            | 63               | 64                 | 65               | Cable            | 63               | 64               | 65               |
| PNP                               | Normally Open   |  | 9961-0200        | 9961-0263        | 9961-0264          | 9961-0265        | 9961-0400        | 9961-0463        | 9961-0464        | 9961-0465        |
|                                   | Normally Closed |  | 9961-4400        |                  | 9961-4464          | 9961-4465        | 9961-4600        |                  | 9961-4664        | 9961-4665        |
| NPN                               | Normally Open   |  | 9961-0300        | 9961-0363        | 9961-0364          | 9961-0365        | 9961-0500        | 9961-0563        | 9961-0564        | 9961-0565        |
|                                   | Normally Closed |  | 9961-4500        |                  | 9961-4564          | 9961-4565        | 9961-4700        |                  | 9961-4764        | 9961-4765        |
| Ripple Voltage                    |                 |                                                                                   | ≤10%             | ≤10%             | ≤10%               | ≤10%             | ≤10%             | ≤10%             | ≤10%             | ≤10%             |
| Voltage Range                     |                 |                                                                                   | 10V-30V          | 10V - 30V        | 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           | ≤10 mA           | ≤10 mA           |
| Max. Load Current                 |                 |                                                                                   | 200 mA           | 200 mA           | 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            | ≤2.4V            | ≤2.4V            |
| Max. Leakage Current              |                 |                                                                                   | ≤10 μA           | ≤10 μA           | ≤10 μA             | ≤10 μA           | ≤10 μA           | ≤10 μA           | ≤10 μA           | ≤10 μA           |
| Switching Frequency               |                 |                                                                                   | 2000 Hz          | 2000 Hz          | 2000 Hz            | 2000 Hz          | 2000 Hz          | 2000 Hz          | 2000 Hz          | 2000 Hz          |
| Hysteresis                        |                 |                                                                                   | ≤15%             | ≤15%             | ≤15%               | ≤15%             | ≤15%             | ≤15%             | ≤15%             | ≤15%             |
| Temperature Drift                 |                 |                                                                                   | ≤10%             | ≤10%             | ≤10%               | ≤10%             | ≤10%             | ≤10%             | ≤10%             | ≤10%             |
| Repeatability                     |                 |                                                                                   | .15mm (.006 in.) | .15mm (.006 in.) | .15mm (.006 in.)   | .15mm (.006 in.) | .20mm (.008 in.) | .20mm (.008 in.) | .20mm (.008 in.) | .20mm (.008 in.) |
| Front Cap Material                |                 |                                                                                   | PBTP             | PBTP             | PBTP               | PBTP             | PBTB             | PBTB             | PBTB             | PBTB             |

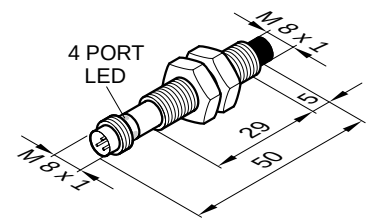
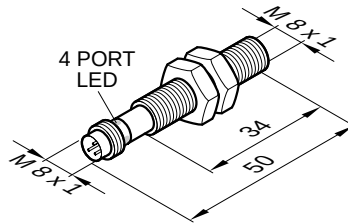
#### Fixed Cable

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. Non-metallic locknuts for M8 and Brass, Nickel Plated (BN) locknuts for M12 through M30.



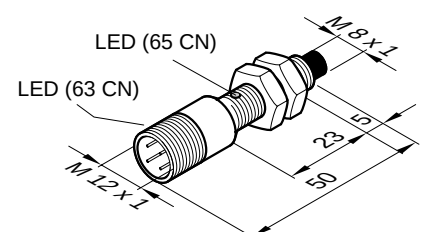
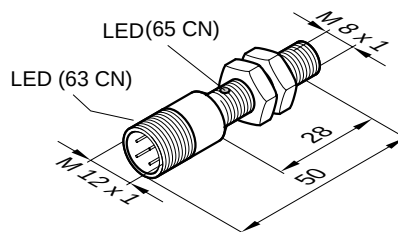
#### 64 Style Connector

3-pin, Pico style, 8mm (.31 in.) supplied with non-metallic locknuts for M8 and Brass, Nickel Plated (BN) locknuts for M12 through M30.



#### 63 and 65 Style Connectors

4-pin, Micro style, 12mm (.47 in.) supplied with Non-metallic locknuts for M8 and Brass, Nickel Plated (BN) locknuts for M12 through M30. The 63 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

## M12 Flush Mount

2mm (.08 in.)

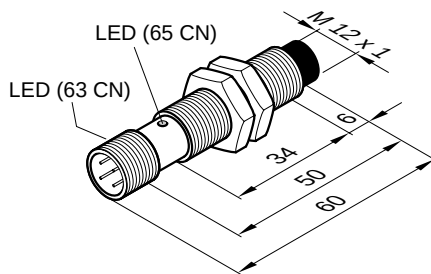
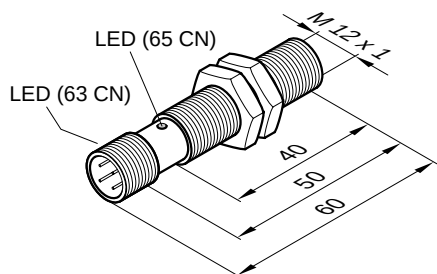
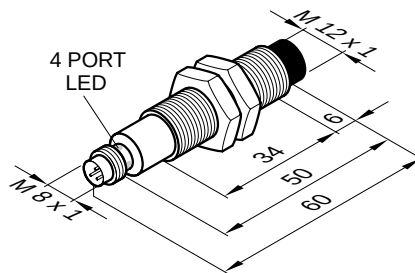
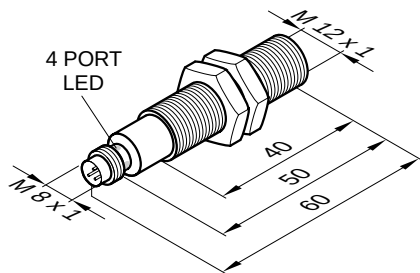
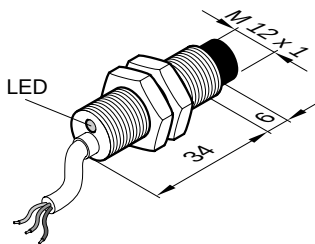
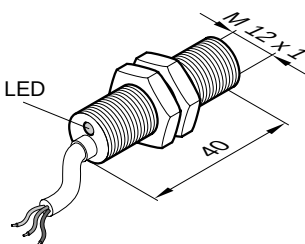
| Cable           | 63              | 64              | 65              |
|-----------------|-----------------|-----------------|-----------------|
| 9962-4000       | 9962-4063       | 9962-4064       | 9962-4065       |
| 9962-4400       |                 | 9962-4464       | 9962-4465       |
| 9962-4100       | 9962-4163       | 9962-4164       | 9962-4165       |
| 9962-4500       |                 | 9962-4564       | 9962-4565       |
| ≤10%            | ≤10%            | ≤10%            | ≤10%            |
| 10V - 30V       | 10V - 30V       | 10V - 30V       | 10V - 30V       |
| ≤10 mA          | ≤10 mA          | ≤10 mA          | ≤10 mA          |
| 200 mA          | 200 mA          | 200 mA          | 200 mA          |
| ≤2.4V           | ≤2.4V           | ≤2.4V           | ≤2.4V           |
| ≤10 μA          | ≤10 μA          | ≤10 μA          | ≤10 μA          |
| 2000 Hz         | 2000 Hz         | 2000 Hz         | 2000 Hz         |
| ≤15%            | ≤15%            | ≤15%            | ≤15%            |
| ≤10%            | ≤10%            | ≤10%            | ≤10%            |
| .20mm (.008in.) | .20mm (.008in.) | .20mm (.008in.) | .20mm (.008in.) |
| PBTB            | PBTB            | PBTB            | PBTB            |

## M12 Non-Flush Mount

4mm (.16 in.)

| Cable           | 63              | 64              | 65              |
|-----------------|-----------------|-----------------|-----------------|
| 9962-4200       | 9962-4263       | 9962-4264       | 9962-4265       |
| 9962-4600       |                 | 9962-4664       | 9962-4665       |
| 9962-4300       | 9961-4363       | 9962-4364       | 9962-4365       |
| 9962-4700       |                 | 9962-4764       | 9962-4765       |
| ≤10%            | ≤10%            | ≤10%            | ≤10%            |
| 10V - 30V       | 10V - 30V       | 10V - 30V       | 10V - 30V       |
| ≤10 mA          | ≤10 mA          | ≤10 mA          | ≤10 mA          |
| 200 mA          | 200 mA          | 200 mA          | 200 mA          |
| ≤2.4V           | ≤2.4V           | ≤2.4V           | ≤2.4V           |
| ≤10 μA          | ≤10 μA          | ≤10 μA          | ≤10 μA          |
| 1000 Hz         | 1000 Hz         | 1000 Hz         | 1000 Hz         |
| ≤15%            | ≤15%            | ≤15%            | ≤15%            |
| ≤10%            | ≤10%            | ≤10%            | ≤10%            |
| .40mm (.016in.) | .40mm (.016in.) | .40mm (.016in.) | .40mm (.016in.) |
| PBTB            | PBTB            | PBTB            | PBTB            |

Note: Sensor dimensions in mm.



## Accessories

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

|              |           |                             |
|--------------|-----------|-----------------------------|
| 64 Connector | 8000-5220 | PVC, Straight               |
| 64 Connector | 8000-5230 | PVC, Right Angle, 2LED, PNP |
| 64 Connector | 8000-5240 | PVC, Right Angle, 2LED, NPN |

## 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

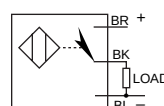
## Mounting Brackets – See Pages 114-115

## Wiring Diagrams

Note: Wire colors are applicable to cable purchased from Altech

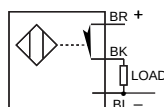
## PNP

## Fixed Cable



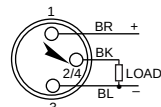
Normally Open

## Fixed Cable



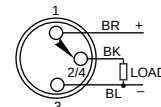
Normally Closed

## 64 Connector



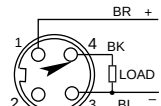
Normally Open

## 64 Connector



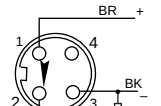
Normally Closed

## 63/65 Connector



Normally Open

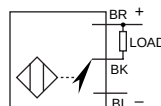
## 63/65 Connector



Normally Closed

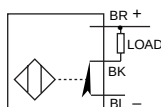
## NPN

## Fixed Cable



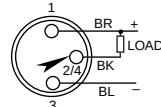
Normally Open

## Fixed Cable



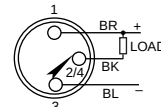
Normally Closed

## 64 Connector



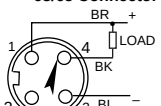
Normally Open

## 64 Connector



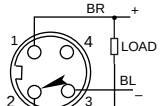
Normally Closed

## 63/65 Connector



Normally Open

## 65 Connector



Normally Closed

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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