

# INDUCTIVE PROXIMITY SENSORS

## SMALL DIAMETER—5 AND 8 mm

### E57 Series



- Small 5 and 8 mm Diameters for Use in Applications with Limited Space for Mounting Sensors
- Stainless Steel or Ni-Brass Housings
- All Models Include an LED Indicator to Show Output Status
- Short Circuit and Reverse Polarity Protection
- Rated NEMA 4, 4X, 6, 6P, 12 and 13 (IP67) for High Resistance to Environmental Factors

### Applications

- Automation Equipment
- Robotics
- Machine Tool
- Counting
- Sorting

These unique Cutler-Hammer® Inductive Proximity Sensors are designed to be used in extremely small spaces. A wide variety of models are available with housing diameters of 8 mm (0.31") and a very small 5 mm (0.20"), allowing you to choose the one that best fits your application. The sensors are 3-wire devices that operate from 10 to 30 Vdc. Both shielded and unshielded versions are available.

### SPECIFICATIONS

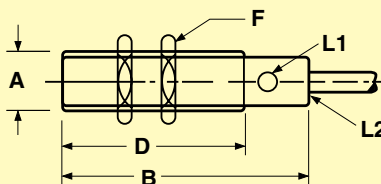
**Operating Voltage:** 10 to 30 Vdc  
**Maximum Load Current:** 200 mA  
**Switching Frequency:** 2 kHz  
**Leakage Current:** 0.01 mA maximum  
**Voltage Drop:** 1.5V maximum  
**Burden Current:** 10 mA maximum  
**Protection Transient:** Power on false pulse suppression, auto-reset short circuit

E57EAL5T110SP shown larger than actual size.

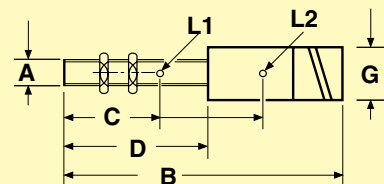


E57-08GS01-CDB shown larger than actual size.

Cable Models—Threaded Barrel



Connector Models—Threaded Barrel



Dimensions: mm (in)

| DIA<br>A                          | LENGTH<br>B | mm<br>C     | (in)<br>D   | THREAD<br>E | NUT WIDTH<br>F | CONNECTOR<br>DIA G | LED<br>LOCATION |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------|--------------------|-----------------|
| 5 mm<br>(0.20")                   | 25<br>(1.0) | —           | 21<br>(0.8) | M5 x 0.5    | SW8            | —                  | L1              |
| 8 mm<br>(0.31")<br>cable          | 30<br>(1.8) | —           | 30<br>(1.2) | M8 x 1      | SW13           | —                  | L2              |
| 8 mm<br>(0.31")<br>micro-<br>con. | 50<br>(2.0) | 40<br>(1.6) | 25<br>(1.0) | M8 x 1      | SW13           | 1.2<br>(0.47)      | L2              |

**Switching Hysteresis:** <15% rated sensing distance  
**Repeat Accuracy:** <1% sensing distance  
**Time Delay Before Availability:** <50 mS  
**Output Indicator LED:** Lights when output is ON  
**Operating Temperature:** -25 to 70°C (-13 to 158°F)

**Enclosure Ratings:** NEMA 4, 4X, 6, 6P, 12 and 13 (IP67)  
**Housing Material:** Stainless steel or Ni plated brass  
**Cable:** PVC high flex, oil/water resistant, 22 AWG



E57EAL5T110SP shown larger than actual size.

E57-08GS01-CDB shown larger than actual size.

### Wiring Diagrams (Pin Numbers Are for Reference, Rely on Pin Location When Wiring)

| OPERATING VOLTAGE<br>3-WIRE SENSORS | OUTPUT   | CABLE MODELS | MICRO CONNECTOR MODELS<br>(FACE VIEW MALE SHOWN) |
|-------------------------------------|----------|--------------|--------------------------------------------------|
| 10 to 30 Vdc                        | NO (NPN) |              |                                                  |
|                                     | NO (PNP) |              |                                                  |

| To Order                                              |                |                   |                           |              |                           |
|-------------------------------------------------------|----------------|-------------------|---------------------------|--------------|---------------------------|
| TYPE                                                  | MODEL NO.      | OPERATING VOLTAGE | SENSING RANGE<br>mm (in)  | SHIELDING    | CONNECTION TYPE<br>m (ft) |
| 5 mm (0.20") Dia. End Sensing NO Output SS Case       | E57EAL5T110SP  | 10 to 30 Vdc      | 0.8 (0.03)                | Shielded NPN | 2 (6) cable               |
|                                                       | E57EAL5T111SP  |                   |                           | Shielded PNP |                           |
| 8 mm (0.31") Dia. End Sensing NO Output Ni-Brass Case | E57-08GS01-C   | 10 to 30 Vdc      | 1 (0.04)                  | Shielded NPN | 2 (6) cable               |
|                                                       | E57-08GS01-CDB |                   |                           |              | 4-pin micro DC connector  |
|                                                       | E57-08GS01-G   |                   |                           | Shielded PNP | 2 (6) cable               |
|                                                       | E57-08GS01-GDB |                   |                           |              | 4-pin micro DC connector  |
|                                                       | E57-08GU02-C   |                   | 2 (0.08)                  | Shielded NPN | 2 (6) cable               |
|                                                       | E57-08GU02-CDB |                   |                           |              | 4-pin micro DC connector  |
|                                                       | E57-08GU02-G   |                   |                           | Shielded PNP | 2 (6) cable               |
|                                                       | E57-08GU02-GDB |                   |                           |              | 4-pin micro DC connector  |
|                                                       | E57-08GE03-C   |                   | 3 (0.1)<br>Extended Range | Shielded NPN | 2 (6) cable               |
|                                                       | E57-08GE03-CDB |                   |                           |              | 4-pin micro DC connector  |
|                                                       | E57-08GE03-G   |                   |                           | Shielded PNP | 2 (6) cable               |
|                                                       | E57-08GE03-GDB |                   |                           |              | 4-pin micro DC connector  |

Ordering Examples: E57EAL5T110SP, 5 mm (0.20") diameter prox, shielded, NPN output, 2 m (6') cable.  
E57-08GU02-C, 8 mm (0.31") unshielded NPN output with 2 m (6') cable.

### Accessories

| MODEL NO.     | DESCRIPTION                                  |
|---------------|----------------------------------------------|
| CSDS4A4CY2202 | DC cable, 4-pin, 22 AWG, 2 m (6') PVC jacket |
| E57KM8        | Bracket for 8 mm (0.31") tubular sensors     |