# EZ-LIGHT® 2-Color Indicators for Use with Sensors Datasheet

## Technical Information

*DC-operated LED indicators*

To view or download the latest technical information about this product, including specifications, dimensions, accessories, and wiring, go to www.bannerengineering.com.

**WARNING:**
- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

## Models

| Models | | Inputs |
|---|---|---|
|  | **M18GYX7PQ** | PNP |
| | **M18GYX7NQ** | NPN |
| | • Nickel-plated brass housing, thermoplastic diffuser<br>• Fully encapsulated IP67 | |
|  | **K30LGYX7PQ** | PNP |
| | **K30LGYX7NQ** | NPN |
| | • 22 mm threaded polycarbonate base, translucent polycarbonate dome<br>• Fully encapsulated IP67, IP69K per DIN 40050-9 | |
|  | **K50LGYX7PQ** | PNP |
| | **K50LGYX7NQ** | NPN |
| | • 30 mm threaded polycarbonate base, translucent polycarbonate dome<br>• Fully encapsulated IP67, IP69K per DIN 40050-9 | |
|  | **K50FLGYX7PQ** | PNP |
| | **K50FLGYX7NQ** | NPN |
| | • Polycarbonate base, translucent polycarbonate dome<br>• Fully encapsulated IP67, IP69K per DIN 40050-9 | |
|  | **K80LGYX7PQ** | PNP |
| | **K80LGYX7NQ** | NPN |
| | • ABS and polycarbonate base, translucent polycarbonate dome<br>• Electronics fully encapsulated IP67 | |

The following models are no longer available for order, but are still covered by the information in this document.


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| Models | | Inputs |
|---|---|---|
|  | **T18GYX7PQ** | PNP |
| | **T18GYX7NQ** | NPN |
| | • Thermoplastic polyester housing, thermoplastic diffuser<br>• Fully encapsulated IP67 | |
|  | **T30GYX7PQ** | PNP |
| | **T30GYX7NQ** | NPN |
| | • Thermoplastic polyester housing, thermoplastic diffuser<br>• Fully encapsulated IP67 | |
|  | **T8LGYX7PQP** | PNP |
| | **T8LGYX7NQP** | NPN |
| | • Polycarbonate/ABS alloy housing, thermoplastic diffuser<br>• IP67 | |

Models with a quick disconnect require a mating cordset.See "Cordsets" on page 4.

**T8L Models:** Standard 150 mm (6 in) PVC-jacketed 4-pin M12 quick-disconnect connector models are listed. To order the integral 4-wire cabled model, omit suffix **QP** (for example, **T8LGYX7P**).

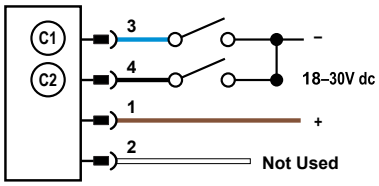
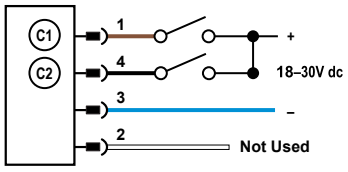
**K80L Models:** Standard integral 4-pin M12 quick-disconnect connector models are listed. To order the terminal-wired model, omit suffix **Q** (for example, **K80LGYX7P**).

**T30 Models:** Standard integral 4-pin M12 quick-disconnect connector models are listed. To order the 150 mm (6 in) PUR-jacketed cable model with 4-pin M12 quick-disconnect connector, replace the suffix **Q** with **QPMA** (for example, **T30GYX7PQPMA**).

**Other Models:** Standard integral 4-pin M12 quick-disconnect connector models are listed. To order the 2 m (6.5 ft) integral 4-wire cabled model, omit suffix **Q** (example, **M18GYX7P**). To order the 150 mm (6 in) PVC-jacketed cable with 4-pin M12 quick-disconnect connector, replace suffix **Q** with **QP** (for example, **M18GYX7PQP**).

Contact the factory for other colors/color combinations, including: blue, white, and orange.

# Wiring

| NPN | PNP | Key | Legend |
|---|---|---|---|
|  Color 2 overrides Color 1 |  Color 2 overrides Color 1 | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black | C1 = Color 1 (Green)<br>C2 = Color 2 (Yellow) |

# Specifications

**Supply Voltage and Current**

**T8L models:** 10 V DC to 30 V DC at 20 mA maximum

**T18, M18, and K30L models:** 10 V DC to 30 V DC at 25 mA maximum per LED color

**T30 models:** 10 V DC to 30 V DC at 40 mA maximum per LED color

**K50L, K50FL, and K80L models:** 18 V DC to 30 V DC at 40 mA maximum per LED color

**Indicators**

Entire translucent diffuser or dome provides indication. Green and yellow, when connected to discrete output of 3-wire or 4-wire sensors. For other colors, contact factory for availability.

**Input Response Time**

**Indicator ON/OFF:** 1 ms max.

**Operating Conditions**

**Temperature:** –40 °C to +50 °C (–40 °F to +122 °F)


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### Environmental Rating

Rated IP67. T8L not encapsulated; K80L has encapsulated electronics only; other models fully encapsulated.

K30L, K50L, and K50FL QD models meet IP69K per DIN 40050-9.

Cabled models also meet IP69K if the cable and cable entrance are protected from high-pressure spray.

### Connections

**T8L models:** 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector (QP) or 2 m (6.5 ft) unterminated 4-wire integral cable, depending on model

**K30L models:** Integral 4-pin M12 male quick-disconnect connector (Q), 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector (QP), 2 m (6.5 ft) unterminated 4-wire integral cable, or 5 color-coded screw terminal for up to 16 AWG wire, depending on model. Screw terminal max torque: 0.11 N·m (1.0 lbf·in).

**K80L models:** Integral 4-pin M12 male quick-disconnect connector (Q) standard; terminal-wired models available for use with bulk cable; compression fitting optional. Contact Factory for cable information.

**Other models:** Integral 4-pin M12 male quick-disconnect connector (Q), 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector (QP), or 2 m (6.5 ft) unterminated 4-wire integral cable, depending on model

### Construction

See Models lists

### Required Overcurrent Protection

**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to www.bannerengineering.com.

| Supply Wiring (AWG) | Required Overcurrent Protection (A) | Supply Wiring (AWG) | Required Overcurrent Protection (A) |
|---|---|---|---|
| 20 | 5.0 | 26 | 1.0 |
| 22 | 3.0 | 28 | 0.8 |
| 24 | 1.0 | 30 | 0.5 |

### Certifications

All models:

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

K50L, K50FL, T18, and T30 models only:

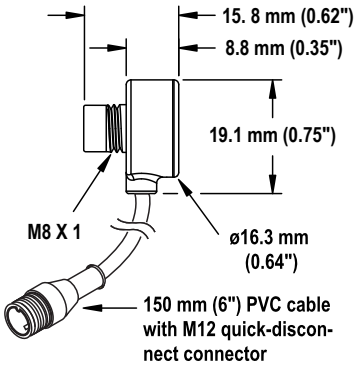
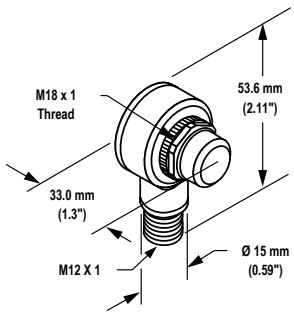
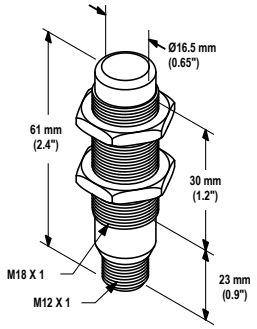
Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN

K30L and K50L models only:

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## Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.

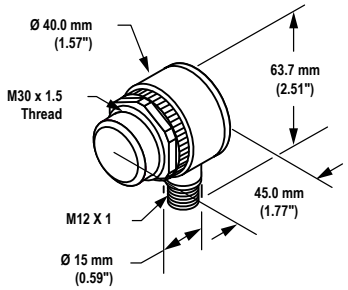
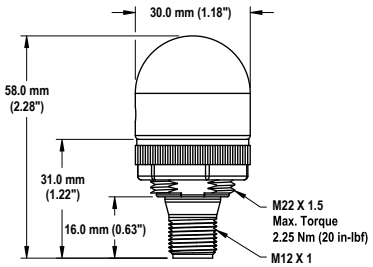
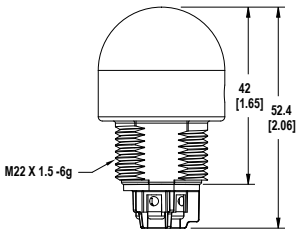
| T8L Models | T18 Models | M18 Models |
|---|---|---|
|  |  |  |

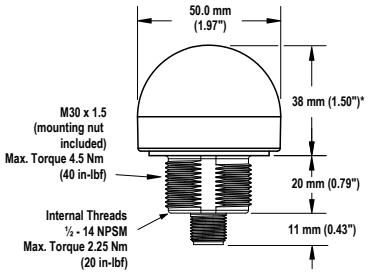
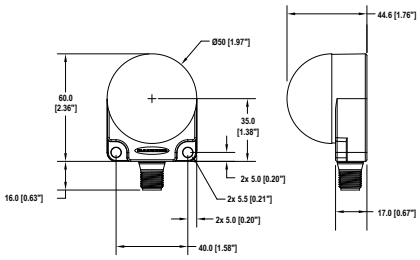
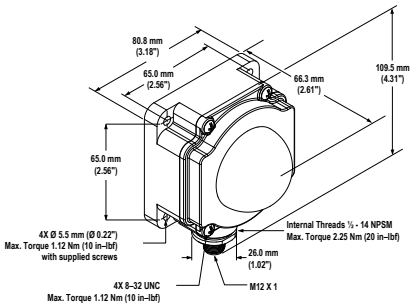






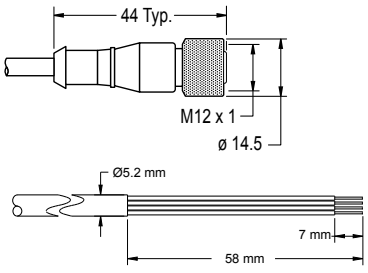
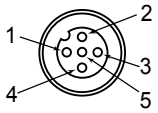
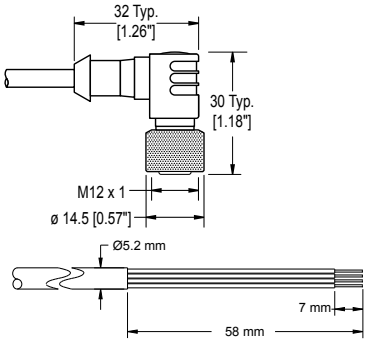
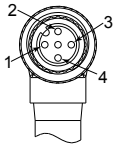

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| T30 Models | K30L Models | K30 Terminal Models |
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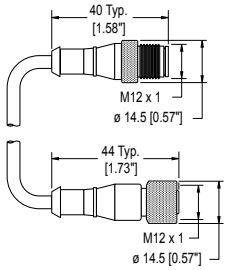
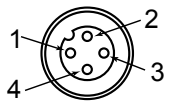
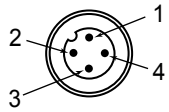
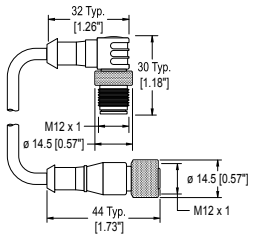
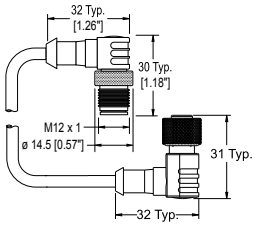
| K50L Models | K50FL Models | K80L Models |
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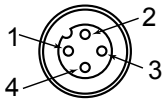
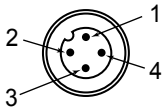
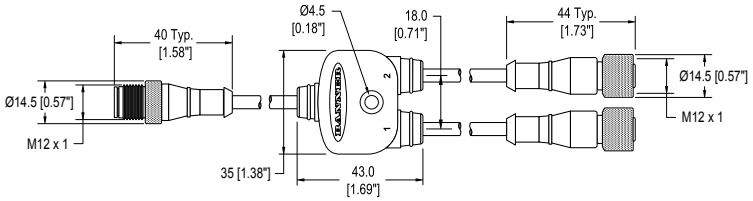
# Accessories

# Cordsets

| 4-Pin Threaded M12 Cordsets—Single Ended | | | | | |
|---|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** | |
| **MQDC-406** | 2 m (6.56 ft) | Straight |  |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Unused |
| **MQDC-415** | 5 m (16.4 ft) | | | | |
| **MQDC-430** | 9 m (29.5 ft) | | | | |
| **MQDC-450** | 15 m (49.2 ft) | | | | |
| **MQDC-406RA** | 2 m (6.56 ft) | Right-Angle |  |  | |
| **MQDC-415RA** | 5 m (16.4 ft) | | | | |
| **MQDC-430RA** | 9 m (29.5 ft) | | | | |
| **MQDC-450RA** | 15 m (49.2 ft) | | | | |


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| 4-Pin Threaded M12 Cordsets—Double Ended | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout** |
| **MQDEC-401SS** | 0.31 m (1 ft) | Male Straight / Female Straight |  | Female<br><br>Male<br><br>1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black |
| **MQDEC-403SS** | 0.91 m (2.99 ft) | | | |
| **MQDEC-406SS** | 1.83 m (6 ft) | | | |
| **MQDEC-412SS** | 3.66 m (12 ft) | | | |
| **MQDEC-415SS** | 4.58 m (15 ft) | | | |
| **MQDEC-420SS** | 6.10 m (20 ft) | | | |
| **MQDEC-430SS** | 9.14 m (30.2 ft) | | | |
| **MQDEC-450SS** | 15.2 m (49.9 ft) | | | |
| **MQDEC-403RS** | 0.91 m (2.99 ft) | Male Right-Angle / Female Straight |  | |
| **MQDEC-406RS** | 1.83 m (6 ft) | | | |
| **MQDEC-412RS** | 3.66 m (12 ft) | | | |
| **MQDEC-420RS** | 6.10 m (20 ft) | | | |
| **MQDEC-430RS** | 9.14 m (30.2 ft) | | | |
| **MQDEC-450RS** | 15.2 m (49.9 ft) | | | |
| **MQDEC-403RR** | 0.9 m (2.9 ft) | Male Right-Angle / Female Right-Angle |  | |
| **MQDEC-406RR** | 1.8 m (5.9 ft) | | | |
| **MQDEC-412RR** | 3.6 m (11.8 ft) | | | |
| **MQDEC-420RR** | 6.1 m (20 ft) | | | |

| 4-Pin Threaded M12 Splitter Cordsets—Flat Junction | | | |
|---|---|---|---|
| **Model** | **Branches (Female)** | **Trunk (Male)** | **Pinout** |
| **CSB-M1240M1240** | No branch | No trunk | Female<br><br>Male<br><br>1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black |
| **CSB-M1240M1241** | 2 × 0.3 m (1 ft) | No trunk | |
| **CSB-M1241M1241** | | 0.30 m (1 ft) | |
| **CSB-M1248M1241** | | 2.44 m (8 ft) | |
| **CSB-M12415M1241** | | 4.57 m (15 ft) | |
| **CSB-M12425M1241** | | 7.60 m (25 ft) | |
| **CSB-UNT425M1241** | | 7.60 m (25.0 ft) Unterminated | |
|  | | | |

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For patent information, see www.bannerengineering.com/patents.

Document title: EZ-LIGHT™ 2-Color Indicators for Use with Sensors
Part number: 121900
Revision: L
Original Instructions
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121900


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