

## Datasheet

To view or download the latest technical information about this product, including specifications, dimensions, accessories, and wiring, see [www.bannerengineering.com](http://www.bannerengineering.com).

## Models

| Models <sup>1</sup>                                                                 |                                                                                                                                          | LED Color <sup>2</sup> |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|    | T8LGXXPQ                                                                                                                                 | Green                  |
|                                                                                     | T8LXRXQP                                                                                                                                 | Red                    |
|                                                                                     | T8LXXYPQ                                                                                                                                 | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>Polycarbonate/ABS alloy housing, thermoplastic diffuser.</li><li>IP67</li></ul>                    |                        |
|    | M18GXXPQ                                                                                                                                 | Green                  |
|                                                                                     | M18XRXQP                                                                                                                                 | Red                    |
|                                                                                     | M18XXYPQ                                                                                                                                 | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>Nickel-plated brass housing, thermoplastic diffuser.</li><li>Fully encapsulated IP67</li></ul>     |                        |
|   | T18GXXPQ                                                                                                                                 | Green                  |
|                                                                                     | T18XRXQP                                                                                                                                 | Red                    |
|                                                                                     | T18XXYPQ                                                                                                                                 | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>Thermoplastic polyester housing, thermoplastic diffuser.</li><li>Fully encapsulated IP67</li></ul> |                        |
|  | T30GXXPQ                                                                                                                                 | Green                  |
|                                                                                     | T30XRXQP                                                                                                                                 | Red                    |
|                                                                                     | T30XXYPQ                                                                                                                                 | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>Thermoplastic polyester housing, thermoplastic diffuser.</li><li>Fully encapsulated IP67</li></ul> |                        |

| Models <sup>1</sup>                                                                 |                                                                                                                                                           | LED Color <sup>2</sup> |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|    | K30LGXXPQ                                                                                                                                                 | Green                  |
|                                                                                     | K30LXRXQP                                                                                                                                                 | Red                    |
|                                                                                     | K30LXXYPQ                                                                                                                                                 | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>22 mm threaded polycarbonate base, translucent polycarbonate dome.</li><li>Fully encapsulated IP67, IP69K</li></ul> |                        |
|    | K50LGXXPQ                                                                                                                                                 | Green                  |
|                                                                                     | K50LXRXQP                                                                                                                                                 | Red                    |
|                                                                                     | K50LXXYPQ                                                                                                                                                 | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>30 mm threaded polycarbonate base, translucent polycarbonate dome.</li><li>Fully encapsulated IP67, IP69K</li></ul> |                        |
|   | K50FLGXXPQ                                                                                                                                                | Green                  |
|                                                                                     | K50FLXRXQP                                                                                                                                                | Red                    |
|                                                                                     | K50FLXXYPQ                                                                                                                                                | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>ABS base, translucent polycarbonate dome.</li><li>Fully encapsulated IP67, IP69K</li></ul>                          |                        |
|  | K80LGXXPQ                                                                                                                                                 | Green                  |
|                                                                                     | K80LXRXQP                                                                                                                                                 | Red                    |
|                                                                                     | K80LXXYPQ                                                                                                                                                 | Yellow                 |
|                                                                                     | <ul style="list-style-type: none"><li>Polycarbonate base, translucent polycarbonate dome.</li><li>Electronics fully encapsulated IP67</li></ul>           |                        |



### WARNING: Not To Be Used for Personnel Protection

Never use this device as a sensing device for personnel **protection**. Doing so could lead to serious injury or death. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

<sup>1</sup>

- T8L Models: Standard QD models are listed. To order the integral 4-wire cable model, omit the suffix QP. For example, T8LGXXP.
- K30FL Models: Standard 4-pin M12/Euro-style integral QD connector models are listed. For 2 m (6.5 ft) integral 4-wire cable model, omit suffix Q. For example K30LGRXP. For 150 mm (6 inch) PVC cable with 4-pin M12/Euro-style connector, replace suffix Q with QP. For example, K30LGRXPQP. For terminal model, replace suffix Q with T. For example, K30LGRXPPT.
- K80L Models: Standard 4-pin Euro integral QD connector models are listed. To order the terminal-wired model, omit suffix Q. For example, K80LGXXP.
- Other Models: Standard 4-pin M12/Euro-style integral QD connector models are listed. To order the 2 m (6.5 ft) integral 4-wire cable model, omit suffix Q. For example, M18GXXP. To order the 150 mm (6 inch) PVC cable with 4-pin M12/Euro-style connector, replace suffix Q with QP. For example, M18GXXPQP.
- Models with a quick disconnect require a mating cordset.

<sup>2</sup>

Contact Banner Engineering for other colors and color combinations.



## 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.

### Environmental Rating

Rated IEC 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.

### Operating Conditions

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

### Certifications



K30L and K50L models only:

### Connections

T8L models: 4-pin M12/Euro-style 150 mm (6 in) PVC cable with QD (QP) or 4-wire, 2 m (6.5 ft) integral cable, depending on model  
 K30L models: 4-pin M12/Euro-style QD (Q), 150mm (6") PVC cable with QD (QP), 4-wire, 2 m (6.5 ft) integral cable, or 5 color-coded screw terminal for up to 16 AWG wire, depending on model. Screw terminal max torque: 0.11N-m (1.0lbf-in).  
 K80L models: 4-pin M12/Euro-style integral QD (Q) standard; terminal-wired models available for use with bulk cable; compression fitting optional. Contact Factory for cable information.  
 Other models: 4-pin /M12/Euro-style integral QD (Q), 150 mm (6 in) PVC cable with QD (QP), or 4-wire, 2 m (6.5 ft) 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.

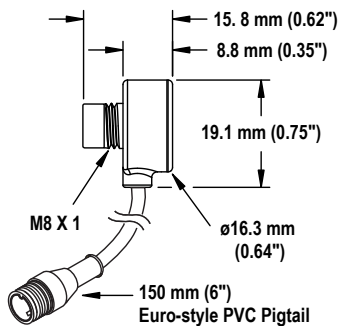
Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to [www.bannerengineering.com](http://www.bannerengineering.com).

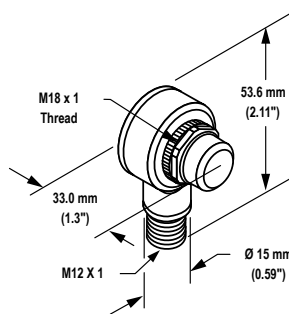
| Supply Wiring (AWG) | Required Overcurrent Protection (Amps) |
|---------------------|----------------------------------------|
| 20                  | 5.0                                    |
| 22                  | 3.0                                    |
| 24                  | 2.0                                    |
| 26                  | 1.0                                    |
| 28                  | 0.8                                    |
| 30                  | 0.5                                    |

## Dimensions

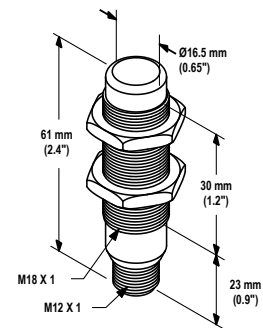
T8L Models



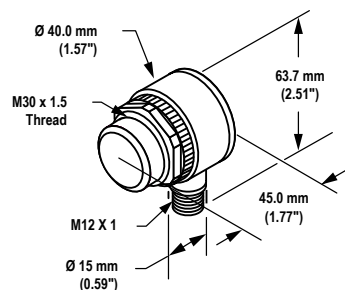
T18 Models



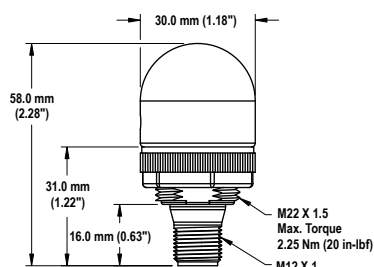
M18 Models



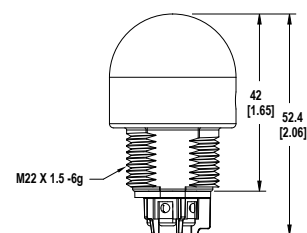
T30 Models



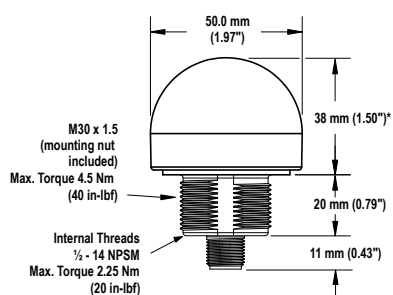
K30L Models



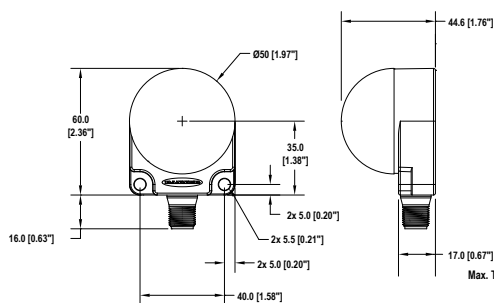
K30 Terminal Models



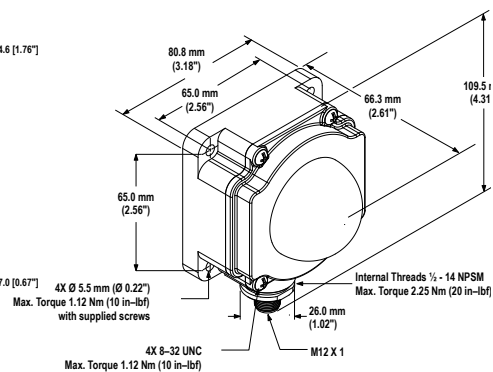
K50L Models



K50FL Models



K80L Models



## Wiring

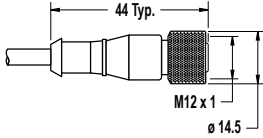
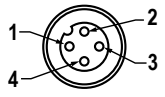
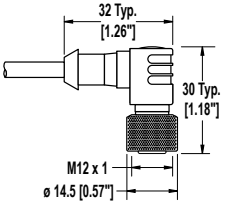
| For NPN Operation        |                          |                          |
|--------------------------|--------------------------|--------------------------|
| Green LED                | Red LED                  | Yellow LED               |
|                          |                          |                          |
| Pin 1 and Pin 2 not used | Pin 4 and Pin 2 not used | Pin 1 and Pin 4 not used |

| For PNP Operation        |                          |                          |
|--------------------------|--------------------------|--------------------------|
| Green LED                | Red LED                  | Yellow LED               |
|                          |                          |                          |
| Pin 1 and Pin 2 not used | Pin 4 and Pin 2 not used | Pin 1 and Pin 4 not used |

## Wiring Key

- |               |               |
|---------------|---------------|
| 1. Brown (bn) | 3. Blue (bu)  |
| 2. White (wh) | 4. Black (bk) |

## Accessories

| 4-Pin Threaded M12/Euro-Style Cordsets |                |             |                                                                                    |                                                                                                                                            |
|----------------------------------------|----------------|-------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Model                                  | Length         | Style       | Dimensions                                                                         | Pinout (Female)                                                                                                                            |
| MQDC-406                               | 1.83 m (6 ft)  | Straight    |  | <br><br>1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black |
| MQDC-415                               | 4.57 m (15 ft) |             |                                                                                    |                                                                                                                                            |
| MQDC-430                               | 9.14 m (30 ft) |             |                                                                                    |                                                                                                                                            |
| MQDC-450                               | 15.2 m (50 ft) |             |                                                                                    |                                                                                                                                            |
| MQDC-406RA                             | 1.83 m (6 ft)  | Right-Angle |  |                                                                                                                                            |
| MQDC-415RA                             | 4.57 m (15 ft) |             |                                                                                    |                                                                                                                                            |
| MQDC-430RA                             | 9.14 m (30 ft) |             |                                                                                    |                                                                                                                                            |
| MQDC-450RA                             | 15.2 m (50 ft) |             |                                                                                    |                                                                                                                                            |

### Brackets

For use with T8L models:  
SMB8MM

For use with M18 and T18  
models or base-mount T30  
models:

- SMB18A
- SMB1815SF
- SMB18Q
- SMB18SF
- SMB312PD
- SMBAMS18RA
- SMBAMS18P

For use with T30 models or  
base-mount K50L models:

- SMB30A
- SMBAMS30RA
- SMBAMS30P
- SMB30SC
- SMB30MM
- SMB3018SC

DIN-mount bracket for K80L  
models:

SMBDX80D

For more information about these and other available brackets, visit [www.bannerengineering.com](http://www.bannerengineering.com). K50FL models include a 48 mm (1.9") circular hook-and-loop mounting kit for easy mounting with no additional hardware required.

## Banner Engineering Corp. Limited Warranty

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