

## Features

DC-Operated LED Indicators with One, Two, or Three Colors



- Up to three independent colors in one unit
- Translucent face appears gray when off to avoid false indication
- M12 connector models available for plug and play indication
- Wide 180° field of view
- Wide 10 V DC to 30 V DC operating range allows for use in battery-powered mobile applications
- Available with PNP or NPN input, depending on model
- IP69K rated to withstand harsh wash-down environments
- Wide operating range of -40 °C to +60 °C (-40 °F to +140 °F)
- Daylight visible models with a clear cover and more focused light output provide greater visibility in high ambient light conditions

## Models

Standard Models

| Family      | Color 1  | Color 2  | Color 3  | Input              | Connector   |
|-------------|--|----------|----------|--------------------|---|
| <b>S18L</b> | <b>G</b>   | <b>R</b> | <b>Y</b> | <b>P</b>           | <b>Q</b>  |
| MODEL KEY   | G = Green<br>R = Red<br>Y = Yellow<br>B = Blue<br>W = White<br>O = Orange<br>T = Turquoise<br>V = Violet<br>M = Magenta<br>X = No color in this position |          |          | P = PNP<br>N = NPN | Blank = 2 m (6.5 ft) integral PVC-jacketed cable<br>Q = Integral 4-pin M12 male quick-disconnect connector<br>QP = 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector<br>T = 4-screw terminals |

Daylight Visible Models

| Family       | Color 1  | Color 2  | Color 3  | Input              | Connector   |
|--------------|--|----------|----------|--------------------|---|
| <b>S18DL</b> | <b>G</b>   | <b>R</b> | <b>Y</b> | <b>P</b>           | <b>Q</b>  |
| MODEL KEY    | G = Green<br>R = Red<br>Y = Yellow<br>B = Blue<br>W = White<br>O = Orange<br>X = No color in this position |          |          | P = PNP<br>N = NPN | Blank = 2 m (6.5 ft) integral PVC-jacketed cable<br>Q = Integral 4-pin M12 male quick-disconnect connector<br>QP = 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector<br>T = 4 screw terminals |

| Example Model | Indicators         | Input   | Connector Type  |
|---------------|--------------------|---------|---|
| S18LGRYP      | Green, Red, Yellow | PNP     | Blank = 2 m (6.5 ft) integral PVC-jacketed cable                                  |
| S18LGXXPQ     | Green              | PNP/NPN | Integral 4-pin M12 male quick-disconnect connector                                |
| S18LGRXPQP    | Green, Red         | PNP     | 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector |
| S18LGRYPT     | Green, Red, Yellow | PNP     | 4 screw terminals   |

**NOTE:** Single color models should be ordered as PNP models, but can be wired for either PNP or NPN input.

## Wiring

| Multi Color Wiring |  |   |  |
|--------------------|--|---|--|
|                    |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Gray | C1 = Color 1<br>C2 = Color 2<br>C3 = Color 3 |
|                    |  | Gray Wire not used in K30 Terminal models                   |  |

| Single Color Wiring |  |
|---------------------|--|
|                     |  |

## Specifications

### Supply Voltage and Current

10 V DC to 30 V DC at 25 mA max. per LED color

### Indicators

LEDs are independently selected; 1, 2, or 3 colors, depending on model. For other colors/ combinations, contact Factory for availability

**Standard Models:** Entire translucent dome provides even indication viewable from over 180 degrees

**Daylight Visible Models:** Clear dome and more focused light provides even brighter indication when used in high ambient light areas

### Indicator Response Time

Indicator ON/OFF: 1 ms max

### Indicator Characteristics

| Color     | Dominant Wavelength (nm) or Color Temperature (CCT) | Color Coordinates <sup>(1)</sup> |      | Lumen Output (Typical at 25 °C) |                   |
|-----------|---|----------------------------------|------|---------------------------------|-------------------|
|           |   | X                                | Y    |                                 |                   |
|           | S18L & S18DL  | S18L Only                        | S18L | S18DL                           |                   |
| Green     | 520-535 nm  | –                                | –    | 4.1                             | 2.3               |
| Red       | 620-630 nm  | –                                | –    | 1.1                             | 1.4               |
| Yellow    | 585-595 nm  | –                                | –    | 0.8                             | 1.2               |
| Blue      | 465-475 nm  | –                                | –    | 0.6                             | 0.6               |
| Orange    | 600-615 nm  | –                                | –    | 4                               | 4                 |
| White     | 5665-9000 K   | –                                | –    | 0.8                             | 0.9               |
| Turquoise | –   | 0.19                             | 0.34 | 2.4                             | NA <sup>(2)</sup> |
| Violet    | –   | 0.21                             | 0.11 | 0.5                             | NA <sup>(2)</sup> |
| Magenta   | –   | 0.35                             | 0.15 | 0.5                             | NA <sup>(2)</sup> |

<sup>(1)</sup> Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.

<sup>(2)</sup> Colors not available in this model.

### Environmental Rating

Rated IP67, and IP69K per ISO 20653. Cabled models meet DIN IP69K if the cable is protected from high-pressure spray. Indicator side of terminal models meet IP67, and IP69K per ISO 20653 when installed in an enclosure. Screw connection points meet IP00.

Meets UL Type 4X and UL Type 13 when mounted in a UL Type 4X or Type 13 enclosure.

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

### Construction

UV-stabilized polycarbonate housing

PBT mounting nut max torque 2.3 N·m (20 lbf·in)

Nitrile sealing washer

### Connections

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

### Operating Conditions

–40 °C to +60 °C (–40 °F to +140 °F)

Limited to one color on at a time

### Certifications



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

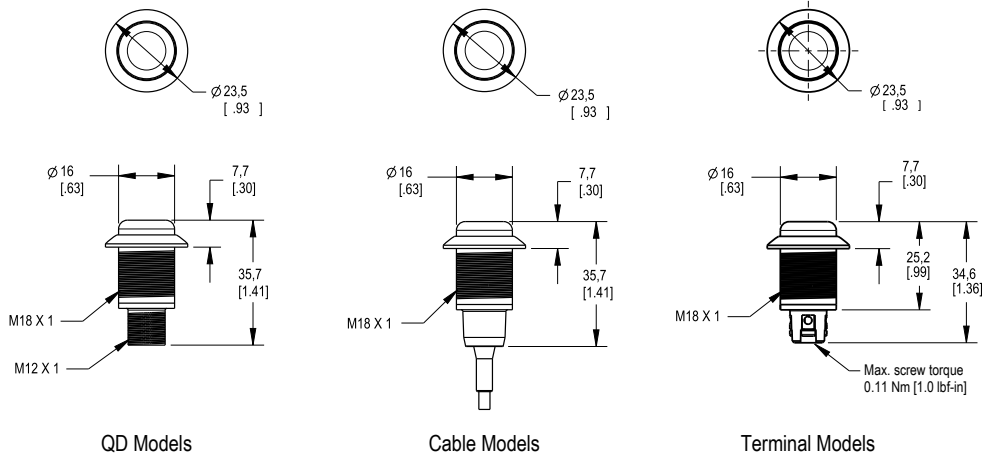


Turck Banner LTD Blenheim House  
Blenheim Court  
Wickford, Essex SS11 8YT  
GREAT BRITAIN



# Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



# Accessories

## Cordsets

| 4-Pin Single-Ended M12 Female Cordsets |                |             |            |                 |   |
|--|----------------|-------------|------------|-----------------|---|
| 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 = Not used<br> |
| MQDC-415                               | 5 m (16.4 ft)  |             |            |                 |   |
| MQDC-430                               | 9 m (29.5 ft)  |             |            |                 |   |
| MQDC-450                               | 15 m (49.2 ft) | Right-Angle |            |                 | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Not used<br> |
| MQDC-406RA                             | 2 m (6.56 ft)  |             |            |                 |   |
| MQDC-415RA                             | 5 m (16.4 ft)  |             |            |                 |   |
| MQDC-430RA                             | 9 m (29.5 ft)  | Right-Angle |            |                 | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Not used<br> |
| MQDC-450RA                             | 15 m (49.2 ft) |             |            |                 |   |

# Brackets

All measurements are listed in millimeters, unless noted otherwise. The measurements provided are subject to change.

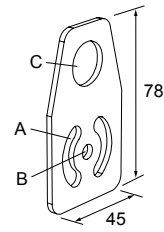
|   |  |
|---|--|
| <b>SMB18A</b> <ul style="list-style-type: none"> <li>Right-angle mounting bracket with a curved slot for versatile orientation</li> <li>12-ga. stainless steel</li> <li>18 mm sensor mounting hole</li> <li>Clearance for M4 (#8) hardware</li> </ul> <p><b>Hole center spacing:</b> A to B = 24.2<br/> <b>Hole size:</b> A = <math>\varnothing</math> 4.6, B = 17.0 <math>\times</math> 4.6, C = <math>\varnothing</math> 18.5</p> |  |
|---|--|

**SMBAMS18P**

- Flat SMBAMS series bracket with 18 mm hole
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

**Hole center spacing:** A = 26.0, A to B = 13.0

**Hole size:** A = 26.8 × 7.0, B = Ø 6.5, C = Ø 19.0

**SMB18AFA..**

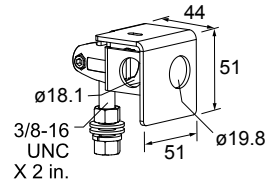
- Protective, swivel bracket with tilt and pan movement for precision adjustment
- Easy sensor mounting to extruded rail T-slots
- Metric and inch size bolts available
- Mounting hole for 18 mm sensors

**Hole size:** B = Ø 18.1

**Bolt Thread (A):**

SMB18AFA = 3/8 - 16 × 2 in

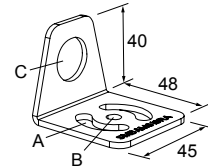
SMB18AFAM10 = M10 - 1.5 × 50

**SMBAMS18RA**

- Right-angle SMBAMS series bracket with 18 mm hole
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

**Hole center spacing:** A = 26.0, A to B = 13.0

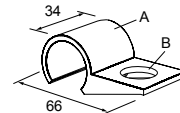
**Hole size:** A = 26.8 × 7.0, B = Ø 6.5, C = Ø 19.0

**SMBC18**

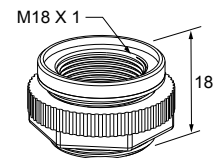
- 18 mm sensor mounting hole
- Snaps onto 28 mm diameter structural framing

A = Ø 26.9 mm

**Hole size:** B = Ø 18.4

**LMB1822FM**

- Adaptor for mounting the S18L into standard 22 mm holes
- Includes adaptor, nut, and gasket



## Banner Engineering Corp Limited Warranty

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