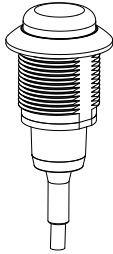


# EZ-LIGHT® S18L General Purpose Indicators



## Datasheet

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

Table 1: Standard Models

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

Table 2: Daylight Visible Models

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

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

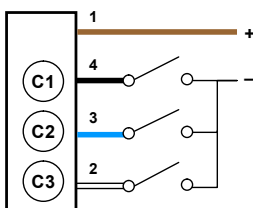


**Note:** Single color models should be ordered as PNP models but can be wired for either PNP or NPN input.

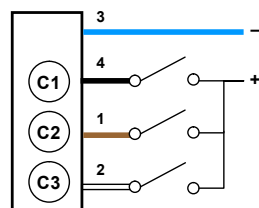
## Wiring Diagrams

### Multi Color Wiring

#### NPN



#### PNP



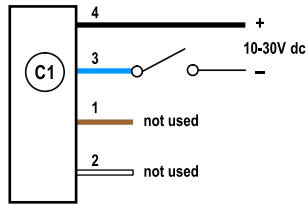
- 1 = Brown
  - 2 = White
  - 3 = Blue
  - 4 = Black
  - 5 = Gray
- C1 = Color 1
  - C2 = Color 2
  - C3 = Color 3

Gray Wire not used in K30 Terminal models

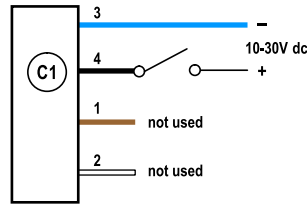


## Single Color Wiring

## NPN



## PNP



## 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 & 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	-	-	4.0	4.0
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>

## Environmental Rating

Rated IP67, and IP69K per DIN 40050-9. Cabled models meet DIN IP69K if the cable is protected from high-pressure spray. Indicator side of terminal models meet IP67, and IP69K per DIN 40050-9 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 (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
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 (5.9 in) PVC cable with 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 Europe**  
Park Lane, Culliganlaan 2F  
bus 3, 1831 Diegem,  
BELGIUM



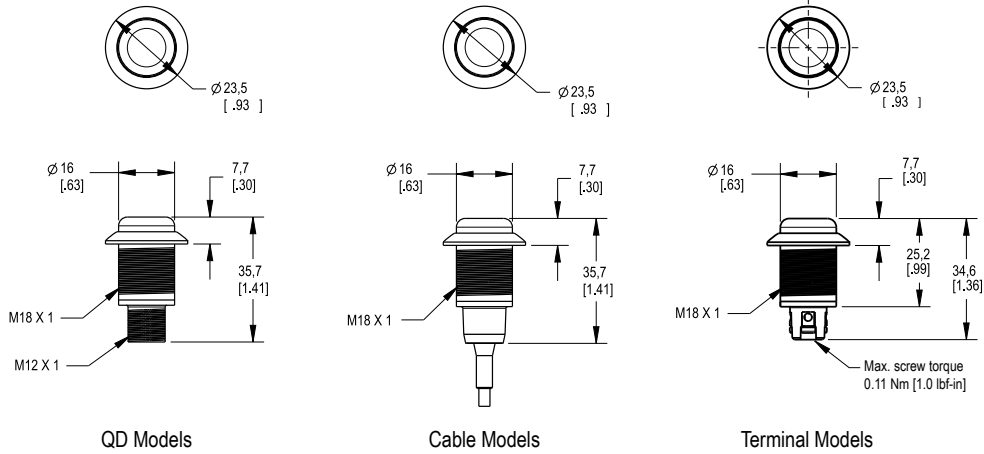
**Turck Banner LTD**  
Blenheim House, Blenheim  
Court, Wickford, Essex  
SS11 8YT, Great Britain



<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.

## Dimensions



## Cordsets

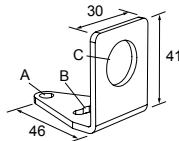
4-Pin Threaded M12 Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	2 m (6.56 ft)	Straight		
MQDC-415	5 m (16.4 ft)			
MQDC-430	9 m (29.5 ft)			
MQDC-450	15 m (49.2 ft)			
MQDC-406RA	2 m (6.56 ft)	Right-Angle		
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA	15 m (49.2 ft)			

## Mounting Brackets

All measurements are listed in millimeters, unless noted otherwise.

### SMB18A

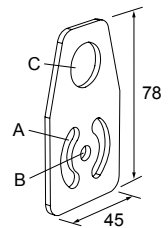
- Right-angle mounting bracket with a curved slot for versatile orientation
- 12-ga. stainless steel
- 18 mm sensor mounting hole
- Clearance for M4 (#8) hardware



Hole center spacing: A to B = 24.2  
 Hole size: A = ø 4.6, B = 17.0 x 4.6, C = ø 18.5

### SMBAMS18P

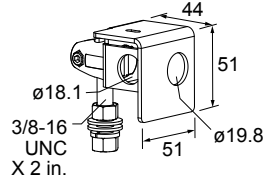
- Flat SMBAMS series bracket with 18 mm hole
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel



Hole center spacing: A = 26.0, A to B = 13.0  
 Hole size: A = 26.8 x 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

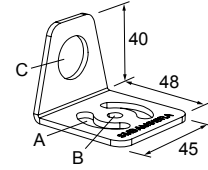


Hole size: B =  $\phi$  18.1

Model	Bolt Thread (A)
SMB18AFA	3/8 - 16 x 2 in
SMB18AFAM10	M10 - 1.5 x 50

**SMBAMS18RA**

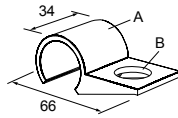
- Right-angle SMBAMS series bracket with 18 mm hole
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel



Hole center spacing: A = 26.0, A to B = 13.0  
 Hole size: A = 26.8 x 7.0, B =  $\phi$  6.5, C =  $\phi$  19.0

**SMBC18**

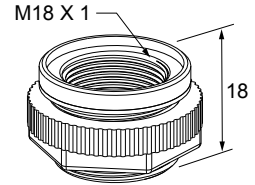
- 18 mm sensor mounting hole
- Snaps onto 28 mm diameter structural framing



A =  $\phi$  26.9 mm  
 Hole size: B =  $\phi$  18.4

**LMB1822FM**

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



## Banner Engineering Corp. Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

**THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.**

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to: [www.bannerengineering.com](http://www.bannerengineering.com).

For patent information, see [www.bannerengineering.com/patents](http://www.bannerengineering.com/patents).