EZ-LIGHT® S18L General Purpose Indicators

BANNER®
more sensors, more solutions

Datasheet

DC-Operated LED Indicators with One, Two, or Three Colors
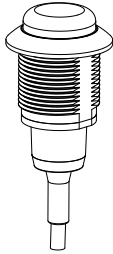
- Up to three independent colors in one unit
- Translucent face appears gray when off to avoid false indication
- M12 connector models available for plug and play indication
- Wide 180° field of view
- Wide 10 V DC to 30 V DC operating range allows for use in battery powered mobile applications
- Available 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.
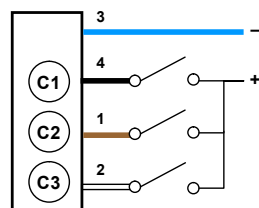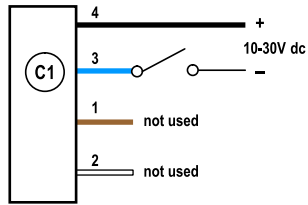
Wiring Diagrams

Multi Color Wiring

NPN
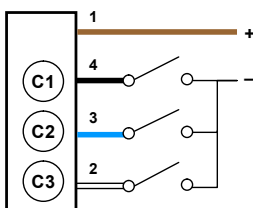
PNP

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

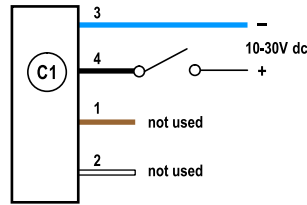## Single Color Wiring

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 [1]		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	–	–	4.0	4.0
White	5665-9000 K	–	–	0.8	0.9
Turquoise	–	0.19	0.34	2.4	NA [2]
Violet	–	0.21	0.11	0.5	NA [2]
Magenta	–	0.35	0.15	0.5	NA [2]

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.

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

CE

UKCA

c UL us LISTED

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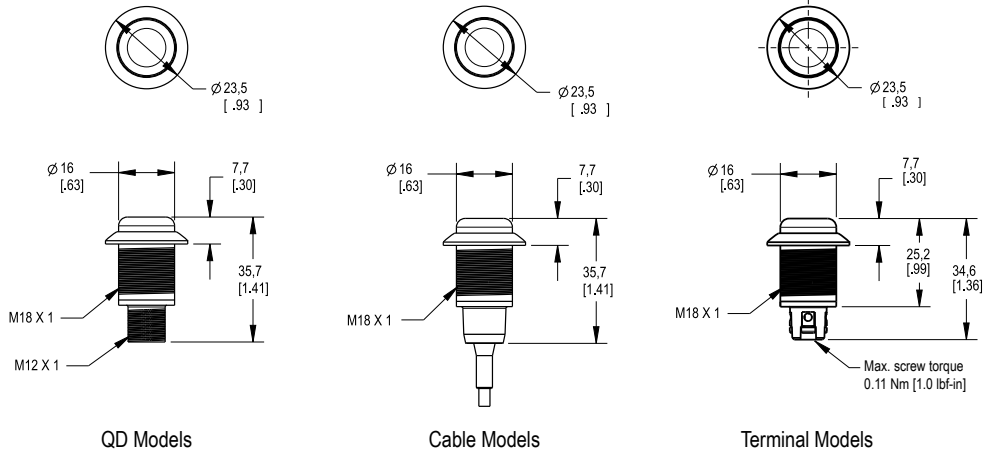Park Lane, Culliganlaan 2F bus 3, 1831 Diegem, BELGIUM

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

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[1] Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.
[2] Colors not available in this model.

Dimensions

∅ 23,5 [.93] ∅ 23,5 [.93] ∅ 23,5 [.93]

∅ 16 [.63] 7,7 [.30] 35,7 [1.41] M18 X 1 M12 X 1

∅ 16 [.63] 7,7 [.30] 35,7 [1.41] M18 X 1

∅ 16 [.63] 7,7 [.30] 25,2 [.99] 34,6 [1.36] M18 X 1 Max. screw torque 0.11 Nm [1.0 lbf-in]

QD Models   Cable Models   Terminal Models

Cordsets

4-Pin Threaded M12 Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	2 m (6.56 ft)	Straight	44 Typ. M12 x 1 ø 14.5	1 = Brown 2 = White 3 = Blue 4 = Black 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	32 Typ. [1.26"] 30 Typ. [1.18"] M12 x 1 ø 14.5 [0.57"]	
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

30 C 41 A B 46
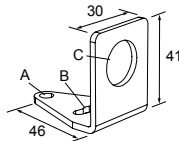
Hole center spacing: A to B = 24.2
Hole size: A = ø 4.6, B = 17.0 × 4.6, C = ø 18.5

SMBAMS18P
- Flat SMBAMS series bracket with 18 mm hole
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

C 78 A B 45
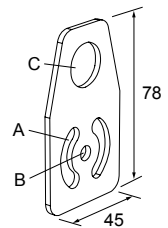
Hole center spacing: A = 26.0, A to B = 13.0
Hole size: A = 26.8 × 7.0, B = ø 6.5, C = ø 19.0

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

44
51
ø18.1
3/8-16 UNC X 2 in.
51
ø19.8
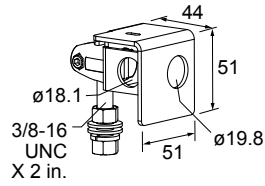
Hole size: B = ø 18.1

Model	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

40
C
48
A
B
45
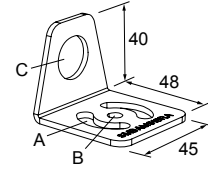
Hole center spacing: A = 26.0, A to B = 13.0
Hole size: A = 26.8 × 7.0, B = ø 6.5, C = ø 19.0

SMBC18

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

34
A
B
66
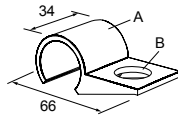
A = ø 26.9 mm
Hole size: B = ø 18.4

LMB1822FM

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

M18 X 1
18
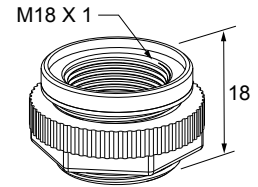
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