EZ-LIGHT® Indicators — 4-Color, Multi-Function



Datasheet

DC-Operated Indicators with 4 Colors and Multiple Flashing Frequencies



- Rugged, cost-effective. and easy-to-install indicators available in K50, K50 Flat Pack, or K80 housing style
- Displays 4 colors and multiple flashing frequencies: steady ON, flashing, or alternating
- Illuminated dome provides easy-to-see operator guidance and indication of equipment status
- Compact devices are completely self-contained, no controller needed
- Choose NPN or PNP input, depending on model
- Immune to ambient light, EMI, and RFI interference
- 18 Vdc to 30 V dc operation



Contact factory for more

information.



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.

Models

Models	Construction	Connection	LED Function ¹	Inputs
K50LGRYB4PQ	50 mm dome/ 30 mm mount polycarbonate	Integral 5-pin M12/Euro-style male quick disconnect (QD)	4 Color: Choose Green, Red, Yellow or Blue ON, flashing or alternative	PNP
K50LGRYB4NQ				NPN
K50FLGRYB4PQ				PNP
K50FLGRYB4NQ				NPN
K80LGRYB4PQ	50 mm dome/ Flat or DIN- mount polycarbonate			PNP
K80LGRYB4NQ				NPN

For the K50L and K50FL Models:

- To order the 150 mm PVC cable with QD model, replace the Q with a QP in model number (example, K50LGRYB4PQP).
- To order the 2 m (6.5 ft) cable model, omit the suffix Q from model number (example, K50LGRYB4P).
- Models with a QD require a mating cable.

For the K80L Models: To order the terminal-wired model, omit the suffix Q from model number (example, K80LGRYB4P).



Original Document 137329 Rev. D 13 February 2017

¹ Contact fhe factory for other colors and color combinations.

Wiring Diagrams

Function	PNP Wiring	NPN Wiring
Wiring Key: 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray	3 4 18-30V dc R 2 5	Indicator Color
Green steady	<u>4</u>	4
Green flashes	2	2
Red steady	1 0 +	3
Red flashes	1	<u>4</u>
Yellow steady	2 +	<u>2</u>
Yellow flashes	2 +	3 -
Blue steady		5
Blue flashes	5 +	5 0
Green, Red flash cycle	5 +	5 -
Red, Blue flash cycle	2 +	5 -
Green, Yellow flash cycle	2 +	2
Green, Blue flash cycle	1 0 +	3 0 0
Red, Yellow flash cycle	2 +	3 -

Function	PNP Wiring	NPN Wiring
Yellow, Blue flash cycle	1 2	3 0 0
Green, Red, Yellow, Blue flash cycle	1 2 5	4 3 2 5

Specifications

Supply Voltage and Current

18 V dc to 30 V dc at 50 mA maximum

Entire translucent diffuser or dome provides indication. LEDs are independently selected: Green, Red, Yellow, or Blue; ON steady or flashing, alternating or rotating

Input Response Time

Indicator ON: 250 ms maximum Indicator OFF: 10 ms maximum

Operating Conditions

-40 °C to +50 °C (-40 °F to +122 °F)

Environmental Rating

K50L and K50FL models: fully encapsulated, rated IEC IP67and IP69K, per DIN 40050-9. Cabled models also meet IP69K if the cable and cable entrance are protected from high-pressure spray.

K80L models: IEC IP67 (encapsulated electronics)

Certifications

All models:

K50L models only:



Indicator Flash Rate

1-Color: 1-second flash rate (500 ms ON) 2- and 4-Color Flash: 500 ms per color

Construction

See Models table

Connections

Integral 5-pin M12/Euro-style male quick disconnect (QD); 150 mm (6 in) PVC cable with a 5-pin M12/Euro-style male quick disconnect (QD); or 2 m (6.5 ft) unterminated 5-wire PVC cable depending on the model ordered

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.

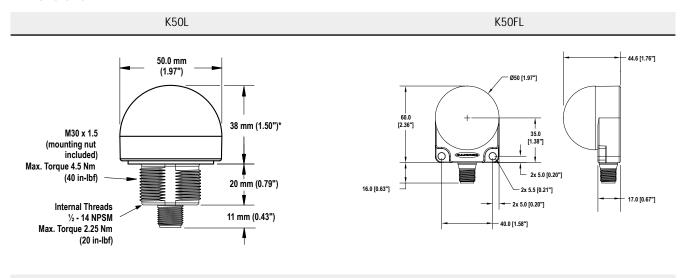
Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

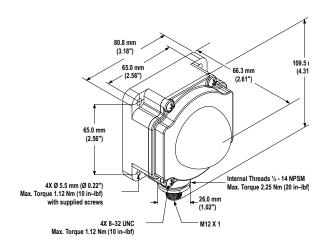
For additional product support, go to www.bannerengineering.com.

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

Dimensions







Accessories

5-Pin Euro-Style Cordsets

5-Pin Threaded M12/Eur	5-Pin Threaded M12/Euro-Style Cordsets—Single Ended			
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-501.5	0.50 m (1.5 ft)			
MQDC1-506	1.83 m (6 ft)		 44 Typ	1 - (000)
MQDC1-515	4.57 m (15 ft)			4
MQDC1-530	9.14 m (30 ft)	Straight	M12 x 1 — 6 14.5 —	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray

Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-506RA	1.83 m (6 ft)			
MQDC1-515RA	4.57 m (15 ft)		32 Typ. [1.26"]	
MQDC1-530RA	9.14 m (30 ft)	Right-Angle	M12 x 1 (1.18") ø 14.5 [0.57"]	

Mounting Brackets

All measurements are listed in millimeters, unless noted otherwise.

Brackets for the K50L and K50FL Models

Note: K50FL models include a 48 mm (1.9 in) circular velcro mounting kit for easy mounting with no additional hardware

SMB30A

- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor

Hole size: A=Ø 6.3, B= 27.1 x 6.3, C=Ø 30.5

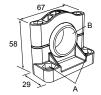
• 12-ga. stainless steel

Hole center spacing: A to B=40

61 C B A 69

SMB30SC

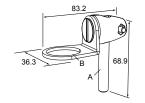
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included



Hole center spacing: A=Ø 50.8 Hole size: A=Ø 7.0, B=Ø 30.0

SMB30FA

- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50 Hole size: B= \emptyset 30.1

SMBAMS30RA

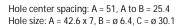
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel

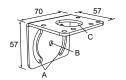


Hole center spacing: A=26.0, A to B=13.0 Hole size: A=26.8 x 7.0, B=Ø 6.5, C=Ø 31.0

SMB30MM

- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor





SMBAMS30P

- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel

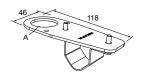


Hole center spacing: A=26.0, A to B=13.0 Hole size: A=26.8 x 7.0, B= \emptyset 6.5, C= \emptyset 31.0

SMB30FVK

- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors

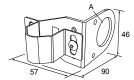
Hole size: A= Ø 31



SMB30RAVK

- V-clamp, right-angle bracket and fasteners for mounting sensors to pipe or extrusion
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors

Hole size: A = Ø 30.5



Brackets for the K80L Models

SMBDX80D

DIN-mount bracket for K80L models, mounts on 35 mm DIN rail

Hardware included to mount to K80L housing

Black reinforced thermoplastic



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, 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: