EZ-LIGHT® QPMA Series

BANNER®
more sensors, more solutions

Datasheet

DC-Operated LED Indicators with 150 mm (6 in) PUR cable with quick-disconnect connector

To view or download the latest technical information about this product, including specifications, dimensions, accessories, and wiring, go to www.bannerengineering.com.

⚠️ **WARNING:**
- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

Models

Models		Construction	Connector [1]	LED Function [2]	Inputs
	M18GXRPQPMA	Nickel-plated brass housing, M18x1 thread; thermoplastic diffuser. Fully encapsulated. IP67	150 mm (6 in) PUR-jacketed cable with 4-pin M12 male quick-disconnect connector	3-color [3]	PNP
	M18GXRNQPMA				NPN
	M18RGX7PQPMA			2-color [4]	PNP
	K30LGXRPQPMA	22 mm threaded polycarbonate base, translucent polycarbonate dome. Fully encapsulated. IP67, IP69K per DIN 40050-9		3-color [3]	PNP
	K30LGXRNQPMA				NPN
	K30LRGX7PQPMA			2-color [4]	PNP
	K50LRGX7PQPMA	30 mm threaded polycarbonate base, translucent polycarbonate dome. Fully encapsulated. IP67, IP69K per DIN 40050-9		2-color [4]	PNP
	K50FLRGX7PQPMA	Polycarbonate base, translucent polycarbonate dome. Fully encapsulated. IP67, IP69K per DIN 40050-9		2-color [4]	PNP
	K80LRGX7PQPMA	ABS and polycarbonate base, translucent polycarbonate dome. Electronics fully encapsulated. IP67		2-color [4]	PNP

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[1] Mating cable required. For use with mating M12 quick-disconnect connector cables or with M12 splitter, model **CSB-M1240M1240**, or equivalent.
[2] Contact Banner Engineering for other colors and color combinations, including: blue, white, orange.
[3] Use with PNP or NPN I/O blocks to produce Green, Red, or Yellow indicator functions (see Wiring Diagrams on page 2).
[4] Use with discrete-output sensors to provide remote indication. Red is ON when the sensor is powered, Green is ON when the output is energized.
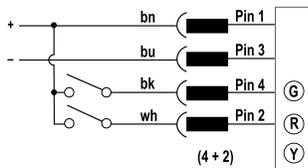
The following models are no longer available for order, but are still covered by the information in this document.
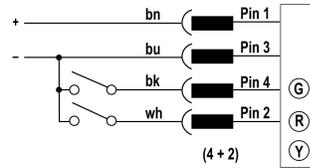
| Models		Construction	Connector [1]	LED Function [2]	Inputs
	T18GXRPQPMA	Thermoplastic polyester housing, thermoplastic diffuser. Fully encapsulated. IP67	150 mm (6 in) PUR-jacketed cable with 4-pin M12 male quick-disconnect connector	3-color [3]	PNP
	T18GXRNQPMA				NPN
	T18RGX7PQPMA			2-color [4]	PNP
	T30GXRPQPMA	Thermoplastic polyester housing, thermoplastic diffuser. Fully encapsulated. IP67		3-color [3]	PNP
	T30GXRNQPMA				NPN
	T30RGX7PQPMA			2-color [4]	PNP
	T30GYX7PQPMA				

Wiring Diagrams

PNP (..GXRP..) 3-Color Models

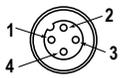

NPN (..GXRN..) 3-Color Models

2-Color (..RGX7P..) Models
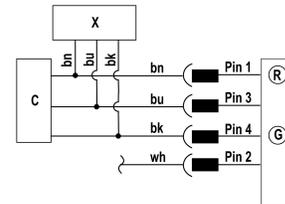
NOTE: When Green (G) is ON, Red (R) is OFF

Pinout

Key

1 = Brown
2 = White
3 = Blue
4 = Black

X = Banner Sensor
C = Control Box
G = Green
R = Red
Y = Yellow

Specifications

Supply Voltage and Current
  K30L, T18, and M18 Models:
    2-color models: 10 V DC to 30 V DC at 30 mA max.
    3-color models: 10 V DC to 30 V DC at 25 mA max. per color
  T30 models:
    2-color models: 10 V DC to 30 V DC at 50 mA max.
    3-color models: 10 V DC to 30 V DC at 40 mA max. per color
  K50L, K50FL, and K80L Models:
    2-color models: 18 V DC to 30 V DC at 50 mA max.

Indicators
  Entire translucent diffuser or dome provides indication. See notes 1 and 2 under Models on page 1. For other colors/combinations, contact Banner Engineering for availability.

Construction
  See Models on page 1

Connections
  150 mm (6 in) PUR-jacketed cable with 4-pin M12 male quick-disconnect connector

Environmental Rating
  Rated IP67. K80L has encapsulated electronics only; other models fully encapsulated.
  K30L, K50L, and K50FL quick-disconnect models meet IP69K per DIN 40050-9.
  Cabled models also meet IP69K if the cable and cable entrance are protected from high-pressure spray.

Certifications

All models:

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

K50L, K50FL, T18, and T30 models only:

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

K30L and K50L models only:

Operating Conditions

–40 °C to +50 °C (–40 °F to +122 °F)

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.
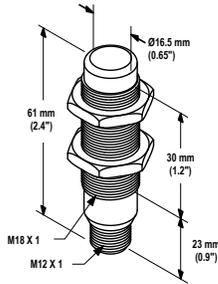Supply wiring leads < 24 AWG shall not be spliced.
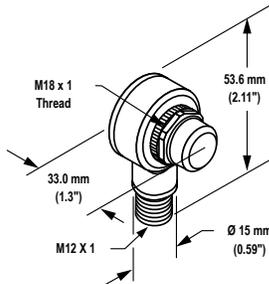For additional product support, go to www.bannerengineering.com.

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

M18 Models

Ø16.5 mm (0.65")
61 mm (2.4")
30 mm (1.2")
M18 X 1
M12 X 1
23 mm (0.9")

T18 Models

M18 x 1 Thread
53.6 mm (2.11")
33.0 mm (1.3")
M12 X 1
Ø 15 mm (0.59")

T30 Models

Ø 40.0 mm (1.57")
M30 x 1.5 Thread
63.7 mm (2.51")
M12 X 1
45.0 mm (1.77")
Ø 15 mm (0.59")

K30L Models

30.0 mm (1.18")
58.0 mm (2.28")
31.0 mm (1.22")
16.0 mm (0.63")
M22 X 1.5 Max. Torque 2.25 Nm (20 in-lbf)
M12 X 1

K50L Models

50.0 mm (1.97")
M30 x 1.5 (mounting nut included) Max. Torque 4.5 Nm (40 in-lbf)
38 mm (1.50")*
20 mm (0.79")
Internal Threads ½ - 14 NPSM Max. Torque 2.25 Nm (20 in-lbf)
11 mm (0.43")

K50FL Models

Ø50 [1.97"]
44.6 [1.76"]
60.0 [2.36"]
35.0 [1.38"]
2x 5.0 [0.20"]
2x 5.5 [0.21"]
16.0 [0.63"]
2x 5.0 [0.20"]
17.0 [0.67"]
40.0 [1.58"]

K80L Models

80.8 mm (3.18")
65.0 mm (2.56")
66.3 mm (2.61")
109.5 r (4.31
65.0 mm (2.56")
4X Ø 5.5 mm (Ø 0.22")
Max. Torque 1.12 Nm (10 in–lbf) with supplied screws
Internal Threads ½ - 14 NPSM
Max. Torque 2.25 Nm (20 in–lbf)
26.0 mm (1.02")
4X 8–32 UNC
Max. Torque 1.12 Nm (10 in–lbf)
M12 X 1

Accessories

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)			

4-Pin Threaded M12 Cordsets—Double Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
MQDEC-401SS	0.31 m (1 ft)	Male Straight/ Female Straight	40 Typ. [1.58"] M12 x 1 ø 14.5 [0.57"] 44 Typ. [1.73"] M12 x 1 ø 14.5 [0.57"]	Female Male 1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			

4-Pin Threaded M12 Cordsets—Double Ended

Model	Length	Style	Dimensions	Pinout
MQDEC-403RS	0.91 m (2.99 ft)	Male Right-Angle/ Female Straight		
MQDEC-406RS	1.83 m (6 ft)			
MQDEC-412RS	3.66 m (12 ft)			
MQDEC-420RS	6.10 m (20 ft)			
MQDEC-430RS	9.14 m (30.2 ft)			
MQDEC-450RS	15.2 m (49.9 ft)			
MQDEC-403RR	0.9 m (2.9 ft)	Male Right-Angle/ Female Right-Angle		
MQDEC-406RR	1.8 m (5.9 ft)			
MQDEC-412RR	3.6 m (11.8 ft)			
MQDEC-420RR	6.1 m (20 ft)			

4-Pin Threaded M12 Splitter Cordsets—Flat Junction

Model	Branches (Female)	Trunk (Male)	Pinout
CSB-M1240M1240	No branch	No trunk	
CSB-M1240M1241	2 × 0.3 m (1 ft)	No trunk	Female
CSB-M1241M1241		0.30 m (1 ft)	
CSB-M1248M1241		2.44 m (8 ft)	
CSB-M12415M1241		4.57 m (15 ft)	
CSB-M12425M1241		7.60 m (25 ft)	Male
CSB-UNT425M1241		7.60 m (25.0 ft) Unterminated	

1 = Brown
2 = White
3 = Blue
4 = Black

Mounting Brackets

For more information about these and other available brackets, visit www.bannerengineering.com.

K50FL models include a 48 mm (1.9 in) circular hook-and-loop mounting kit for easy mounting with no additional hardware required.

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

SMB18A
- Right-angle mounting bracket with a curved slot for versatile orientation
- 12-ga. stainless steel
- 18 mm sensor mounting hole
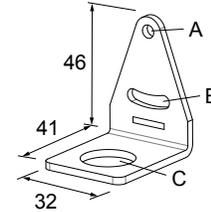- Clearance for M4 (#8) hardware
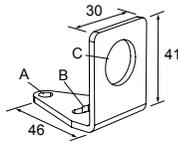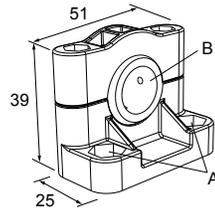
Hole center spacing: A to B = 24.2
Hole size: A = ø 4.6, B = 17.0 × 4.6, C = ø 18.5

SMB312PD
- 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 × 4.6, C = ø 18.5

Note: Not for use with plastic fiber optic sensors

SMB1815SF
- Swivel with set screws for mounting sensors by the cable hub
- Black reinforced thermoplastic polyester
- Stainless steel swivel locking hardware and hex wrench included

Hole center spacing: A = 36.0
Hole size: A = ø 5.0, B = ø 15.0

SMBAMS18RA
- Right-angle SMBAMS series bracket with 18 mm hole
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel
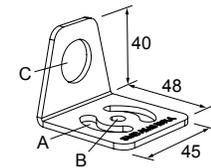
Hole center spacing: A = 26.0, A to B = 13.0
Hole size: A = 26.8 × 7.0, B = ø 6.5, C = ø 19.0

SMB18Q
- Right-angle flanged bracket
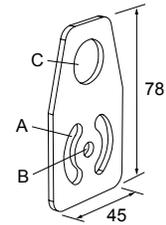- 18 mm sensor mounting hole
- 12-ga. stainless steel
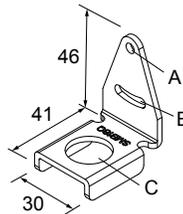
Hole center spacing: A to B = 24.2
Hole size: A = ø 4.6, B = 17.0 × 4.6, C = ø 19.0

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

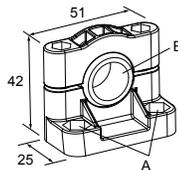**Hole center spacing:** A = 26.0, A to B = 13.0
Hole size: A = 26.8 × 7.0, B = ø 6.5, C = ø 19.0

SMB18SF
- 18 mm swivel bracket with M18 × 1 internal thread
- Black thermoplastic polyester
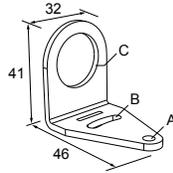- Stainless steel swivel locking hardware included

Hole center spacing: A = 36.0
Hole size: A = ø 5.3, B = ø 18.0

For use with base-mount K30L models

SMB22A
- Right-angle bracket with curved slot for versatile orientation
- 12-ga. stainless steel
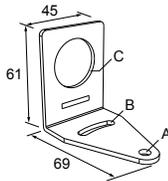- Mounting hole for 22 mm sensor

Hole center spacing: A to B = 26.0
Hole size: A = ø 4.6, B = 4.6 x 16.9, C = 22.2

For use with T30 models or base-mount K50L models

SMB30A
- Right-angle bracket with curved slot for versatile orientation
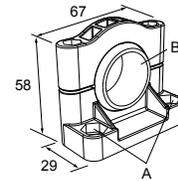- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel

Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

SMB30SC
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
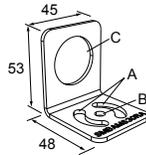- Stainless steel mounting and swivel locking hardware included

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

SMBAMS30RA
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
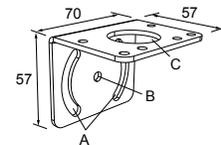- 12-ga. (2.6 mm) cold-rolled steel

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
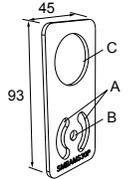- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor

Hole center spacing: A = 51, A to B = 25.4
Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

SMBAMS30P
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
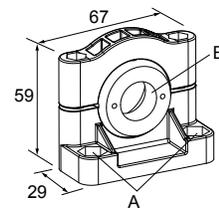- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel

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

SMB3018SC
- 18 mm swivel side or barrel-mount bracket
- Black reinforced thermoplastic polyester
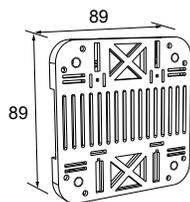- Stainless steel swivel locking hardware included

Hole center spacing: A = 50.8
Hole size: A = ø 7.0, B = ø 18.0

DIN-mount bracket for K80L models

SMBDX80DIN
- Black reinforced thermoplastic
- Bracket for mounting on a 35 mm DIN rail

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