







Setting	Description
Off Delay (ms)	Length of time before the output state returns to a touch, optical sensor, or push button inactive state after the button has been released or sensor has been unblocked. 0-60,000 ms

## Specifications

### Supply Voltage

18 V DC to 30 V DC

### Supply Current

132 mA maximum current at 18 V DC  
 Touch Models: 93 mA typical at 24 V DC  
 Optical Models: 75 mA typical at 24 V DC  
 Push Button Models: 65 mA typical at 24 V DC

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### Touch Dwell Time

If touch dwells for longer than 60 seconds, the output will revert to the untouched state

### Vibration Feedback Characteristics

Max Total On-Time Per Touch: 3 seconds  
 Mechanical Life: 500,000 cycles  
 For all touch conditions, the default Vibration Feedback is On and the type of vibration feedback is Steady

### Touch Response Time

Input Response: 5 ms minimum  
 Touch Response: 300 ms maximum (Standard Sensitivity touch response)

### Optical Sensor Emitter LED

Infrared, 870 nm

### Operating Conditions

-40 °C to +50 °C (-40 °F to +122 °F)  
 Humidity: 90% at +50 °C maximum relative humidity (non-condensing)  
 Storage: -40 °C to +70 °C (-40 °F to +158 °F)

### Environmental Rating

Touch and Optical Models: IEC IP67, IP69K per DIN 40050-9<sup>1</sup>  
 Push Button Models: IEC IP65

### Mounting

M30 × 1.5 threaded base, maximum torque 4.5 N-m (40 in-lbf)

### Construction

Standard Model Base, Dome, and Nut: Polycarbonate  
 FDA Model Base, Dome, and Nut: FDA-grade copolyester  
 Push Button: Thermoplastic

### Vibration and Mechanical Shock

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell)  
 Meets IEC 60068-2-27 requirements (Shock: 30G 11 ms duration, half sine wave)

### IO-Link Interface

Supports Smart Sensor Profile: No  
 Baud Rate: 38400 bps (COM2)  
 Process Data In: 16 bits (2 bytes)  
 Process Data Out: 80 bits (10 bytes)  
 IODD Files: Provides all programming options, plus additional functionality

### Connections

Integral 4-pin M12/Euro-style quick disconnect or 150 mm (5.9 inch) PVC cable with a M12/Euro-style quick disconnect, depending on model  
 Models with a quick disconnect require a mating cordset

### Certifications



### Default Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates <sup>2</sup>		Lumen Output for Touch Models (Typical at 25 °C) <sup>3</sup>
		x	y	
Green	522	0.154	0.700	16.5
Red	620	0.689	0.309	8.3
Yellow	576	0.477	0.493	23.8
Blue	466	0.140	0.054	4.6
White	5700K	0.328	0.337	25.1
Cyan	493	0.170	0.340	18.4
Magenta	-	0.379	0.172	11.1
Amber	589	0.556	0.420	15.7
Rose	-	0.515	0.220	9.1
Lime Green	562	0.388	0.561	21.4
Sky Blue	486	0.155	0.247	19.5
Orange	599	0.616	0.370	12.1
Violet	-	0.217	0.089	9.7
Spring Green	508	0.177	0.536	17.0

### Required Overcurrent Protection



**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

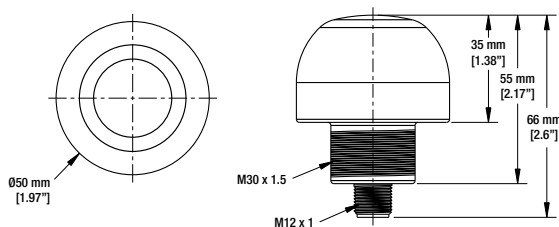
Overcurrent protection is required to be provided by end product application per the supplied table.  
 Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.  
 Supply wiring leads < 24 AWG shall not be spliced.  
 For additional product support, go 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

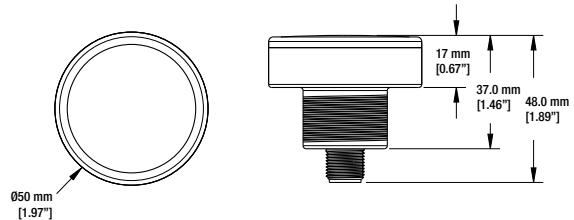
## Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.

### Standard Models: Touch Button



### Compact Models: Touch Button

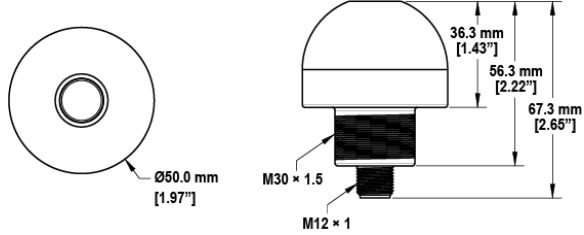


<sup>1</sup> QP models must be installed to protect the cable and cable entrance from high-pressure spray to meet IP69K.

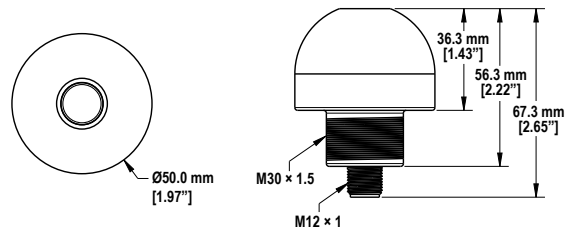
<sup>2</sup> Refer to the CIE 1931 (x,y) Chromaticity Diagram to show equivalent color with indicated color coordinates. Actual coordinates may differ ± 5%.

<sup>3</sup> Values shown apply to touch dome models only. Lumen output for compact models is 20% lower, optical sensor models is 14% lower, and push button models is 10% lower.

Optical Sensor



Push Button



## Accessories

### Cordsets

4-Pin Threaded M12/Euro-Style Cordsets—Double Ended				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight/Female Straight		Female
MQDEC-403SS	0.91 m (3 ft)			
MQDEC-406SS	1.83 m (6 ft)			Male
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-420SS	6.10 m (20 ft)			<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDEC-430SS	9.14 m (30 ft)			
MQDEC-450SS	15.2 m (50 ft)			

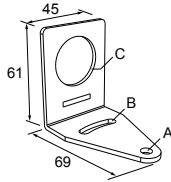
4-Pin Threaded M12/Euro-Style Cordsets—Double Ended, Oil Resistant				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS-PUR	0.3 m (1 ft)	Male Straight/Female Straight		Female
MQDEC-403SS-PUR	1 m (3.28 ft)			
MQDEC-406SS-PUR	2 m (6.56 ft)			Male
MQDEC-415SS-PUR	5 m (16.40 ft)			
MQDEC-430SS-PUR	10 m (32.81 ft)			<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>

4-Pin Threaded M12/Euro-Style Cordsets—Double Ended, Washdown, Stainless Steel				
Model	Length	Style	Dimensions	Pinout
MQDEC-WDSS-401SS	0.3 m (1 ft)	Male Straight/Female Straight		Female
MQDEC-WDSS-403SS	0.91 m (3 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			Male
MQDEC-WDSS-412SS	3.66 m (12 ft)			1 = Brown 2 = White 3 = Blue 4 = Black

## Brackets

### SMB30A

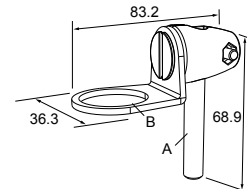
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (1/4 in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



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

### SMB30FA

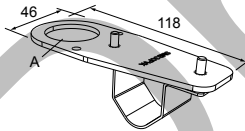
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



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

### SMB30FVK

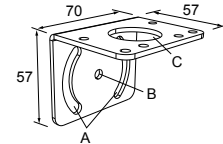
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



**Hole size:** A= ø 31

### SMB30MM

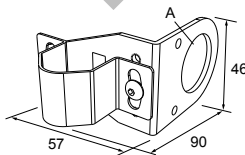
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (1/4 in) hardware
- Mounting hole for 30 mm sensor



**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

### SMB30RAVK

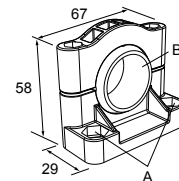
- V-clamp, right-angle bracket and fasteners for mounting sensors to pipe or extrusion
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



**Hole size:** A = ø 30.5

### SMB30SC

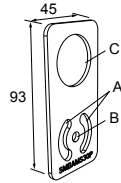
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included



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

**SMBAMS30P**

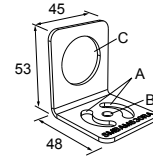
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel



**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

**SMBAMS30RA**

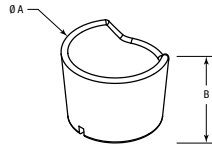
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



**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

**TC-K50-CL**

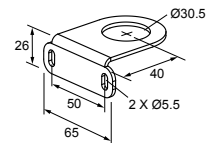
- Touch cover



**Diameter:** A = 67 mm  
**Height:** B = 42.5 mm

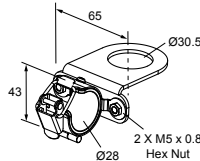
**LMB30LP**

- Low profile
- 30 mm mounting hole
- 300 series stainless steel

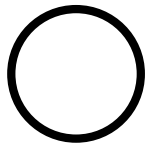


**LMB30LPC**

- For 28 mm tubular racking
- LMB30LP attached to clamp bracket
- Toolless mount to racking
- 30 mm mounting hole



Standard Laser Marking Options



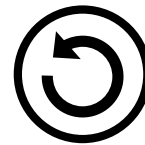
**Circle Icon**  
 (add **-CRCL** to model number)



**Power/Start Icon**  
 (add **-STRT** to model number)



**Stop Icon**  
 (add **-STOP** to model number)



**Reset Icon**  
 (add **-RSET** to model number)

Example: K50PTKQ-RSETI

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

## FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.

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