

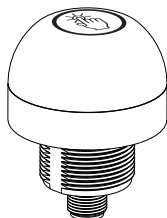
# EZ-LIGHT® Touch K50 Series Illuminated Multipurpose Buttons



more sensors, more solutions

## General Purpose Multicolor Indicator with Independent Momentary Touch Button Output

For the latest technical information about this product, including specifications, dimensions, and wiring, see <http://www.bannerengineering.com>



- Rugged, cost-effective, and easy-to-install multicolor indicator with touch button
- Waterproof IP69K construction for washdown environments
- Three independent colors in one unit - Color 3 overrides Colors 1 and 2, Color 2 overrides Color 1
- Available with PNP and NPN inputs/outputs, depending on model
- Ergonomically designed to eliminate hand, wrist, and arm stresses associated with repeated switch operation; require no physical force to operate
- Can be actuated with bare hands or in gloves
- 12 to 30V dc operation

## Models

Model <sup>1</sup>	I/O Type	Output State	Color 1	Color 2	Color 3	Connection
K50APTGRYF2Q	PNP	N.O.	Green	Red	Yellow	Integral 8-pin Euro QD
K50RPTGRYF2Q		N.C.				
K50ANTGRYF2Q	NPN	N.O.				
K50RNTGRYF2Q		N.C.				



### 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.

## Indicator and Output Behavior

Table 1: PNP Models

Input Actions				Touch Button Actions		
Input #1: Pin 3 Green Wire	Input #2: Pin 8 Red Wire	Input #3: Pin 4 Yellow Wire	LED Color	Output Type	Touch	Output: Pin 1 White Wire
Open or -Vdc	Open or -Vdc	Open or -Vdc	Light OFF	N.O.	Not touched	PNP Output Off
+Vdc	Open or -Vdc	Open or -Vdc	Color #1 ON		Touched	PNP Output On
+Vdc	+Vdc	Open or -Vdc	Color #2 ON	N.C.	Not touched	PNP Output On
+Vdc	+Vdc	+Vdc	Color #3 ON		Touched	PNP Output Off
Open or -Vdc	+Vdc	Open or -Vdc	Color #2 ON			
Open or -Vdc	+Vdc	+Vdc	Color #3 ON			
Open or -Vdc	Open or -Vdc	+Vdc	Color #3 ON			
+Vdc	Open or -Vdc	+Vdc	Color #3 ON			

<sup>1</sup> Integral QD models only are listed.

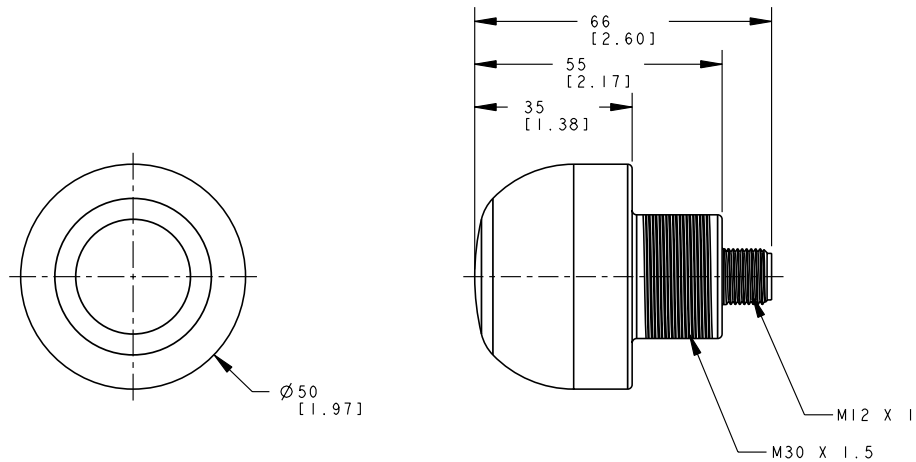
- For 8-pin 150 mm (5.9 in) Euro-style PVC pigtail, replace suffix Q with QP in model number (example, K50APTGRYF2QP).
- For 2 m (6.5 ft) cable, omit suffix Q from model number (example, K50APTGRYF2).
- A model with a QD requires a mating cable (see [Cordsets](#) on page 3).



Table 2: NPN Models

Input Actions				Touch Button Actions		
Input #1: Pin 3 Green Wire	Input #2: Pin 8 Red Wire	Input #3: Pin 4 Yellow Wire	LED Function	Output Type	Touch	Output: Pin 1 White Wire
Open or +Vdc	Open or +Vdc	Open or +Vdc	Light OFF	N.O.	Not touched	NPN Output Off
-Vdc	Open or +Vdc	Open or +Vdc	Color #1 ON		Touched	NPN Output On
-Vdc	-Vdc	Open or +Vdc	Color #2 ON	N.C.	Not touched	NPN Output On
-Vdc	-Vdc	-Vdc	Color #3 ON		Touched	NPN Output Off
Open or +Vdc	-Vdc	Open or +Vdc	Color #2 ON			
Open or +Vdc	-Vdc	-Vdc	Color #3 ON			
Open or +Vdc	Open or +Vdc	-Vdc	Color #3 ON			
-Vdc	Open or +Vdc	-Vdc	Color #3 ON			

## Dimensions



## Hookups

NPN (Sinking) Output Models	PNP (Sourcing) Output Models	Wiring Key	Pinout
		<p>1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red</p>	

## Specifications

### Supply Voltage

12 to 30V dc

### Supply Current

< 75 mA max current at 12V dc (exclusive of load)

< 50 mA max current at 30V dc (exclusive of load)

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### Output Rating

**Maximum Load:** 150 mA

**ON-state saturation voltage:** < 2V at 10 mA dc; < 2.5V at 150 mA dc

**OFF-state leakage current** <10 µA at 30V dc

### Output Response Time

50 milliseconds ON and OFF

### Power-Up Output Delay Time

300 milliseconds

### Connections

8-pin integral Euro-style QD, 2 m (6.5 ft) PVC integral cable, or 8-pin 150 mm (5.9 in) Euro-style PVC pigtail QD

### Indicators

**Color 1:** Green

**Color 2:** Red

**Color 3:** Yellow

### Environmental Rating

IEC IP67, IP69K per DIN 40050-9. Cabled models also meet IP69K if the cable and cable entrance are protected from high-pressure spray.

### Operating Conditions

**Temperature:** -40° to +50° C (-40° to +122° F)

**Humidity:** 90% at 50° C max. relative humidity (non-condensing)

### Storage

-40° to +70° C (-40° to +158° F)

### Construction

**Housing:** polycarbonate

**Translucent dome:** polycarbonate

**Mounting Nut:** PBT

### Mounting

M30 x 1.5 Threaded base Max torque 4.5 Nm (40in lb f)

### Vibration and Mechanical Shock

All models meet Mil. Std. 202F requirements method 201A (vibration: 10 to 60 Hz max., double amplitude 0.06 in. maximum acceleration 10G). Also meets IEC 947-5-2; 30G 11 ms duration, half sine wave.

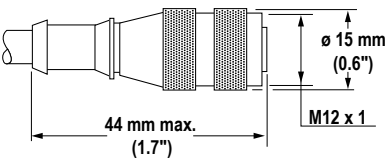
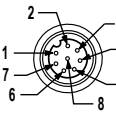
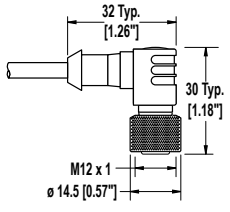
### Certifications



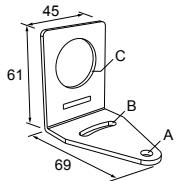
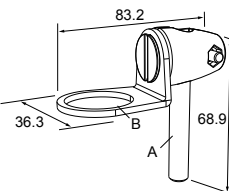
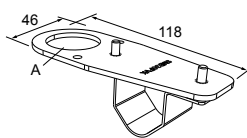
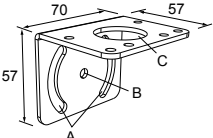
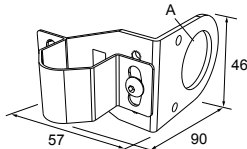
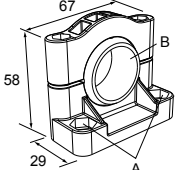
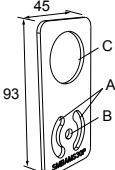
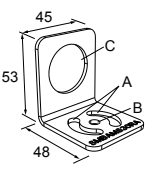
## Accessories

### Cordsets

Table 3: 8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield

Model	Length	Style	Dimensions	Pinout
MQDC2S-806	1.83 m (6 ft)	Straight		
MQDC2S-815	4.57 m (15 ft)			
MQDC2S-830	9.14 m (30 ft)			
MQDC2S-850	15.2 m (50 ft)			
MQDC2S-806RA	1.83 m (6 ft)	Right-Angle		1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red
MQDC2S-815RA	4.57 m (15 ft)			
MQDC2S-830RA	9.14 m (30 ft)			
MQDC2S-850RA	15.2 m (50 ft)			

## Brackets

<p><b>SMB30A</b></p> <ul style="list-style-type: none"> <li>• Right-angle bracket with curved slot for versatile orientation</li> <li>• Clearance for M6 (1/4 in) hardware</li> <li>• Mounting hole for 30 mm sensor</li> <li>• 12-ga. stainless steel</li> </ul>  <p><b>Hole center spacing:</b> A to B=40  <b>Hole size:</b> A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5</p>	<p><b>SMB30FA</b></p> <ul style="list-style-type: none"> <li>• Swivel bracket with tilt and pan movement for precise adjustment</li> <li>• Mounting hole for 30 mm sensor</li> <li>• 12-ga. 304 stainless steel</li> <li>• Easy sensor mounting to extrude rail T-slot</li> <li>• Metric and inch size bolt available</li> </ul>  <p><b>Bolt thread:</b> SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50  <b>Hole size:</b> B= ø 30.1</p>
<p><b>SMB30FVK</b></p> <ul style="list-style-type: none"> <li>• V-clamp, flat bracket and fasteners for mounting to pipe or extensions</li> <li>• Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions</li> <li>• 30 mm hole for mounting sensors</li> </ul>  <p><b>Hole size:</b> A= ø 31</p>	<p><b>SMB30MM</b></p> <ul style="list-style-type: none"> <li>• 12-ga. stainless steel bracket with curved mounting slots for versatile orientation</li> <li>• Clearance for M6 (1/4 in) hardware</li> <li>• Mounting hole for 30 mm sensor</li> </ul>  <p><b>Hole center spacing:</b> A = 51, A to B = 25.4  <b>Hole size:</b> A = 42.6 x 7, B = ø 6.4, C = ø 30.1</p>
<p><b>SMB30RAVK</b></p> <ul style="list-style-type: none"> <li>• V-clamp, right-angle bracket and fasteners for mounting sensors to pipe or extrusion</li> <li>• Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions</li> <li>• 30 mm hole for mounting sensors</li> </ul>  <p><b>Hole size:</b> A = ø 30.5</p>	<p><b>SMB30SC</b></p> <ul style="list-style-type: none"> <li>• Swivel bracket with 30 mm mounting hole for sensor</li> <li>• Black reinforced thermoplastic polyester</li> <li>• Stainless steel mounting and swivel locking hardware included</li> </ul>  <p><b>Hole center spacing:</b> A=ø 50.8  <b>Hole size:</b> A=ø 7.0, B=ø 30.0</p>
<p><b>SMBAMS30P</b></p> <ul style="list-style-type: none"> <li>• Flat SMBAMS series bracket</li> <li>• 30 mm hole for mounting sensors</li> <li>• Articulation slots for 90+° rotation</li> <li>• 12-ga. 300 series stainless steel</li> </ul>  <p><b>Hole center spacing:</b> A=26.0, A to B=13.0  <b>Hole size:</b> A=26.8 x 7.0, B=ø 6.5, C=ø 31.0</p>	<p><b>SMBAMS30RA</b></p> <ul style="list-style-type: none"> <li>• Right-angle SMBAMS series bracket</li> <li>• 30 mm hole for mounting sensors</li> <li>• Articulation slots for 90+° rotation</li> <li>• 12-ga. (2.6 mm) cold-rolled steel</li> </ul>  <p><b>Hole center spacing:</b> A=26.0, A to B=13.0  <b>Hole size:</b> A=26.8 x 7.0, B=ø 6.5, C=ø 31.0</p>

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