EZ-LIGHT® Touch K50 Series Illuminated Multipurpose Buttons

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Datasheet

General Purpose Multicolor Indicator with Independent Momentary Touch Button Output

For the latest technical information about this product, including specifications, dimensions, and wiring, see
www.bannerengineering.com.
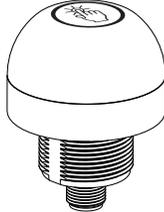
- Rugged, cost-effective, and easy-to-install multicolor indicator with touch button
- Waterproof IP69K construction for washdown environments
- Three independent colors in one unit—Color 3 overrides Colors 1 and 2, Color 2 overrides Color 1
- Available with PNP and NPN inputs/outputs, depending on model
- 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 [1]	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	PNP	N.C.				
K50ANTGRYF2Q	NPN	N.O.				
K50RNTGRYF2Q	NPN	N.C.				

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
+V dc	Open or -Vdc	Open or -Vdc	Color #1 On		Touched	PNP Output On
+V dc	+V dc	Open or -Vdc	Color #2 On	N.C.	Not touched	PNP Output On
+V dc	+V dc	+V dc	Color #3 On		Touched	PNP Output Off
Open or -Vdc	+V dc	Open or -Vdc	Color #2 On			
Open or -Vdc	+V dc	+V dc	Color #3 On			
Open or -Vdc	Open or -Vdc	+V dc	Color #3 On			
+V dc	Open or -Vdc	+V dc	Color #3 On			

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[1] Integral QD models only are listed. A model with a QD requires a mating cable (see *Cordsets* on page 3)
- 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).

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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 Color	Output Type	Touch	Output: Pin 1 White Wire
Open or +V dc	Open or +V dc	Open or +V dc	Light Off	N.O.	Not touched	NPN Output Off
-Vdc	Open or +V dc	Open or +V dc	Color #1 On		Touched	NPN Output On
-Vdc	-Vdc	Open or +V dc	Color #2 On	N.C.	Not touched	NPN Output On
-Vdc	-Vdc	-Vdc	Color #3 On		Touched	NPN Output Off
Open or +V dc	-Vdc	Open or +V dc	Color #2 On			
Open or +V dc	-Vdc	-Vdc	Color #3 On			
Open or +V dc	Open or +V dc	-Vdc	Color #3 On			
-Vdc	Open or +V dc	-Vdc	Color #3 On			

Dimensions
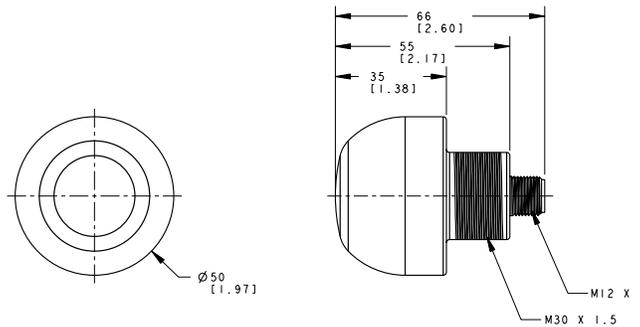
Wiring Diagram

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

Specifications

Supply Voltage
12 to 30 V dc

Supply Current
< 75 mA max current at 12 V dc (exclusive of load)
< 50 mA max current at 30 V 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 30 V 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 °C to +50 °C (-40 °F to +122 °F)
Humidity: 90% at 50 °C max. relative humidity (non-condensing)

Storage
-40 °C to +70 °C (-40 °F 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

CE   c(UL)us LISTED

Accessories

Cordsets

8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield				
Model	Length	Style	Dimensions	Pinout
MQDC2S-806	1.83 m (6 ft)	Straight	44 Typ. / M12 x 1 / ø 14.5	1 = White, 2 = Brown, 3 = Green, 4 = Yellow, 5 = Gray, 6 = Pink, 7 = Blue, 8 = Red
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	32 Typ. [1.26"] / 30 Typ. [1.18"] / M12 x 1 / ø 14.5 [0.57"]	
MQDC2S-815RA	4.57 m (15 ft)			
MQDC2S-830RA	9.14 m (30 ft)			
MQDC2S-850RA	15.2 m (50 ft)			

Brackets

SMB30A
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
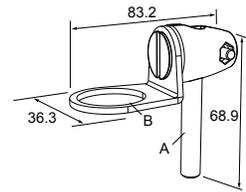- Mounting hole for 30 mm sensor
- 12-ga. stainless steel
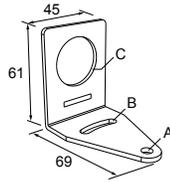
Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

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
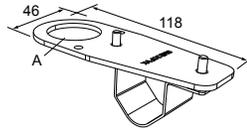- Metric and inch size bolt available

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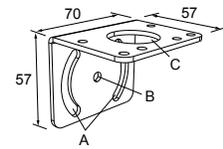Hole size: B= ø 30.1

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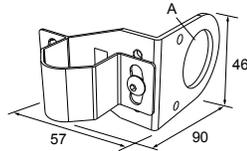- Mounting hole for 30 mm sensor

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

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
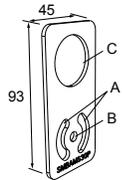- Stainless steel mounting and swivel locking hardware included
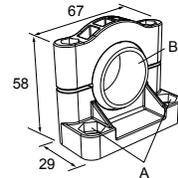
Hole center spacing: A=ø 50.8
Hole size: A=ø 7.0, B=ø 30.0

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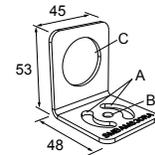- 12-ga. 300 series stainless steel

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

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