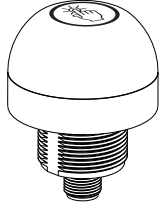# EZ-LIGHT® Touch K50 Series Illuminated **Buttons**

Datasheet

Lighted Touch Button with Bipolar Outputs

- Rugged, cost-effective, and easy-to-install touch button with multicolor light
- Momentary versions remain activated as long as touch is present
- Latching versions start up not activated and toggle between activated and not activated on successive touches
- Waterproof IP69K construction for washdown environments
- 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 V to 30 V operation

⚠️ **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

Model [1]	Function	Output	Light (not activated)	Light (activated)	Connection
K50ALBTXGHQ	Latching	Bipolar, N.O.	-	Green	Integral 5-pin M12/ Euro-style male quick disconnect (QD)
K50RLBTXGHQ	Latching	Bipolar, N.C.			
K50ABTXGHQ	Momentary	Bipolar, N.O.			
K50RBTXGHQ	Momentary	Bipolar, N.C.			
K50ALBTGGHQ	Latching	Bipolar, N.O.	Green	Green	
K50RLBTGGHQ	Latching	Bipolar, N.C.			
K50ABTGGHQ	Momentary	Bipolar, N.O.			
K50RBTGGHQ	Momentary	Bipolar, N.C.			
K50ALBTRGHQ	Latching	Bipolar, N.O.	Red	Green	
K50RLBTRGHQ	Latching	Bipolar, N.C.			
K50ABTRGHQ	Momentary	Bipolar, N.O.			
K50RBTRGHQ	Momentary	Bipolar, N.C.			

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[1] 5-pin integral QD models only are listed.

- To order the 5-pin 150 mm (5.9 in) Euro-style PVC pigtail models, replace suffix Q with QP in model number (example, K50ALBTXGHQP).
- To order the 2 m (6.5 ft) cable models, omit suffix Q from model number (example, K50ALBTXGH).
- A model with a QD requires a mating cable (see *Cordsets* on page 3).

Wiring Diagrams
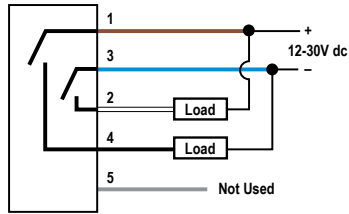
Color Key
1 = Brown
2 = White
3 = Blue
4 = Black
5 = Gray

Note: Cabled wiring diagrams are shown. Quick disconnect (QD) wiring diagrams are functionally identical.

Specifications

Supply Voltage
12 V dc 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: < 2 V dc at 10 mA; < 2.5 V dc at 150 mA
Off-state leakage current: <10 μA at 30 V dc

Operating Conditions
−40 °C to +50 °C (−40 °F to +122 °F)
90% at 50 °C maximum relative humidity (non-condensing)

Storage
−40 °C to +70 °C (−40 °F to +158 °F)

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.

Vibration and Mechanical Shock
All models meet Mil. Std. 202F requirements method 201A (vibration: 10 Hz 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.

Output Response Time
Momentary models: 50 milliseconds On and Off
Latching models: 150 milliseconds On and Off

Power-Up Delay
300 milliseconds
Latching models start up in a 'not activated' state

Connections
5-pin integral M12/Euro-style QD, 2 m (6.5 ft) PVC integral cable, or 5-pin 150 mm (6 in) M12/Euro-style PVC cable QD

Certifications

Indicator Lumens

Color	Typical Wavelength	Typical Intensity (lm)
Green	525 nm	29
Red	625 nm	13

Construction
Housing: polycarbonate
Translucent dome: polycarbonate
Mounting nut: PBT

Mounting
M30 × 1.5 Threaded base Max torque 4.5 N·m (40 in·lbf)

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.
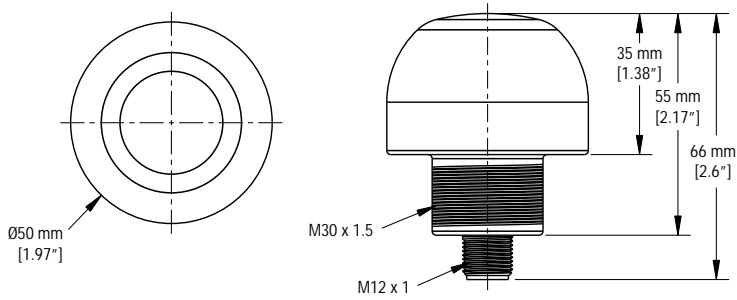Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
Supply wiring leads < 24 AWG shall not be spliced.
For additional product support, go to www.bannerengineering.com.

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

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

Accessories

Cordsets

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

5-Pin Threaded M12/Euro-Style Cordsets—Washdown Stainless Steel				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0506	1.83 m (6 ft)	Straight		
MQDC-WDSS-0515	4.57 m (15 ft)			1 = Brown
MQDC-WDSS-0530	9.14 m (30 ft)			2 = White
				3 = Blue
				4 = Black
				5 = Gray

| 5-Pin Threaded M12/Euro-Style Cordsets—Washdown, with Shield				
Model	Length	Style	Dimensions	Pinout (Female)
MQDCWD-506	1.83 m (6 ft)	Straight	42 Typ. [1.65"] ø 15.0 [0.57"] M12 x 1	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
MQDCWD-530	9.14 m (30 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
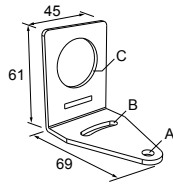
Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

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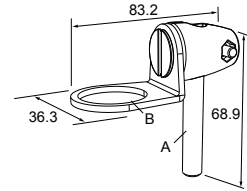
Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50
Hole size: B= ø 30.1

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
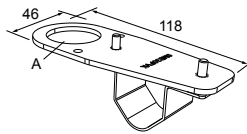
Hole size: A= ø 31

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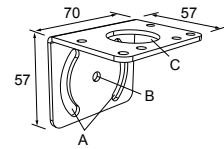
Hole center spacing: A = 51, A to B = 25.4
Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

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
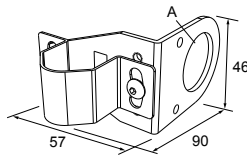
Hole size: A = ø 30.5

SMB30SC
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included
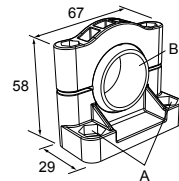
Hole center spacing: A=ø 50.8
Hole size: A=ø 7.0, B=ø 30.0

SMBAMS30P
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel
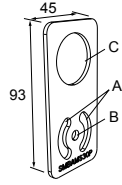
Hole center spacing: A=26.0, A to B=13.0
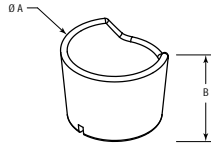Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

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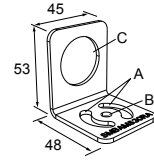
Hole center spacing: A=26.0, A to B=13.0
Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

TC-K50-CL
- Touch cover

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

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