EZ-LIGHT® Touch Gen 2 K50 Series Pick-to-Light



Datasheet

Compact, Single-Point Devices for Error-Proofing of Bin-Picking Operations





Standard Model

Compact Model

- Excellent immunity to false triggering by water spray, detergents, oils, and other foreign materials
- Rugged, cost-effective and easy-to-install solutions for error-proofing and partsverification applications
- · Compact devices are completely self contained—no controller needed
- Waterproof IEC IP69K construction for washdown environments
- · Easy actuation—no force required
- 12 V dc to 30 V dc operation
- · Can be actuated with bare hands or gloves
- Compact models available for lower profile applications



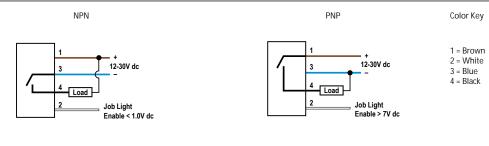
WARNING: Not To Be Used for Personnel Protection

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	Connection	Job Light
K50APT2GXDQ		PNP, N.O.	Integral 4-pin M12/Euro- style male quick disconnect (QD)	Green
K50RPT2GXDQ	Job light is illuminated at all times while job input is active Touch activates output	PNP, N.C.		
K50ANT2GXDQ		NPN, N.O.		
K50RNT2GXDQ		NPN, N.C.		
K50APT2GRCQ		PNP, N.O.		Green (Red)
K50RPT2GRCQ	Job light is Green while job input is active	PNP, N.C.		
K50ANT2GRCQ	 Touch activates output and overrides job light (turns Red) for visual verification that action was sensed 	NPN, N.O.		
K50RNT2GRCQ		NPN, N.C.		
K50APT2GREQ		PNP, N.O.		Green (Red)
K50RPT2GREQ	 Job light is Green at all times while job input is active Touch activates output 	PNP, N.C.		
K50ANT2GREQ	A touch while job input is inactive causes unit to light Red, providing visual verification that sensor is functioning properly	NPN, N.O.		
K50RNT2GREQ	- Seas Termeation Was 55.55. Is functioning property	NPN, N.C.		

Wiring Diagrams





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

- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, K50APT2GXD.
- To order a compact model, add the suffix "C" after K50 in the model number. For example, K50CAPT2GXDQ.
- Models with a quick disconnect require a mating cordset.



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Specifications

Supply Voltage

12 V 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

Output Response Time

50 milliseconds On and Off

Operating Conditions

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

Humidity: 90% at 50 °C maximum relative humidity (non-condensing)

Environmental Rating

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

Construction

Housing: polycarbonate
Translucent dome: polycarbonate

Mounting nut: PBT

Vibration and Mechanical Shock

Vibration 10 Hz to 55 Hz 1.0 mm p-p amplitude per IEC 60068-2-6 Shock 30G 11 ms duration, half sine wave per IEC 60068-2-27

Power-Up Delay

300 milliseconds

Connections

Integral 4-pin M12/Euro style QD, or 2 m (6.5 ft) PVC integral cable

-40 °C to +70 °C (-40 °F to +158 °F)

Certifications





Job (pick) indicator: Green

Pick sensed indicator: Red or unilluminated, depending on model

Indicator Lumens

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

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.

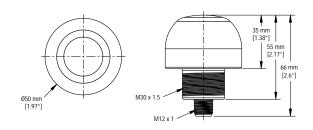
Supply wiring leads < 24 AWG shall not be spliced.

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		

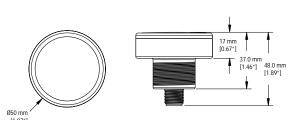
Dimensions

Standard Models



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

Compact Models



Accessories

Cordsets

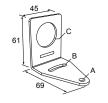
4-Pin Threaded M12/Euro-Style Cordsets					
Model	Length	Style	Dimensions	Pinout (Female)	
MQDC-406	1.83 m (6 ft)	Straight	 		
MQDC-415	4.57 m (15 ft)				
MQDC-430	9.14 m (30 ft)				
MQDC-450	15.2 m (50 ft)		M12 x 1 → ø 14.5 →	1-60-2	
MQDC-406RA	1.83 m (6 ft)	Right-Angle	, 32 Тур.	4-3	
MQDC-415RA	4.57 m (15 ft)		[1.26"]		
MQDC-430RA	9.14 m (30 ft)		30 Typ.	1 = Brown 2 = White	
MQDC-450RA	15.2 m (50 ft)		M12 x 1	3 = Blue 4 = Black	

Brackets

SMB30A

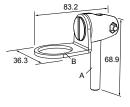
- Right-angle bracket with curved slot for versatile orientation Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel

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



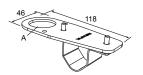
SMB30FA

- 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



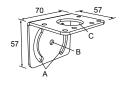
Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50 Hole size: B= ø 30.1

- 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



SMB30MM

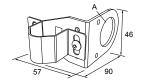
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



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

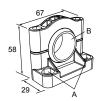
Hole size: A= ø 31

- 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



SMB30SC

- Swivel bracket with 30 mm mounting hole for sensor Black reinforced thermoplastic
- 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

Hole size: A = Ø 30.5

SMBAMS30P

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



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 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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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
- 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