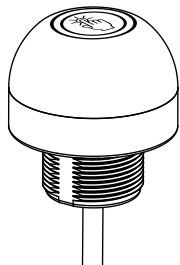


# EZ-LIGHT® Touch Gen 2 K50 FDA-Grade Pick-to-Light



## Datasheet

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



- FDA-grade materials; rated to IEC IP67, IP68, and IP69K
- Laser marked information withstands aggressive cleaning procedures
- 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 parts-verification applications
- Compact devices are completely self contained—No controller needed
- Easy actuation—no force required
- 12 V to 30 V dc operation
- Can be actuated with bare hands or in gloves



**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 <sup>1</sup>	Function	Output	Connection	Job Light
K50APT2FGXDQP	<ul style="list-style-type: none"> <li>• Job light is ON at all times while job input is active</li> <li>• Touch activates output</li> </ul>	PNP, N.O.	150 mm (6 in) PVC cable with a 4-pin M12/Euro-style male, stainless steel, quick disconnect (QD)	Green
K50RPT2FGXDQP		PNP, N.C.		
K50ANT2FGXDQP		NPN, N.O.		
K50RNT2FGXDQP		NPN, N.C.		
K50APT2FGRCQP	<ul style="list-style-type: none"> <li>• Job light is Green while job input is active</li> <li>• Touch activates output and overrides job light (turns Red) for visual verification that action was sensed</li> </ul>	PNP, N.O.		Green (Red)
K50RPT2FGRCQP		PNP, N.C.		
K50ANT2FGRCQP		NPN, N.O.		
K50RNT2FGRCQP		NPN, N.C.		
K50APT2FGREQP	<ul style="list-style-type: none"> <li>• Job light is Green at all times while job input is active</li> <li>• Touch activates output</li> <li>• A touch while job input is inactive causes unit to light Red, providing visual verification that sensor is functioning properly</li> </ul>	PNP, N.O.		Green (Red)
K50RPT2FGREQP		PNP, N.C.		
K50ANT2FGREQP		NPN, N.O.		
K50RNT2FGREQP		NPN, N.C.		

<sup>1</sup>

- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "QP" in the model number. For example, K50APT2FGXD.
- Models with a quick disconnect require a mating cordset.



# Specifications

## Supply Voltage

12 V to 30 V dc

## Supply Current

< 75 mA max current at 12 V dc (exclusive of load)  
< 40 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 at 10 mA dc; < 2.5 V at 150 mA dc  
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)

## Storage

-40 °C to +70 °C (-40 °F to +158 °F)

## Environmental Rating

IEC IP67, IP69K per DIN 40050-9.

## 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

## Construction

Base, dome, and nut: FDA-grade polycarbonate

## Mounting

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

## Certifications



## Indicators

Job ("pick") indicator: Green

Pick sensed indicator: Red or Off, depending on model

## Indicator Lumens

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

## Connections

150 mm (6 in) PVC cable with a 4-pin M12/Euro-style male, stainless steel, quick disconnect (QD) or 2 m (6.5 ft) unterminated PVC-jacketed cable

## Required Overcurrent Protection

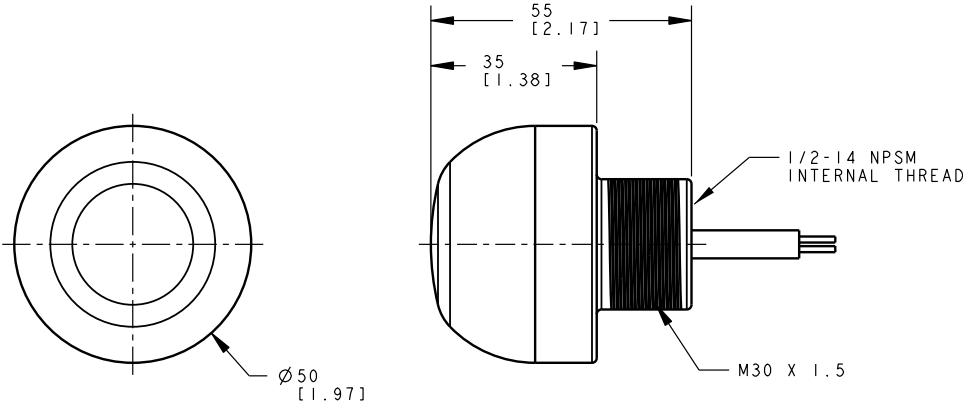


**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

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 <http://www.bannerengineering.com>.

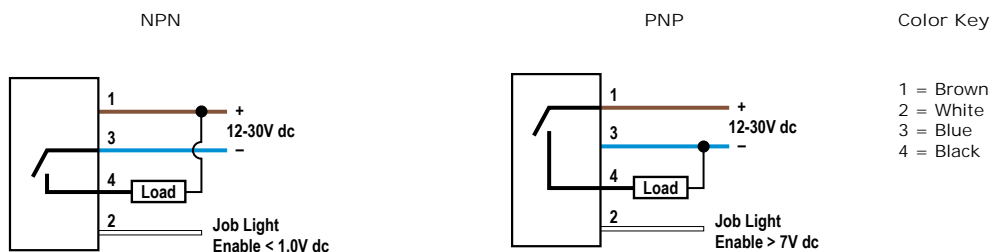
Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

# Dimensions



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

## Wiring Diagrams



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

## Accessories

### Cordsets

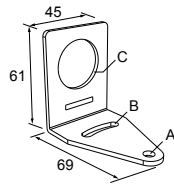
4-Pin Threaded M12/Euro-Style Cordsets				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	1.83 m (6 ft)	Straight		
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			
MQDC-450	15.2 m (50 ft)			
MQDC-406RA	1.83 m (6 ft)	Right-Angle		
MQDC-415RA	4.57 m (15 ft)			
MQDC-430RA	9.14 m (30 ft)			
MQDC-450RA	15.2 m (50 ft)			

4-Pin Threaded M12/Euro-Style Cordsets—Washdown, Stainless Steel				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0406	1.83 m (6 ft)	Straight		
MQDC-WDSS-0415	4.57 m (15 ft)			
MQDC-WDSS-0430	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

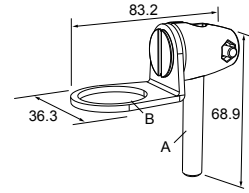


Hole center spacing: A to B=40

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

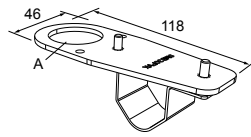


Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50

Hole size: B= ø 30.1

### SMB30FVK

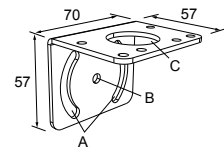
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



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

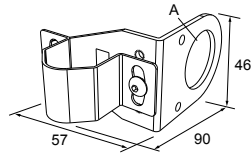


Hole center spacing: A = 51, A to B = 25.4

Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

### SMB30RAVK

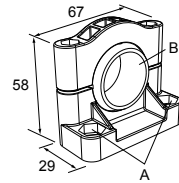
- V-clamp, right-angle bracket and fasteners for mounting sensors to pipe or extrusion
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



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

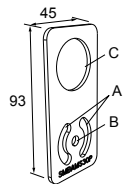


Hole center spacing: A=ø 50.8

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

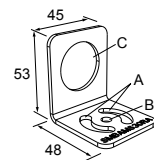


Hole center spacing: A=26.0, A to B=13.0

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

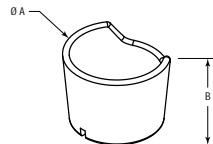


Hole center spacing: A=26.0, A to B=13.0

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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