# EZ-LIGHT® Touch K50 Series Pick-to-Light

## Features

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



**Standard Model**

- Rugged, cost-effective, and easy-to-install solutions for error-proofing and parts-verification applications
- Compact devices are completely self-contained, no controller is needed
- Illuminated dome provides an easy-to-see green job light: some models also light red for alternate operation
- Waterproof  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

**WARNING:**

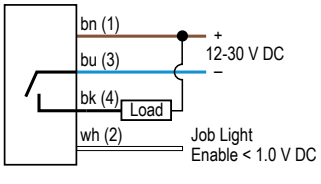
- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

## Models

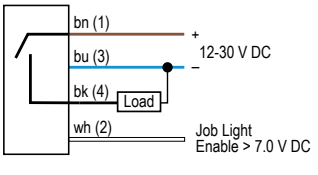
| Model[1] | Function | Output | Connection | Job Light |
|---|---|---|---|---|
| K50APTGXDQ | • Job light is illuminated at all times while job input is active<br>• Touch activates output | PNP, N.O. | Integral 4-pin M12 male quick-disconnect connector | Green |
| K50RPTGXDQ | | PNP, N.C. | | |
| K50ANTGXDQ | | NPN, N.O. | | |
| K50RNTGXDQ | | NPN, N.C. | | |
| K50APTGRCQ | • Job light is Green while job input is active<br>• Touch activates output and overrides job light (turns Red) for visual verification that action was sensed | PNP, N.O. | | Green (Red) |
| K50RPTGRCQ | | PNP, N.C. | | |
| K50ANTGRCQ | | NPN, N.O. | | |
| K50RNTGRCQ | | NPN, N.C. | | |
| K50APTGREQ | • Job light is Green at all times while job input is active<br>• Touch activates output<br>• A touch while job input is inactive causes unit to light Red, providing visual verification that sensor is functioning properly | PNP, N.O. | | Green (Red) |
| K50RPTGREQ | | PNP, N.C. | | |
| K50ANTGREQ | | NPN, N.O. | | |
| K50RNTGREQ | | NPN, N.C. | | |

## Wiring Diagrams

**NPN**




**PNP**




**NOTE:** Cabled wiring diagrams are shown. Quick disconnect wiring diagrams are functionally identical.

(1)

- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, K50APTGXD.
- Models with a quick disconnect require a mating cordset.

Original Instructions
09-Jun-25

© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

161830
p/n: 161830 Rev. F

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

# Specifications

**Supply Voltage**

12 V DC 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 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

**Indicators**

Job (pick) indicator: Green

Pick sensed indicator: Red or unilluminated, depending on model

**Indicator Lumens**

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

**Mounting**

M30 × 1.5 threaded base max. torque 4.5 N·m (40 in·lbf)

**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**

IP67, IP69K per ISO 20653

Cabled models also meet IP69K per ISO 20653 if the cable and cable entrance are protected from high-pressure spray.

**Construction**

Housing: polycarbonate

Translucent dome: polycarbonate

Mounting nut: PBT

**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.

**Power-Up Delay**

300 milliseconds

**Connections**

Integral 4-pin M12 male quick-disconnect connector, or 2 m (6.5 ft) integral PVC-jacketed cable

**Storage**

–40 °C to +70 °C (–40 °F to +158 °F)

**Certifications**

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

**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 (A) | Supply Wiring (AWG) | Required Overcurrent Protection (A) |
|---|---|---|---|
| 20 | 5.0 | 26 | 1.0 |
| 22 | 3.0 | 28 | 0.8 |
| 24 | 1.0 | 30 | 0.5 |

# FCC Part 15 Class B for Unintentional Radiators

(Part 15.105(b)) 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. 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 dealer or an experienced radio/TV technician for help.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

# Industry Canada ICES-003(B)

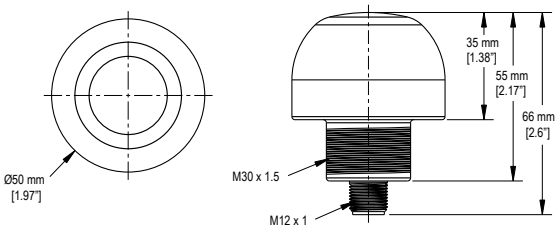
This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

# Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

**Standard Models**

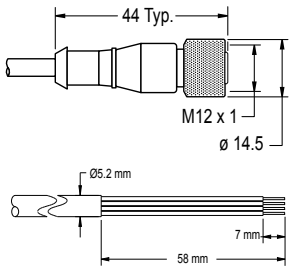
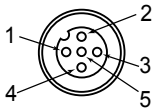
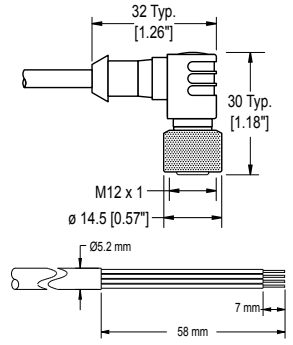
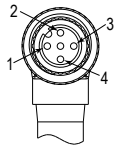




© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

# Accessories

## Cordsets

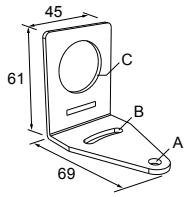
| 4-Pin Single-Ended M12 Female Cordsets | | | | | |
|---|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** | |
| **MQDC-406** | 2 m (6.56 ft) | Straight |  |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Not used<br>c UL us |
| **MQDC-415** | 5 m (16.4 ft) | | | | |
| **MQDC-430** | 9 m (29.5 ft) | | | | |
| **MQDC-450** | 15 m (49.2 ft) | | | | |
| **MQDC-406RA** | 2 m (6.56 ft) | Right-Angle |  |  | |
| **MQDC-415RA** | 5 m (16.4 ft) | | | | |
| **MQDC-430RA** | 9 m (29.5 ft) | | | | |
| **MQDC-450RA** | 15 m (49.2 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-gauge stainless steel

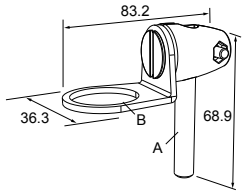
**Hole center spacing:** A to B=40
**Hole size:** A=ø 6.3, B= 27.1 × 6.3, C=ø 30.5




**SMB30FA**

- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-gauge 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric- and inch-size bolt available

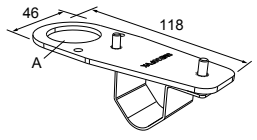
**Bolt thread:** SMB30FA, A= 3/8 - 16 × 2 in; SMB30FAM10, A= M10 - 1.5 × 50
**Hole size:** B= ø 30.1




**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



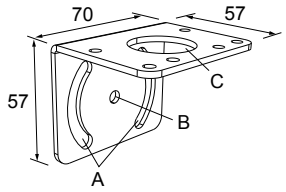


© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

**SMB30MM**

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

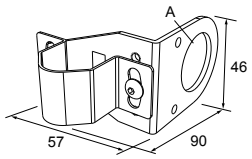
**Hole center spacing:** A = 51, A to B = 25.4
**Hole size:** A = 42.6 × 7, B = ø 6.4, C = ø 30.1




**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

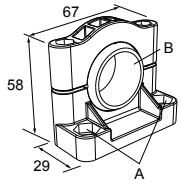
**Hole size:** A = ø 30.5




**SMB30SC**

- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included

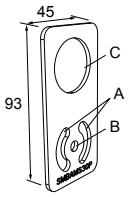
**Hole center spacing:** A=ø 50.8
**Hole size:** A=ø 7.0, B=ø 30.0




**SMBAMS30P**

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

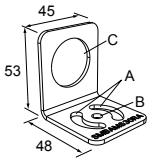
**Hole center spacing:** A=26.0, A to B=13.0
**Hole size:** A=26.8 × 7.0, B=ø 6.5, C=ø 31.0




**SMBAMS30RA**

- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-gauge (2.6 mm) cold-rolled steel

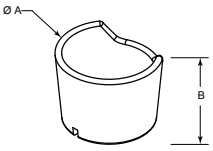
**Hole center spacing:** A=26.0, A to B=13.0
**Hole size:** A=26.8 × 7.0, B=ø 6.5, C=ø 31.0




**TC-K50-CL**

- Touch cover

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




# Banner Engineering Corp Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

**THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.**

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to: www.bannerengineering.com.

For patent information, see www.bannerengineering.com/patents.


© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com