# Features

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



- 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 is needed
- 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
- Five color options available
- Terminal connection models available for panel wiring applications

# Models

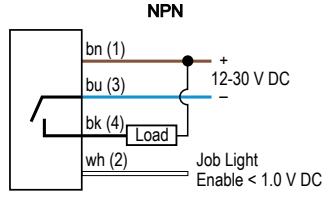
*Model Key*

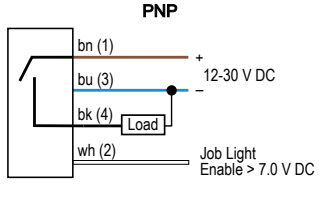
| Family | Output State | Input/Output | Activation Method | Job Light Color 1 | Job Light Color 2 | Function | Connector(1) |
|---|---|---|---|---|---|---|---|
| K30 | A | P | T2 | G | R | C | Q |
| | A = Normally open<br>R = Normally closed | P = PNP<br>N = NPN | T2 = Touch | G = Green<br>R = Red<br>Y = Yellow<br>B = Blue<br>W = White<br>X = Not used | | C = Input Activates Color 1. Touch activates Color 2 and Output.<br>D = Input activates Color 1. Touch activates Output.<br>E = Input activates Color 1. Touch activates Output. Touch with inactive input activates Color 2. | Blank = 2 m (6.5 ft) integral PVC-jacketed cable<br>Q = Integral 4-pin M12 male quick-disconnect connector<br>QP = 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector<br>T = Terminal screws |

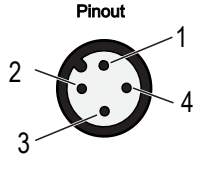
*Sample Models*

| Model Name | Description |
|---|---|
| K30APT2GRC | Normally open output state, with PNP and Touch. Color 1: Green. Color 2: Red. Input activates Color 1, Touch activates Color 2 and Output. 2 m (6.5 ft) integral PVC-jacketed cable. |
| K30RNT2GXDQ | Normally closed output state, with NPN and Touch, Color 1: Green. Color 2: No color. Input activates Color 1, Touch activates Output. Integral 4-pin M12 male quick-disconnect connector. |
| K30APT2BXDT | Normally open output state, with PNP and Touch. Color 1: Blue. Color 2: No color. Input activates Color 1, Touch activates Output. Terminal screws. |

# Wiring




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

# Specifications

**Supply Voltage** 12 V DC to 30 V DC

(1) Models with a quick-disconnect connector require a mating cordset.

Original Instructions
07-Oct-25

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189827
p/n: 189827 Rev. E

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

**Supply Current**

55 mA max current (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:**

150 milliseconds On and Off

**Mounting**

M22 × 1.5 Threaded base, max torque 2.25 N·m (20 in·lbf)

**Connections**

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

**Environmental Rating**

Rated IP67 and IP69K per ISO 20653

Cabled models also meet IP69K if the cable and cable entrance are protected from high-pressure spray. Indicator side of terminal models meet IP67 and IP69K when installed in an enclosure

Screw connection points meet IP00

Meets UL type 4X and 13, when used in a suitable enclosure.

**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)

**Power-Up Delay**

300 milliseconds

**Construction**

Housing: polycarbonate

Translucent dome: polycarbonate

Mounting nut: PBT

**Vibration and Mechanical Shock**

Vibration: 10 Hz to 55 Hz, 1.0 mm peak-to-peak amplitude per IEC 60068-2-6

Shock: 30G 11 ms duration, half sine wave per IEC 60068-2-27

**Indicator Characteristics**

| Color | Dominant Wavelength (nm) or Color Temperature (CCT) | Lumen Output (Typical at 25 °C) |
|---|---|---|
| Green | 520 nm to 535 nm | 4.4 |
| Red | 620 nm to 630 nm | 1.7 |
| Yellow | 585 nm to 595 nm | 4.4 |
| Blue | 465 nm to 475 nm | 1 |
| White | 5665K to 9000K | 5 |

**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 | 2.0 | 30 | 0.5 |

**Certifications**

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

## 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.


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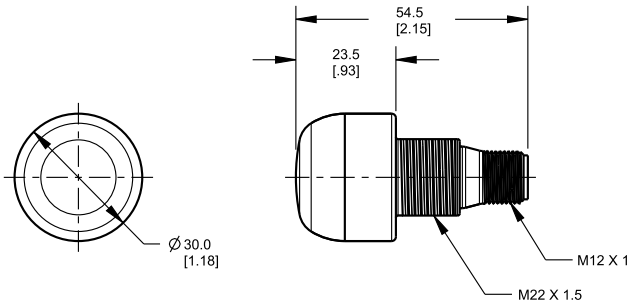
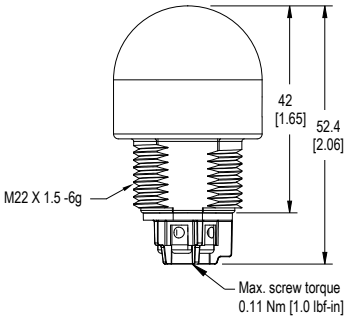
## Dimensions

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

**Quick-Disconnect Models**

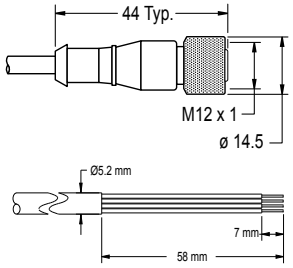
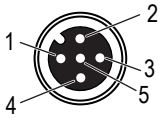
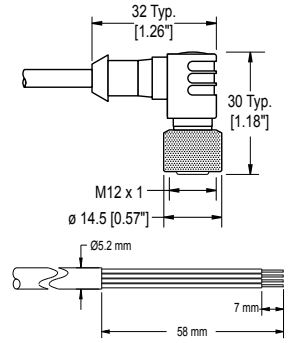
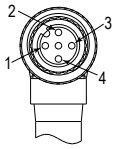



**Terminal Models**




# 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) | | | | |

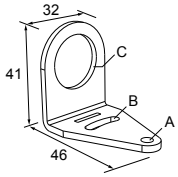
## Brackets

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

**SMB22A**

- Right-angle bracket with curved slot for versatile orientation
- 12-ga. stainless steel
- Mounting hole for 22 mm sensor

**Hole center spacing:** A to B = 26.0
**Hole size:** A = ø 4.6, B = 4.6 x 16.9, C = 22.2





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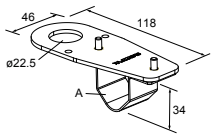
**SMB22FVK**

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

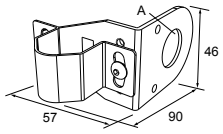
**Hole size:** A = ø 22.5




**SMB22RAVK**

- V-clamp, right-angle bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor

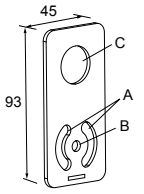
**Hole size:** A = ø 22.5




**SMBAMS22P**

- Flat SMBAMS series bracket with 22 mm hole for mounting sensors
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

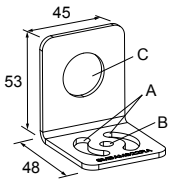
**Hole center spacing:** A = 26.0, A to B = 13.0
**Hole size:** A = 26.8 x 7.0, B = ø 6.5, C = ø 22.5




**SMBAMS22RA**

- Right-angle SMBAMS series bracket with 22 mm hole for mounting sensors
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

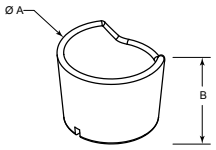
**Hole center spacing:** A = 26.0, A to B = 13.0
**Hole size:** A = 26.8 x 7.0, B = ø 6.5, C = ø 22.5




**TC-K30-CL**

- Touch cover

**Diameter:** A = 40.7 mm
**Height:** B = 31 mm

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