

Features

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

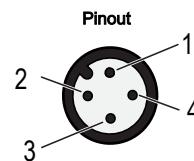
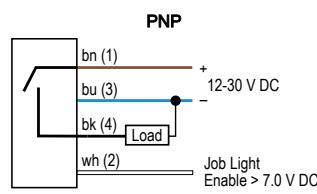
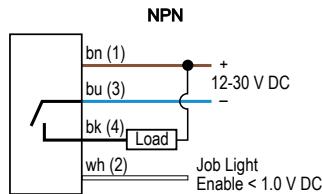


- Rugged, cost-effective, and easy-to-install solutions for error-proofing and parts-verification applications
- Compact devices are completely self-contained, no controller is needed
- Illuminated dome provides an easy-to-see green job light: some models also light red for alternate operation
- Waterproof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

Models

Model	Function	Output	Connection ⁽¹⁾	Job Light
K30APTGXDQ	<ul style="list-style-type: none"> • Job light is ON at all times while job input is active • Touch activates output 	PNP, NO	Integral 4-pin M12 male quick-disconnect connector	Green
K30RPTGXDQ		PNP, NC		
K30ANTGXDQ		NPN, NO		
K30RNTGXDQ		NPN, NC		
K30APTGRCQ	<ul style="list-style-type: none"> • Job light is Green while job input is active • Touch activates output and overrides job light (turns Red) for visual verification that action was sensed 	PNP, NO	Integral 4-pin M12 male quick-disconnect connector	Green (Red)
K30RPTGRCQ		PNP, NC		
K30ANTGRCQ		NPN, NO		
K30RNTGRCQ		NPN, NC		
K30APTGREQ	<ul style="list-style-type: none"> • Job light is Green at all times while job input is active • Touch activates output • A touch while job input is inactive causes unit to light Red, providing visual verification that sensor is functioning properly 	PNP, NO	Integral 4-pin M12 male quick-disconnect connector	Green (Red)
K30RPTGREQ		PNP, NC		
K30ANTGREQ		NPN, NO		
K30RNTGREQ		NPN, NC		

Wiring



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

Specifications

Supply Voltage

12 V DC to 30 V DC

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 μ A at 30 V DC

Output Response Time:

150 milliseconds On and Off

⁽¹⁾ Integral quick-disconnect connector models are listed.

- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, K30APTGXD.
- To order the 150 mm (6 in) PVC cable model with a 4-pin M12 male quick-disconnect connector, replace the suffix "Q" with "QP" in the model number. For example, K30APTGXDQ.
- To order the terminal model, replace the suffix "Q" with "T" in the model number. For example, K30APT2GXDT.
- Models with a quick-disconnect connector require a mating cordset.

Environmental Rating

IP67, IP69K per ISO 20653.

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

Enclosure Type 4X, 13

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

All models meet MIL-STD-202F, Method 201A (Vibration: 10 Hz to 60 Hz maximum, 0.06 inch (1.52 mm) double amplitude, 10G maximum acceleration) requirements. Also meets IEC 60947-5-2 (Shock: 30G 11 ms duration, half sine wave) requirements.

Indicators

Job (pick) indicator: Green

Pick sensed indicator: Red or unilluminated, depending on model

Mounting

M22 x 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

Required Overcurrent Protection

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

Certifications

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



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.

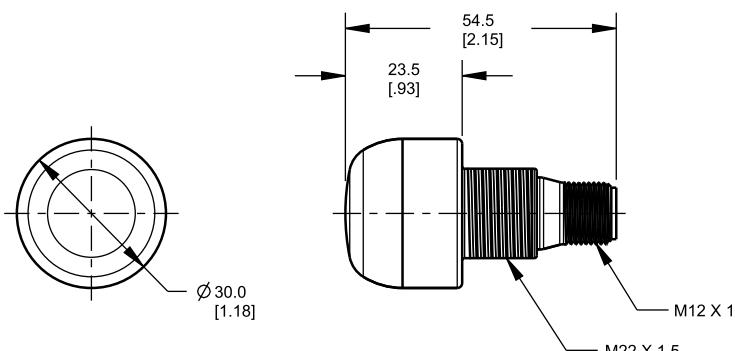
Supply wiring leads < 24 AWG shall not be spliced.

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

Dimensions

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

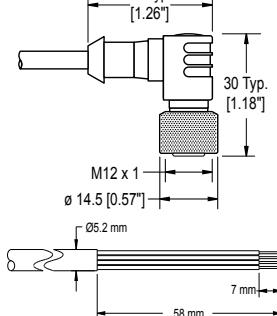
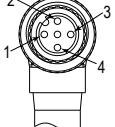
**Accessories****Cordsets**

4-Pin Single-Ended M12 Female Cordsets			
Model	Length	Style	Dimensions
MQDC-406	2 m (6.56 ft)		
MQDC-415	5 m (16.4 ft)		
MQDC-430	9 m (29.5 ft)		
MQDC-450	15 m (49.2 ft)	Straight	
			1 = Brown 2 = White 3 = Blue 4 = Black 5 = Not used

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4-Pin Single-Ended M12 Female Cordsets

Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406RA	2 m (6.56 ft)			
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA	15 m (49.2 ft)	Right-Angle	 <p>Technical drawing showing dimensions for the 4-Pin Single-Ended M12 Female Cordset. The housing has a width of 32 Typ. [1.26"], a height of 30 Typ. [1.18"], and a depth of 58 mm. The cable has a diameter of Ø 14.5 [0.57"] and a length of 7 mm. The pinout (Female) is as follows: Pin 1 (bottom left), Pin 2 (top left), Pin 3 (top right), and Pin 4 (bottom right).</p>	 <p>Pinout (Female): 1 2 3 4</p>

Brackets

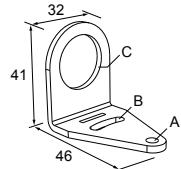
All measurements are listed in millimeters, unless noted otherwise. The measurements provided are subject to change.

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

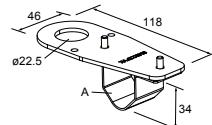
Hole size: A = Ø 4.6, B = 4.6 x 16.9, C = 22.2



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

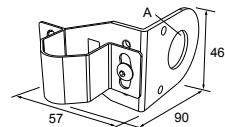
Hole size: A = Ø 22.5



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

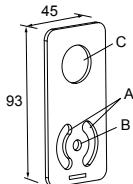


SMBAMS22P

- 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

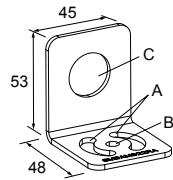


SMBAMS22RA

- 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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