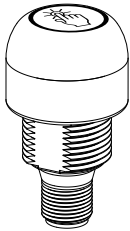


## Datasheet

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 needed
- Illuminated dome provides an easy-to-see green job light: some models also light red for alternate operation
- Waterproof IP69K construction for washdown environments
- Easy actuation—no force required
- 12 to 30 V dc operation
- Can be actuated with bare hands or in gloves

## Models

Model <sup>1</sup>	Function	Output	Connection	Job Light		
K30APTGXDO	• Job light is ON at all times while job input is active	PNP, NO	Integral 4-pin M12/ Euro-style QD	Green		
K30RPTGXDO		PNP, NC				
K30ANTGXDO		NPN, NO				
K30RNTGXDO		NPN, NC				
K30APTGRCO	• Job light is Green while job input is active	PNP, NO		Integral 4-pin M12/ Euro-style QD	Green (Red)	
K30RPTGRCO		PNP, NC				
K30ANTGRCO		NPN, NO				
K30RNTGRCO		NPN, NC				
K30APRGREQ	• Job light is Green at all times while job input is active	PNP, NO			Integral 4-pin M12/ Euro-style QD	Green (Red)
K30RPTGREQ		PNP, NC				
K30ANTGREQ		NPN, NO				
K30RNTGREQ		NPN, NC				
	• Touch activates output					
	• Touch activates output and overrides job light (turns Red) for visual verification that action was sensed					
	• A touch while job input is inactive causes unit to light Red, providing visual verification that sensor is functioning properly					

## Specifications

Supply Voltage  
12 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: < 2V at 10 mA dc; < 2.5V at 150 mA dc  
OFF-state leakage current: <10 µA at 30 V dc

Output Response Time:  
150 milliseconds On and Off

Power-Up  
Device requires 300 milliseconds to start up

Construction  
Housing: polycarbonate  
Translucent dome: polycarbonate  
Mounting Nut: PBT

Indicators  
Job ("Pick") Indicator: Green  
Pick Sensed Indicator: Red or Off, depending on model

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

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

<sup>1</sup> Integral QD models are listed.

- For 2 m (6.5 ft) PVC cable, omit suffix Q from model number (example, K30APTGXDO).
- For 4-pin 150 mm (5.9 in ) Euro-style PVC pigtail, replace suffix Q with QP in the model number (example, K30APTGXDOQP).
- A model with a QD requires a mating cable (see [Cordsets](#) on page 3).



**Vibration and Mechanical Shock**

All models meet Mil. Std. 202F requirements method 201A (vibration: 10 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.

**Environmental Rating**

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

**Storage**

-40 °C to +70 °C (-40 °F to +158 °F)

**Operating Conditions**

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

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

**Certifications**



**Required Overcurrent Protection**



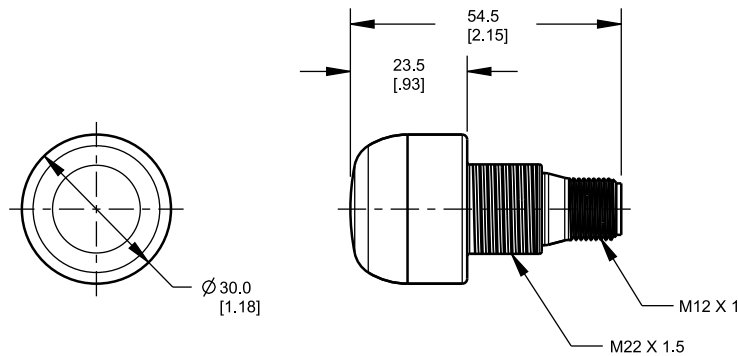
**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

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	Required Overcurrent Protection
20	5.0 Amps
22	3.0 Amps
24	2.0 Amps
26	1.0 Amps
28	0.8 Amps
30	0.5 Amps

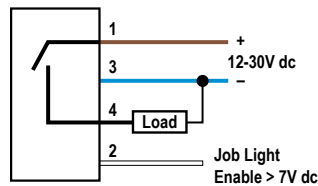
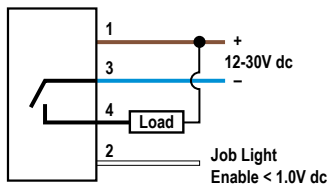
**Dimensions**

All measurements are listed in millimeters (inches), unless noted otherwise.



**Wiring Diagrams**

NPN	PNP	Color Key
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- 1 = Brown
- 2 = White
- 3 = Blue
- 4 = Black

## Accessories

### Cordsets

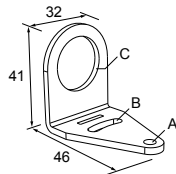
4-Pin Threaded M12/Euro-Style Cordsets				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	1.83 m (6 ft)	Straight		<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			
MQDC-450	15.2 m (50 ft)			
MQDC-406RA	1.83 m (6 ft)	Right-Angle		
MQDC-415RA	4.57 m (15 ft)			
MQDC-430RA	9.14 m (30 ft)			
MQDC-450RA	15.2 m (50 ft)			

### Brackets

All measurements are listed in millimeters, unless noted otherwise.

#### SMB22A

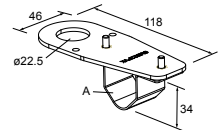
- Right-angle bracket with curved slot for versatile orientation
- 12-ga. stainless steel
- Mounting hole for 22 mm sensor



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

#### SMB22FVK

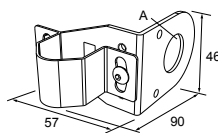
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



Hole size: A = ø 22.5

#### SMB22RAVK

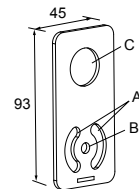
- V-clamp, right-angle bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



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

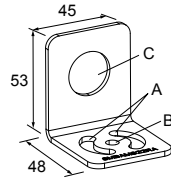


Hole center spacing: A = 26.0, A to B = 13.0

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 =  $\varnothing$  6.5, C =  $\varnothing$  22.5

## Banner Engineering Corp. Limited Warranty

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