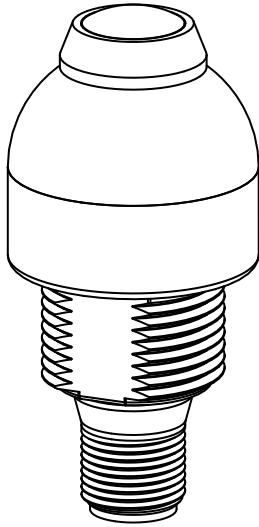


EZ-LIGHT® K30 Series Pick-to-Light Sensors



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

For the latest technical information about this product, including specifications, dimensions, and wiring, see www.BannerEngineering.com/IL_K30



- Rugged, cost-effective and easy-to-install multicolor indicator light with pushbutton
- Illuminated dome provides an easy-to-see green job light; some models also light red for alternate operation
- Waterproof IP65 construction for washdown environments
- Compact devices are self-contained — no controller needed
- Immune to EMI and RFI interference
- 12 to 30V dc operation
- Cabled and Quick Disconnect models available

Models

Model	Function	Output	Connection*	Job Light	
K30APPBGXDQ	<ul style="list-style-type: none"> • Job light is ON at all times while job input is active. • Pressing push button activates output. 	PNP, NO	Integral 4-pin Euro QD connector	Green	
K30ANPBGXDQ		NPN, NO			
K30APPBGRQC	<ul style="list-style-type: none"> • Job light is green while job input is active, until push button is pushed. • Pressing push button activates output and overrides job light (it turns Red) for visual verification that action was sensed. 	PNP, NO		Green (Red)	
K30ANPBGRQC		NPN, NO			
K30APPBGRQC	<ul style="list-style-type: none"> • Job light is ON at all times while job input is active. • Pressing push button activates output. • Pressing push button while job input is inactive causes unit to light Red, providing visual indication that sensor is functioning properly. 	PNP, NO			Green (Red)
K30ANPBGRQC		NPN, NO			

* Integral QD models only are listed.

- For integral 2 m (6.5') PVC cable, omit suffix **Q** from model number (example, "K30APPBGXD").
- A model with a QD requires a mating cordset (see [Accessory Cordsets](#)).



WARNING: Not To Be Used for Personnel Protection

Never use this product as a sensing device for personnel protection. Doing so could lead to serious injury or death. This product 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.



Overview

The solid-state output interfaces to a system controller, which is pre-programmed for a specific sequence of tasks. Mounted in or near each bin in an assembler's work station, the sensor job light signals the assembler:

- Which bins contain items to be picked in a given operation; and
- In what order they should be picked.

As the assembler takes a part in sequence, the sensor senses that the part was removed and it sends an output signal to the controller. The controller then verifies if the correct part was taken and may respond by turning that job light OFF, activating the job light of the next bin in the sequence.

If multiple parts are to be removed from one bin, the job light may remain ON until the appropriate number of signals is returned to the controller. If an incorrect part is selected, the control system may be wired to signal an alarm for the assembler and/or a supervisor, or it may be programmed to interpret the action as a call for parts.

Installation

Install the K30 sensor at such a height and in a location that will be easy for the user and/or supervisor to see the indicator and comfortable for the user to press the push-button.

Specifications

Supply Voltage and Current

12 to 30V dc (10% max. ripple) @ 50 mA max.

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Output Rating

Max. load: 150 mA

ON-state saturation voltage: < 0.5V @ 10 mA dc; < 1.0V @ 150 mA dc

OFF-state leakage current: < 10 µA @ 30V dc

Output Protection

Protected against false pulse on power-up and continuous overload or short circuit of output.

Output Response Time

1 millisecond On and Off

Indicators

Job ("Pick") Indicator: Green

Pick Sensed Indicator: Red or OFF, depending on model

Job Light Enable

Input Impedance: 10K Ohms

Input high > 8.0V

Environmental Rating

IEC IP65

Construction

Base: polycarbonate

Translucent dome: polycarbonate

Push button: thermoplastic

Connections

Integral 4-pin Euro-style QD fitting, PVC-jacketed 2 m (6.5') or 9 m (30') cable, depending on model.

Operating Temperature

-40° to +50° C (-40° to +122° F)

Max. Relative Humidity

90% @ +50° C (non-condensing)

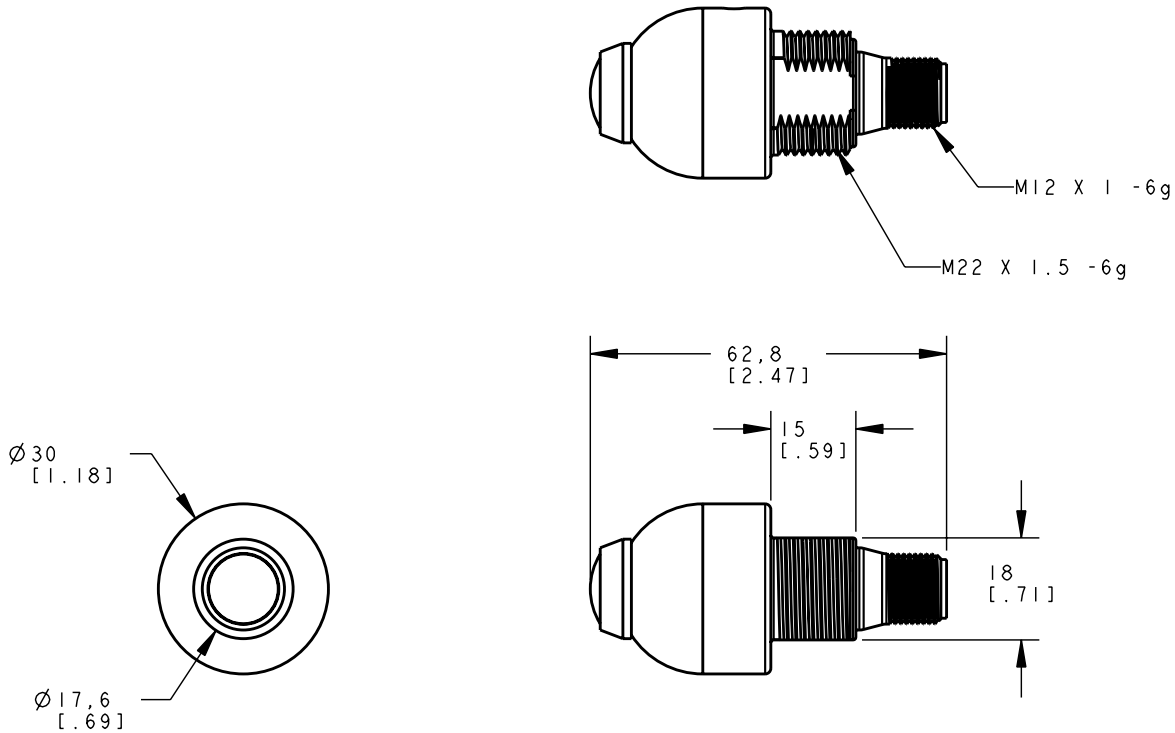
Storage Temperature

-40° to +70° C (-40° to +158° F)

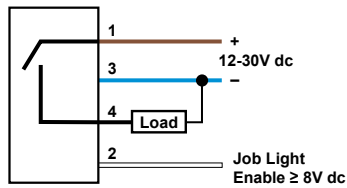
Certifications



Dimensions



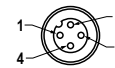
Wiring



Legend

- 1 = brown
- 2 = white
- 3 = blue
- 4 = black

M12 Euro-style Pinout



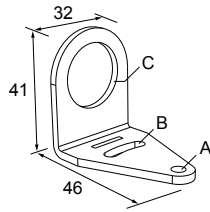
Cordsets

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

Brackets

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 = \varnothing 4.6, B = 4.6 x 16.9, C = 22.2

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.