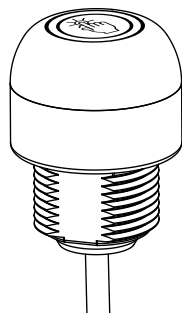


# EZ-LIGHT® Touch Gen 2 K30 FDA-Grade Series Illuminated Multipurpose Buttons



## Datasheet

*General Purpose Multicolor Indicator with Independent Momentary Touch Button Output*



- FDA-grade materials; rated to IEC IP67, IP68, and IP69K
- Laser marked information withstands aggressive cleaning procedures
- Excellent immunity to false triggering by water spray, detergents, oils, and other foreign materials
- Rugged, cost-effective, and easy-to-install multicolor indicator with touch button
- Two or three independent colors in one unit: Color 3 overrides Colors 1 and 2, Color 2 overrides Color 1
- Available with PNP and NPN inputs/outputs, depending on model
- Ergonomically designed to eliminate hand, wrist, and arm stresses associated with repeated switch operation; require no physical force to operate
- Can be actuated with bare hands or gloves
- 12 V dc to 30 V dc operation

## Models

### 2 Color Models

| Model <sup>1</sup> | I/O Type | Output State | Light Color 1 (Power Applied) | Light Color 2 (Input Active) | Connection                                                                                                                             |
|--------------------|----------|--------------|-------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| K30APT2FXRF2QP     | PNP      | N.O.         | -                             | Red                          | 2 m (6.5 ft) unterminated PVC-jacketed cable or 150 mm (6 in) PVC cable with a 5-pin M12/ Euro-style, stainless steel quick disconnect |
| K30APT2FXGF2QP     |          |              | -                             | Green                        |                                                                                                                                        |
| K30APT2FGRF2QP     |          |              | Green                         | Red                          |                                                                                                                                        |
| K30APT2FRGF2QP     |          |              | Red                           | Green                        |                                                                                                                                        |
| K30ANT2FXRF2QP     | NPN      |              | -                             | Red                          |                                                                                                                                        |
| K30ANT2FXGF2QP     |          |              | -                             | Green                        |                                                                                                                                        |
| K30ANT2FGRF2QP     |          |              | Green                         | Red                          |                                                                                                                                        |
| K30ANT2FRGF2QP     |          |              | Red                           | Green                        |                                                                                                                                        |

### 3 Color Model

| Model <sup>1</sup> | I/O Type | Output State | Color 1 | Color 2 | Color 3 | Connection                                                                                                               |
|--------------------|----------|--------------|---------|---------|---------|--------------------------------------------------------------------------------------------------------------------------|
| K30APT2FGRYF2QP    | PNP      | N.O.         | Green   | Red     | Yellow  | 2 m (6.5 ft) unterminated PVC-jacketed cable or 150 mm 8-pin M12/Euro-style male, stainless steel, quick disconnect (QD) |

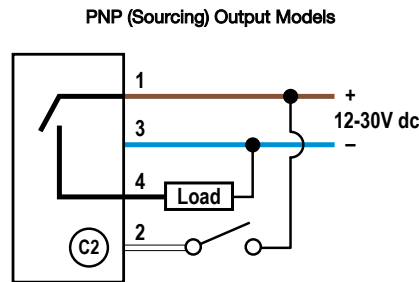
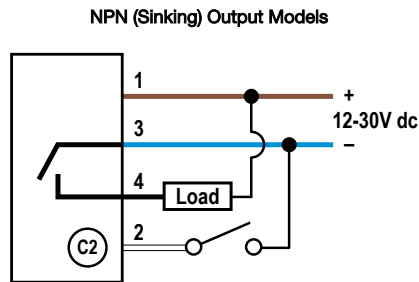
<sup>1</sup>

- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "QP" in the model number. For example, K30APT2FXRF2.
- Models with a quick disconnect require a mating cordset.



## Wiring

### 2 Color Models

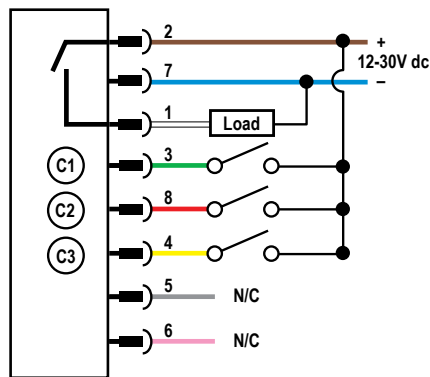


**Wiring Key**

- 1 = Brown
- 2 = White
- 3 = Blue
- 4 = Black

### 3 Color Model

**PNP (Sourcing) Output Models**



**Wiring Key**

- 1 = White
- 2 = Brown
- 3 = Green
- 4 = Yellow
- 5 = Gray
- 6 = Pink
- 7 = Blue
- 8 = Red



**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/Output 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

**Power-Up Delay**

300 milliseconds

**Connections**

2 m (6.5 ft) PVC integral cable or 150 mm (6 inch) pigtail PVC cable with a 5-pin or 8-pin M12/Euro-style male, stainless steel, quick disconnect (QD)

**Construction**

Base, dome, and nut: FDA-grade copolyester

**Mounting**

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

**Environmental Rating**

IEC IP67, IP69K per DIN 40050-9.

**Operating Conditions****Temperature:** -40 °C to +50 °C (-40 °F to +122 °F)**Humidity:** 90% at +50 °C maximum relative humidity (non-condensing)**Storage Temperature**

-40 °C to +70 °C (-40 °F to +158 °F)

**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

**Certifications****Required Overcurrent Protection**

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

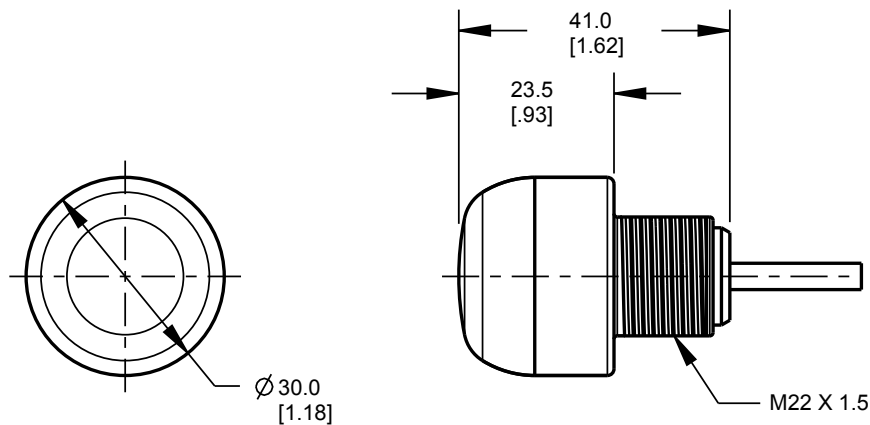
Overcurrent protection is required to be provided by end product application per the supplied table.

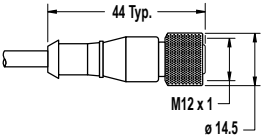
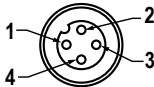
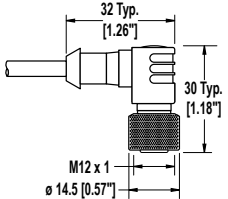
Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

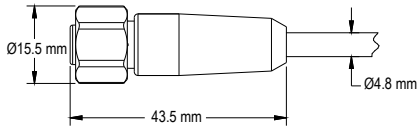
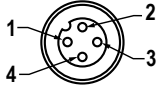
Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to [www.bannerengineering.com](http://www.bannerengineering.com).

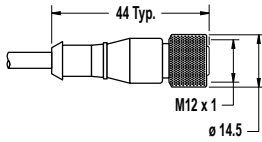
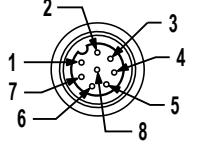
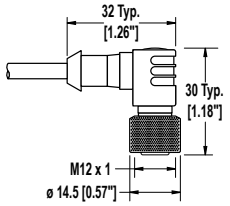
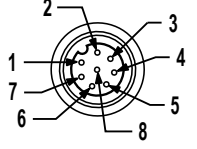
| Supply Wiring (AWG) | Required Overcurrent Protection (Amps) |
|---------------------|----------------------------------------|
| 20                  | 5.0                                    |
| 22                  | 3.0                                    |
| 24                  | 2.0                                    |
| 26                  | 1.0                                    |
| 28                  | 0.8                                    |
| 30                  | 0.5                                    |

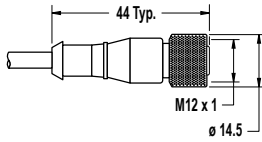
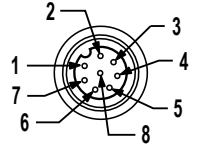
**Dimensions****Accessories****Cordsets**

| 4-Pin Threaded M12/Euro-Style Cordsets |                |             |                                                                                                                                                                                                                                      |                                                                                                                                              |
|----------------------------------------|----------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Model                                  | Length         | Style       | Dimensions                                                                                                                                                                                                                           | Pinout (Female)                                                                                                                              |
| MQDC-406                               | 1.83 m (6 ft)  | Straight    |                                                                                                                                                  | <br><br>1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black |
| 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) |             |                                                                                                                                                                                                                                      |                                                                                                                                              |

| 4-Pin Threaded M12/Euro-Style Cordsets—Washdown, Stainless Steel |                |          |                                                                                    |                                                                                                                                               |
|------------------------------------------------------------------|----------------|----------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Model                                                            | Length         | Style    | Dimensions                                                                         | Pinout (Female)                                                                                                                               |
| MQDC-WDSS-0406                                                   | 1.83 m (6 ft)  | Straight |  |  <p>1 = Brown<br/>2 = White<br/>3 = Blue<br/>4 = Black</p> |
| MQDC-WDSS-0415                                                   | 4.57 m (15 ft) |          |                                                                                    |                                                                                                                                               |
| MQDC-WDSS-0430                                                   | 9.14 m (30 ft) |          |                                                                                    |                                                                                                                                               |

## Cordsets

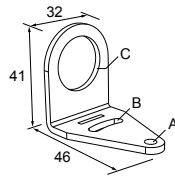
| 8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield |                |             |                                                                                                                                                                                                              |                                                                                                                                                                                                    |
|---------------------------------------------------------|----------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                                                   | Length         | Style       | Dimensions                                                                                                                                                                                                   | Pinout (Female)                                                                                                                                                                                    |
| MQDC2S-806                                              | 1.83 m (6 ft)  | Straight    |                                                                                                                            |  <p>1 = White<br/>2 = Brown<br/>3 = Green<br/>4 = Yellow<br/>5 = Gray<br/>6 = Pink<br/>7 = Blue<br/>8 = Red</p> |
| MQDC2S-815                                              | 4.57 m (15 ft) |             |                                                                                                                                                                                                              |                                                                                                                                                                                                    |
| MQDC2S-830                                              | 9.14 m (30 ft) |             |                                                                                                                                                                                                              |                                                                                                                                                                                                    |
| MQDC2S-850                                              | 15.2 m (50 ft) | Right-Angle |  |  <p>1 = White<br/>2 = Brown<br/>3 = Green<br/>4 = Yellow<br/>5 = Gray<br/>6 = Pink<br/>7 = Blue<br/>8 = Red</p> |
| MQDC2S-806RA                                            | 1.83 m (6 ft)  |             |                                                                                                                                                                                                              |                                                                                                                                                                                                    |
| MQDC2S-815RA                                            | 4.57 m (15 ft) |             |                                                                                                                                                                                                              |                                                                                                                                                                                                    |
| MQDC2S-830RA                                            | 9.14 m (30 ft) |             |                                                                                                                                                                                                              |                                                                                                                                                                                                    |
| MQDC2S-850RA                                            | 15.2 m (50 ft) |             |                                                                                                                                                                                                              |                                                                                                                                                                                                    |

| 8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield—Washdown, Stainless Steel |                |          |                                                                                      |                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|----------------|----------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                                                                             | Length         | Style    | Dimensions                                                                           | Pinout (Female)                                                                                                                                                                                          |
| MQDC-WDSS-0806                                                                    | 1.83 m (6 ft)  | Straight |  |  <p>1 = White      5 = Gray<br/>2 = Brown      6 = Pink<br/>3 = Green      7 = Blue<br/>4 = Yellow      8 = Red</p> |
| MQDC-WDSS-0815                                                                    | 4.57 m (15 ft) |          |                                                                                      |                                                                                                                                                                                                          |
| MQDC-WDSS-0830                                                                    | 9.14 m (30 ft) |          |                                                                                      |                                                                                                                                                                                                          |

## Brackets

### SMB22A

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

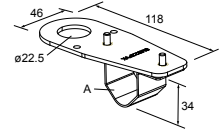


**Hole center spacing:** A to B = 26.0

**Hole size:** A =  $\varnothing$  4.6, B = 4.6 x 16.9, C = 22.2

### SMB22FVK

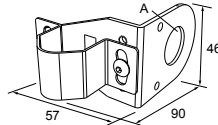
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



**Hole size:** A =  $\varnothing$  22.5

### SMB22RAVK

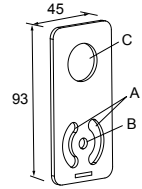
- V-clamp, right-angle bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



**Hole size:** A =  $\varnothing$  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

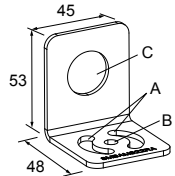


**Hole center spacing:** A = 26.0, A to B = 13.0

**Hole size:** A = 26.8 x 7.0, B =  $\varnothing$  6.5, C =  $\varnothing$  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

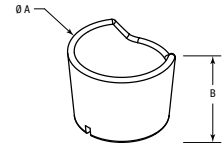


**Hole center spacing:** A = 26.0, A to B = 13.0

**Hole size:** A = 26.8 x 7.0, B =  $\varnothing$  6.5, C =  $\varnothing$  22.5

### TC-K30-CL

- Touch cover



**Diameter:** A = 40.7

**Height:** B = 31

All measurements are listed in millimeters, unless noted otherwise.

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