



## K50 Illuminated Touch Buttons

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The K50 Touch Series is a versatile family that combines a large, bright indicator with solid-state switching capability activated by a simple touch. There are several models with a variety of input/output options to choose from that fit nearly any application.

- Simple operation with the touch of a finger, hand or whole palm
- Easily actuated with bare hands or work gloves
- Rugged, fully encapsulated IP69K construction
- Models with either latching or momentary outputs
- One-, two- and three-color models available with a variety of colors and option of custom laser surface marking

## Independent Input/Output Models with up to Three Indicator Colors Controlled by Separate Inputs

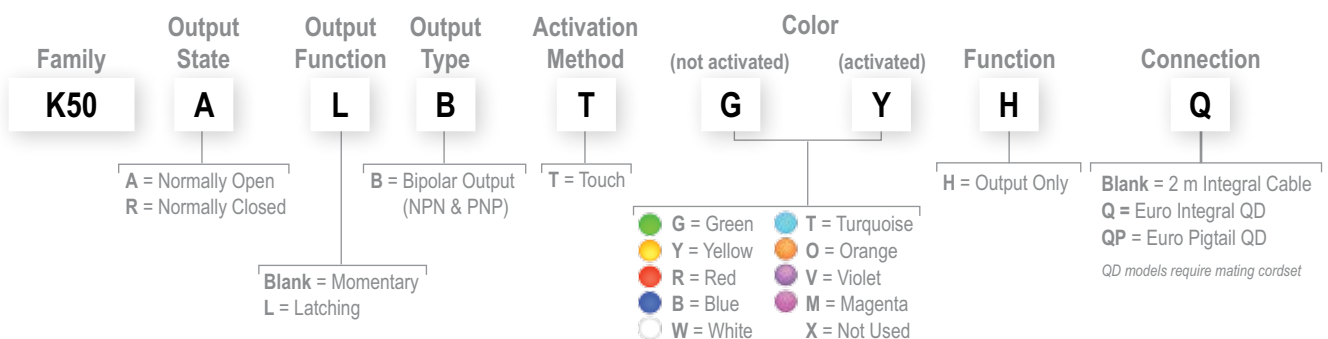
The output is activated by touching the device and is totally independent of the indicator inputs.



## One- or Two-Color Momentary or Latching Bipolar (1 NPN and 1 PNP) Output Models

These models do not have inputs to control the indicator. The color of the indicator is determined by the non-activated or activated condition.

LASER MARKING AVAILABLE



Supply Voltage	12 to 30V dc
Construction	Housing: Polycarbonate Translucent dome: Polycarbonate Mounting Nut: PBT
Environmental Rating	IEC IP67, IP69K per DIN 40050
Operating Temperature	-40° to +50° C (-40° to +122° F)
Certifications	CE



**5-Pin M12/  
Euro-Style Cordsets**  
Straight connector models listed;  
for right-angle models, add **RA**  
to the end of model number  
(example, **MQDC1-506RA**)



**MQDC1-506**  
2 m (6.5')  
**MQDC1-515**  
5 m (15')  
**MQDC1-530**  
9 m (30')

**8-Pin M12/  
Euro-Style Cordsets**  
*For use with 3 color F2 models.*  
Straight connector models listed;  
for right-angle models, add **RA**  
to the end of model number  
(example, **MQDC2S-806RA**)

**MQDC2S-806**  
2 m (6.5')  
**MQDC2S-815**  
5 m (15')  
**MQDC2S-830**  
9 m (30')

Additional accessories are available at [bannerengineering.com](http://bannerengineering.com)



## K30 Illuminated Touch Buttons

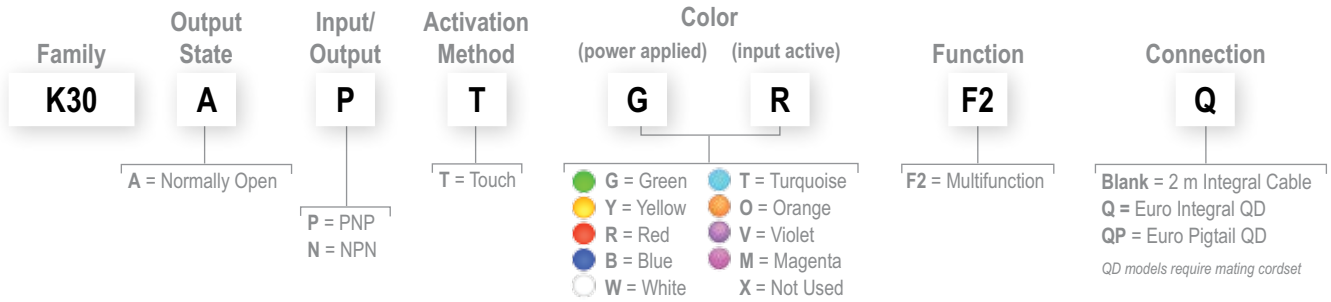
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The K30 Touch Series is a versatile family that combines a small, bright indicator with solid-state switching capability activated by a simple touch. These easy-to-use small indicators are cost-effective with a 22 mm threaded base to fit into industry standard punched holes.

- Simple operation with the touch of a finger, hand or whole palm
- Easily actuated with bare hands or work gloves
- Rugged, fully encapsulated IP69K construction
- Models with either latching or momentary outputs
- One- and two-color models available with a variety of colors and option of custom laser surface marking

## Independent Input/Output Models with One Color Controlled by a Separate Input

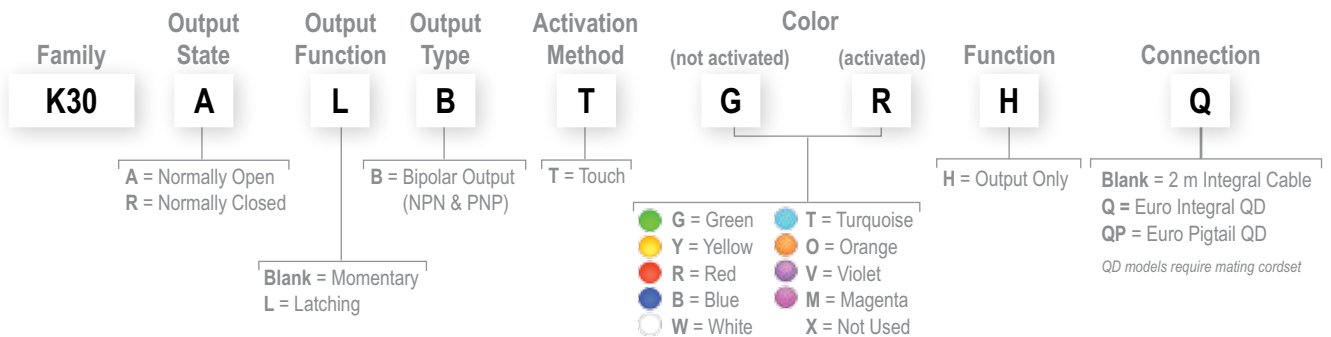
The output is activated by touching the device and is totally independent of the indicator input



## One- or Two-Color Momentary or Latching Bipolar (1 NPN and 1 PNP) Output Models

These models do not have inputs to control the indicator. The color of the indicator is determined by the non-activated or activated condition.

LASER MARKING AVAILABLE



Supply Voltage	12 to 30V dc
Construction	Housing: Polycarbonate Translucent dome: Polycarbonate Mounting Nut: PBT
Environmental Rating	IEC IP67, IP69K per DIN 40050
Operating Temperature	-40° to +50° C (-40° to +122° F)
Certifications	CE



4-Pin M12/  
Euro-Style Cordsets  
Straight connector models listed;  
for right-angle models, add **RA**  
to the end of model number  
(example, **MQDC-406RA**)



**MQDC-406**  
2 m (6.5')  
**MQDC-415**  
5 m (15')  
**MQDC-430**  
9 m (30')

Additional accessories are available at  
[bannerengineering.com](http://bannerengineering.com)

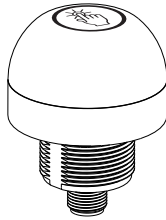
# EZ-LIGHT® Touch K50 Series Illuminated Multipurpose Buttons



more sensors, more solutions

General Purpose Multicolor Indicator with Independent Momentary Touch Button Output

For the latest technical information about this product, including specifications, dimensions, and wiring, see <http://www.bannerengineering.com>



- Rugged, cost-effective, and easy-to-install multicolor indicator with touch button
- Waterproof IP69K construction for washdown environments
- 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 in gloves
- 12 to 30V dc operation

## Models

Model <sup>1</sup>	I/O Type	Output State	Color 1	Color 2	Color 3	Connection
K50APTGRYF2Q	PNP	N.O.	Green	Red	Yellow	Integral 8-pin Euro QD
K50RPTGRYF2Q		N.C.				
K50ANTGRYF2Q	NPN	N.O.				
K50RNTGRYF2Q		N.C.				



### WARNING: Not To Be Used for Personnel Protection

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

## Indicator and Output Behavior

Table 1: PNP Models

Input Actions				Touch Button Actions		
Input #1: Pin 3 Green Wire	Input #2: Pin 8 Red Wire	Input #3: Pin 4 Yellow Wire	LED Color	Output Type	Touch	Output: Pin 1 White Wire
Open or -Vdc	Open or -Vdc	Open or -Vdc	Light OFF	N.O.	Not touched	PNP Output Off
+Vdc	Open or -Vdc	Open or -Vdc	Color #1 ON		Touched	PNP Output On
+Vdc	+Vdc	Open or -Vdc	Color #2 ON	N.C.	Not touched	PNP Output On
+Vdc	+Vdc	+Vdc	Color #3 ON		Touched	PNP Output Off
Open or -Vdc	+Vdc	Open or -Vdc	Color #2 ON			
Open or -Vdc	+Vdc	+Vdc	Color #3 ON			
Open or -Vdc	Open or -Vdc	+Vdc	Color #3 ON			
+Vdc	Open or -Vdc	+Vdc	Color #3 ON			

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

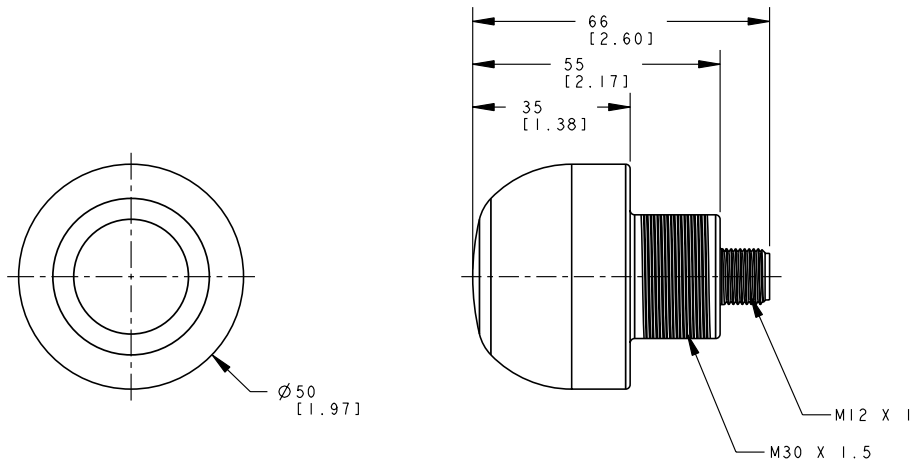
- For 8-pin 150 mm (5.9 in) Euro-style PVC pigtail, replace suffix Q with QP in model number (example, K50APTGRYF2QP).
- For 2 m (6.5 ft) cable, omit suffix Q from model number (example, K50APTGRYF2).
- A model with a QD requires a mating cable (see [Cordsets](#) on page 3).



Table 2: NPN Models

Input Actions				Touch Button Actions		
Input #1: Pin 3 Green Wire	Input #2: Pin 8 Red Wire	Input #3: Pin 4 Yellow Wire	LED Function	Output Type	Touch	Output: Pin 1 White Wire
Open or +Vdc	Open or +Vdc	Open or +Vdc	Light OFF	N.O.	Not touched	NPN Output Off
-Vdc	Open or +Vdc	Open or +Vdc	Color #1 ON		Touched	NPN Output On
-Vdc	-Vdc	Open or +Vdc	Color #2 ON	N.C.	Not touched	NPN Output On
-Vdc	-Vdc	-Vdc	Color #3 ON		Touched	NPN Output Off
Open or +Vdc	-Vdc	Open or +Vdc	Color #2 ON			
Open or +Vdc	-Vdc	-Vdc	Color #3 ON			
Open or +Vdc	Open or +Vdc	-Vdc	Color #3 ON			
-Vdc	Open or +Vdc	-Vdc	Color #3 ON			

Dimensions



Hookups

NPN (Sinking) Output Models	PNP (Sourcing) Output Models	Wiring Key	Pinout
		<p>1 = White                  2 = Brown                  3 = Green                  4 = Yellow                  5 = Gray                  6 = Pink                  7 = Blue                  8 = Red</p>	

## Specifications

### Supply Voltage

12 to 30V dc

### Supply Current

< 75 mA max current at 12V dc (exclusive of load)  
< 50 mA max current at 30V dc (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 30V dc

### Output Response Time

50 milliseconds ON and OFF

### Power-Up Output Delay Time

300 milliseconds

### Connections

8-pin integral Euro-style QD, 2 m (6.5 ft) PVC integral cable, or 8-pin 150 mm (5.9 in) Euro-style PVC pigtail QD

### Indicators

**Color 1:** Green  
**Color 2:** Red  
**Color 3:** Yellow

### 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.

### Operating Conditions

**Temperature:** -40° to +50° C (-40° to +122° F)  
**Humidity:** 90% at 50° C max. relative humidity (non-condensing)

### Storage

-40° to +70° C (-40° to +158° F)

### Construction

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

### Mounting

M30 x 1.5 Threaded base Max torque 4.5 Nm (40in lb f)

### 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.

### Certifications



## Accessories

### Cordsets

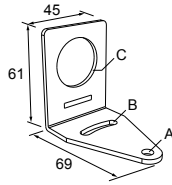
Table 3: 8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield

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

## Brackets

### SMB30A

- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel

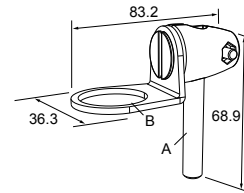


Hole center spacing: A to B=40

Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

### SMB30FA

- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available

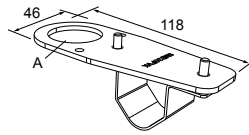


Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50

Hole size: B= ø 30.1

### SMB30FVK

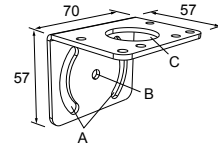
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



Hole size: A= ø 31

### SMB30MM

- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor

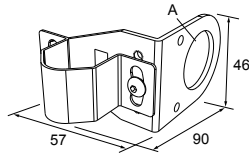


Hole center spacing: A = 51, A to B = 25.4

Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

### SMB30RAVK

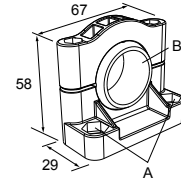
- V-clamp, right-angle bracket and fasteners for mounting sensors to pipe or extrusion
- Clamp accommodates 28 mm dia. tubing or 1 in. square extrusions
- 30 mm hole for mounting sensors



Hole size: A = ø 30.5

### SMB30SC

- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included

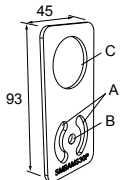


Hole center spacing: A=ø 50.8

Hole size: A=ø 7.0, B=ø 30.0

### SMBAMS30P

- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90+° rotation
- 12-ga. 300 series stainless steel

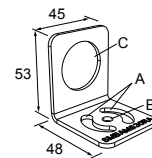


Hole center spacing: A=26.0, A to B=13.0

Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

### SMBAMS30RA

- Right-angle SMBAMS series bracket
- 30 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 31.0

## 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.

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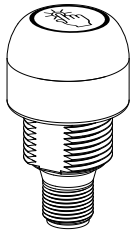
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# EZ-LIGHT® Touch K30 Series Illuminated Multipurpose Buttons



General Purpose Multicolor Indicator with Independent Momentary Touch Button Output



- Rugged, cost-effective, and easy-to-install multicolor indicator with touch button
- Waterproof IP69K construction for washdown environments
- Two independent colors in one unit—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 in gloves
- 12 to 30V dc operation

## Models

Model <sup>1</sup>	I/O Type	Output State	Light Color 1 (Power Applied)	Light Color 2 (Input Active)	Connection
K30APTXXRF2Q	PNP	N.O.	-	Red	Integral 4-pin Euro QD
K30APTXXGF2Q			-	Green	
K30APTGRF2Q			Green	Red	
K30APTRGF2Q			Red	Green	
K30ANTXXRF2Q	NPN		-	Red	
K30ANTXXGF2Q			-	Green	
K30ANTGRF2Q			Green	Red	
K30ANTRGF2Q			Red	Green	

## Specifications

### Supply Voltage

12 to 30V 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 30V dc

### Output Response Time

150 milliseconds ON and OFF

### Power-Up

Device requires 300 milliseconds to start up

### Connections

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

150 mm (5.9 in) Euro-style PVC pigtail QD

### 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.

### 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)

### Construction

**Housing:** polycarbonate

**Translucent dome:** polycarbonate

**Mounting Nut:** PBT

### Mounting

M22 × 1.5 Threaded base, max torque 2.25 Nm (20 in-lbf)

### 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.

### Certifications



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

• For 4-pin 150 mm (5.9 in) Euro-style PVC pigtail, replace suffix **Q** with **QP** in the model number (example, **K30APTXXRF2QP**).

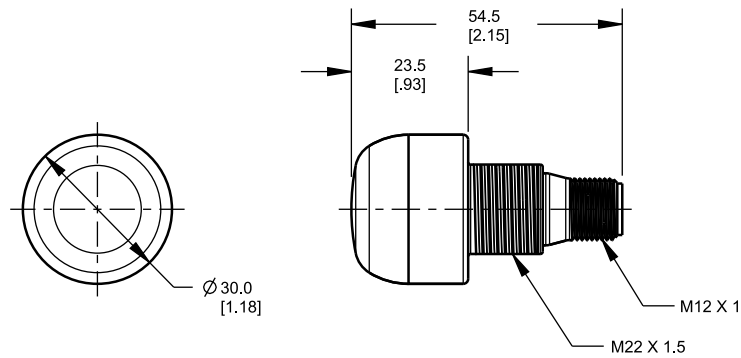
• For 2 m (6.5 ft) cable, omit suffix **Q** from the model number (example, **K30APTXXRF2**).

• A model with a QD requires a mating cable (see [Cordsets](#) on page 2).



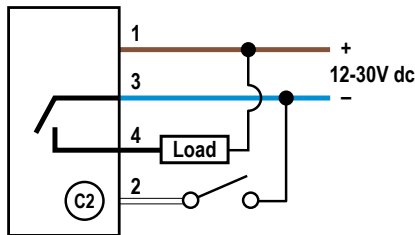
## Dimensions

All measurements are listed in millimeters (inches).

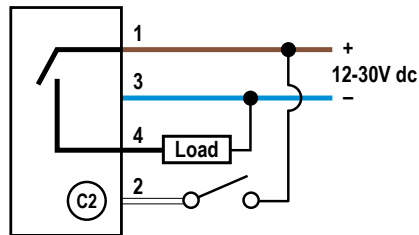


## Hookups

### NPN (Sinking) Output Models



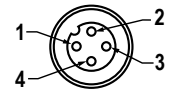
### PNP (Sourcing) Output Models



### Wiring Key

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

### Pinout



## Accessories

### Cordsets

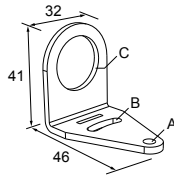
4-Pin Threaded M12/Euro-Style Cordsets				
Model	Length	Style	Dimensions	Pinout
MQDC-406	1.83 m (6 ft)	Straight		
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			
MQDC-450	15.2 m (50 ft)			
MQDC-406RA	1.83 m (6 ft)	Right-Angle		<ul style="list-style-type: none"> <li>1 = Brown</li> <li>2 = White</li> <li>3 = Blue</li> <li>4 = Black</li> </ul>
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.

### SMB22A

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

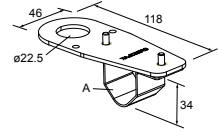


**Hole center spacing:** A to B = 26.0

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

### SMB22FVK

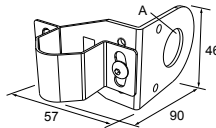
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



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

### SMB22RAVK

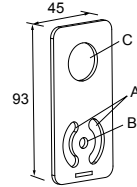
- V-clamp, right-angle bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



**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

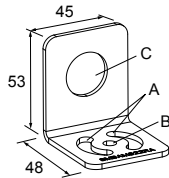


**Hole center spacing:** A = 26.0, A to B = 13.0

**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

## 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.

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