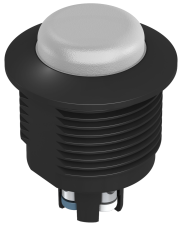


## Features

DC-Operated LED Indicators with One, Two, or Three Colors



- Up to three independent colors in one unit
- Translucent face appears gray when off to avoid false indication
- M12 connector models available for plug and play indication
- Wide 180° field of view
- Wide 10 V DC to 30 V DC operating range allows for use in battery-powered mobile applications
- Available with PNP or NPN input, depending on model
- IP69K rated to withstand harsh wash-down environments
- Wide operating range of -40 °C to +50 °C (-40 °F to +122 °F)
- Daylight visible models with a clear cover and more focused light output provide greater visibility in high ambient light conditions

## Models

Standard Models

Family	Color 1	Color 2	Color 3	Input	Connector
S22L	G	R	Y	P	Q
MODEL KEY	G = Green R = Red Y = Yellow B = Blue W = White O = Orange T = Turquoise V = Violet M = Magenta X = No color in this position			P = PNP N = NPN	Blank = 2 m (6.5 ft) integral PVC-jacketed cable Q = Integral 4-pin M12 male quick-disconnect connector QP = 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector T = 4-screw terminals

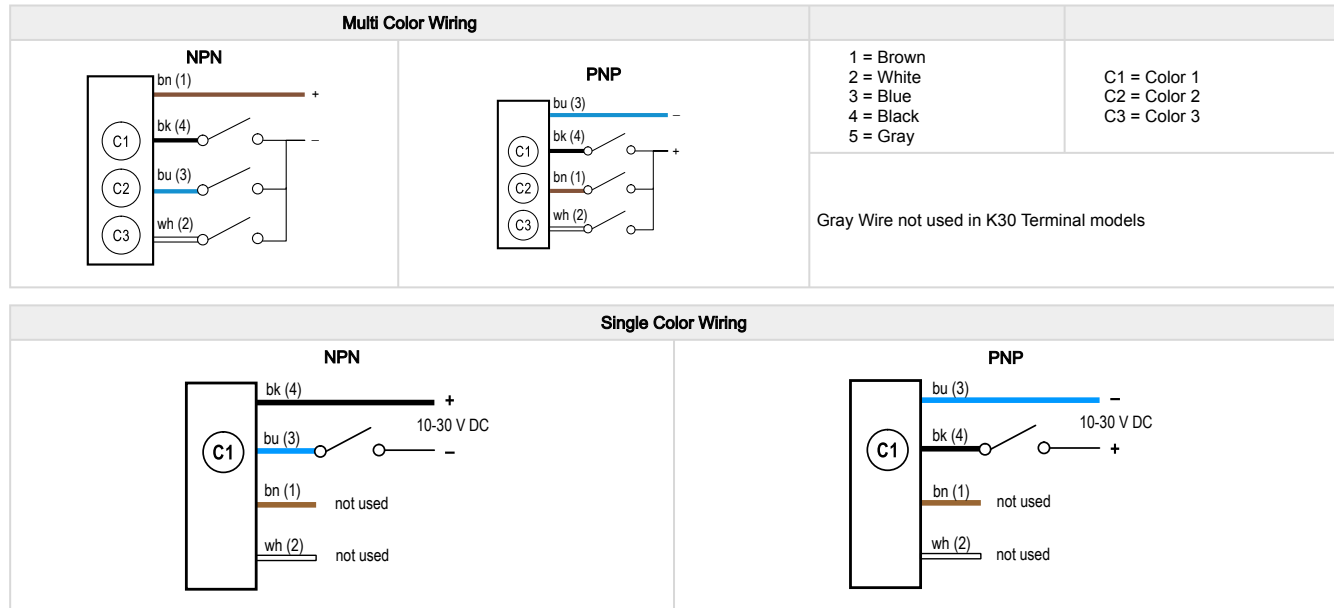
Daylight Visible Models

Family	Color 1	Color 2	Color 3	Input	Connector
S22DL	G	R	Y	P	Q
MODEL KEY	G = Green R = Red Y = Yellow B = Blue W = White O = Orange X = No color in this position			P = PNP N = NPN	Blank = 2 m (6.5 ft) integral PVC-jacketed cable Q = Integral 4-pin M12 male quick-disconnect connector QP = 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector T = 4-screw terminals

Example Model	Indicators	Input	Connector Type
S22LGRYP	Green, Red, Yellow	PNP	2 m (6.5 ft) integral PVC-jacketed cable
S22LGXXPQ	Green	PNP/NPN	Integral 4-pin M12 male quick-disconnect connector
S22LGRXPQP	Green, Red	PNP	150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector
S22LGRYPT	Green, Red, Yellow	PNP	4 screw terminals

**NOTE:** Single color models should be ordered as PNP models, but can be wired for either PNP or NPN input.

## Wiring



## Specifications

### Supply Voltage and Current

10 V DC to 30 V DC at 25 mA max. per LED color

### Indicators

LEDs are independently selected; 1, 2, or 3 colors, depending on model. For other colors/ combinations, contact Factory for availability

**Standard Models:** Entire translucent dome provides even indication viewable from over 180 degrees

**Daylight Visible Models:** Clear dome and more focused light provides even brighter indication when used in high ambient light areas

### Indicator Response Time

Indicator ON/OFF: 1 ms max

### Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates <sup>(1)</sup>		Lumen Output (Typical at 25 °C)	
		X	Y	S22L	S22DL
Green	520-535 nm	–	–	4.1	2.3
Red	620-630 nm	–	–	1.1	1.4
Yellow	585-595 nm	–	–	0.8	1.2
Blue	465-475 nm	–	–	0.6	0.6
Orange	600-615 nm	–	–	4	4
White	5665-9000 K	–	–	0.8	0.9
Turquoise	–	0.19	0.34	2.4	NA <sup>(2)</sup>
Violet	–	0.21	0.11	0.5	NA <sup>(2)</sup>
Magenta	–	0.35	0.15	0.5	NA <sup>(2)</sup>

<sup>(1)</sup> Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.

<sup>(2)</sup> Colors not available in this model.

### Environmental Rating

Rated IP67, and IP69K per ISO 20653. Cabled models meet DIN IP69K if the cable is protected from high-pressure spray. Indicator side of terminal models meet IP67, and IP69K per ISO 20653 when installed in an enclosure. Screw connection points meet IP00.

Meets UL Type 4X and UL Type 13 when mounted in a UL Type 4X or Type 13 enclosure.

### 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 (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

### Construction

UV-stabilized polycarbonate housing

PBT mounting nut max torque 2.3 N·m (20 lbf·in)

Nitrile sealing washer

### Connections

Integral 4-pin M12 male quick-disconnect connector, 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector, or 4-wire, 2 m (6.5 ft) PVC integral cable, 4 color-coded screw terminals for up to 16 AWG wire, depending on model, screw terminal max. torque 0.11 N·m (1.0 lbf·in)

### Operating Conditions

–40 °C to +60 °C (–40 °F to +140 °F)

Limited to one color on at a time

### Certifications



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

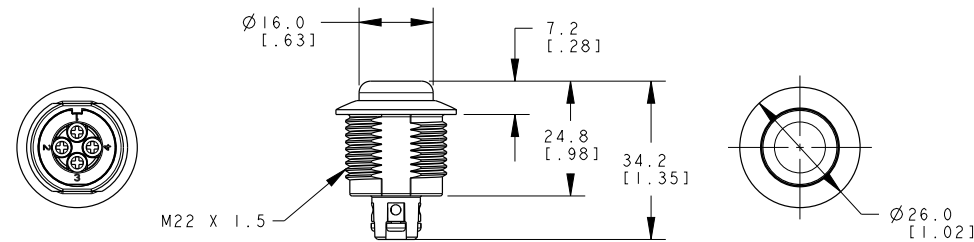


Turck Banner LTD Blenheim House  
Blenheim Court  
Wickford, Essex SS11 8YT  
GREAT BRITAIN



### 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	Pinout (Female)
MQDC-406	2 m (6.56 ft)	Straight		
MQDC-415	5 m (16.4 ft)			
MQDC-430	9 m (29.5 ft)			
MQDC-450	15 m (49.2 ft)			
MQDC-406RA	2 m (6.56 ft)	Right-Angle		
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA	15 m (49.2 ft)			

1 = Brown  
2 = White  
3 = Blue  
4 = Black  
5 = Not used

### Brackets

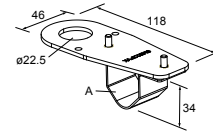
All measurements are listed in millimeters, unless noted otherwise. The measurements provided are subject to change.

<p><b>SMB22A</b></p> <ul style="list-style-type: none"><li>• Right-angle bracket with curved slot for versatile orientation</li><li>• 12-ga. stainless steel</li><li>• Mounting hole for 22 mm sensor</li></ul> <p><b>Hole center spacing:</b> A to B = 26.0 <b>Hole size:</b> A = <math>\varnothing</math> 4.6, B = 4.6 x 16.9, C = 22.2</p>	
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**SMB22FVK**

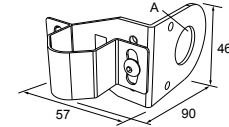
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor

**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

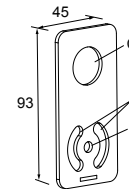
**Hole size:** A =  $\varnothing$  22.5

**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

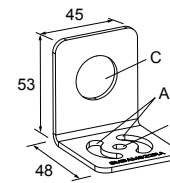
**Hole size:** A = 26.8 x 7.0, B =  $\varnothing$  6.5, C =  $\varnothing$  22.5

**SMBAMS22RA**

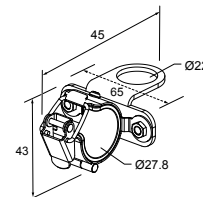
- Right-angle SMBAMS series bracket with 22 mm hole for mounting sensors
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

**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

**LMB22LPC**

- For 28 mm tubular racking
- Toolless mount to racking
- 22 mm mounting hole



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