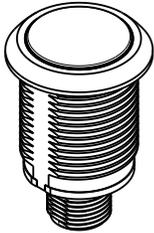


# S22 Pro Indicator



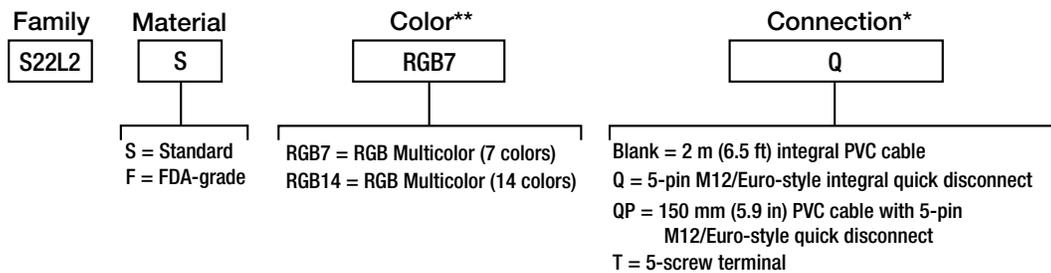
## Datasheet

22 mm Flush Mount Multicolor RGB Indicator with Seven Color Flashing Input Control and up to Fourteen Color Options



- Bright, uniform indicator light
- Up to fourteen colors in one device (Green, Red, Yellow, Blue, White, Cyan, Magenta, Orange, Amber, Lime Green, Spring Green, Sky Blue, Violet, and Rose)
- 22 mm threaded polycarbonate base
- Translucent polycarbonate window
- Rugged IEC IP66, IEC IP67, and IEC IP69 design
- Bimodal inputs (PNP/NPN), depending on source wiring
- Seven color models have flashing input control
- Variety of connector options
- Models constructed from FDA-grade materials available
- Terminal connection models available for panel wiring applications

## Models



\* Models with a quick disconnect require a mating cordset

\*\* 7 Colors = Green, Red, Yellow, Blue, White, Cyan, Magenta with flash input

\*\* 14 Colors = Above colors, plus Orange, Amber, Lime Green, Spring Green, Sky Blue, Violet, and Rose

## Wiring Diagrams

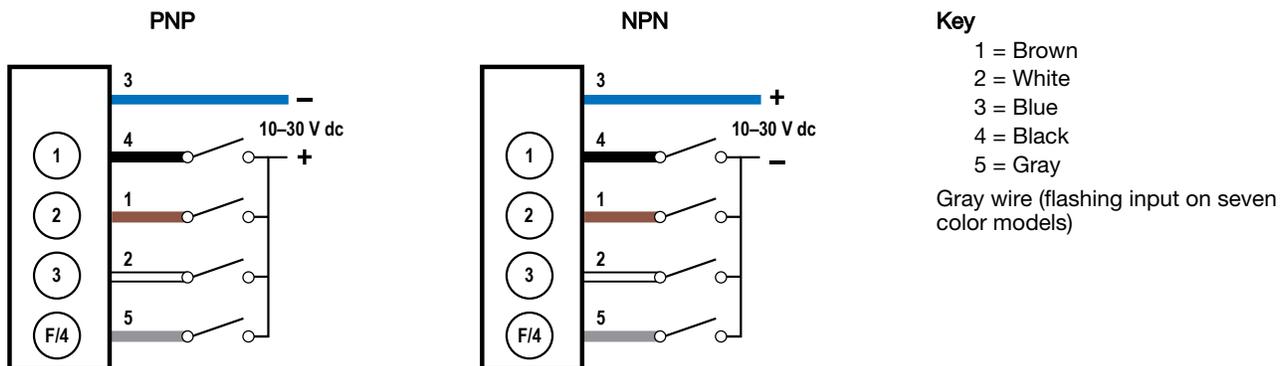


Table 1: Color Definition

	Red	Yellow	Green	Cyan	Blue	Magenta	White	Amber	Rose	Lime Green	Orange	Sky Blue	Violet	Spring Green
Input 1	X	X				X	X		X		X		X	
Input 2		X	X	X			X			X	X			X
Input 3				X	X	X	X					X	X	X
Input 4								X	X	X	X	X	X	X

An "X" denotes an active input, for example when Input 1 and Input 3 are active, the indicator will show Magenta.

Input 4 is only available on fourteen color models.

## Specifications

### Supply Voltage

10 V dc to 30 V dc

### Supply Current

70 mA maximum current at 10 V dc (exclusive of load)

60 mA maximum current at 12 V dc (exclusive of load)

40 mA maximum current at 24 V dc (exclusive of load)

35 mA maximum current at 30 V dc (exclusive of load)

### Supply Protection

Protected against reverse polarity and transient voltages

### Input Response Time

250 milliseconds maximum

### Flash

1.5 Hz flash rate through flash input wire

### Connections

Integral 5-pin M12/Euro-style quick disconnect, 150 mm (6 in) PVC cable with a M12/Euro-style quick disconnect, or 2 m (6.5 ft) integral PVC cable, depending on model

Models with a quick disconnect require a mating cordset

### Construction

**Standard Model Base, Dome, and Nut:** polycarbonate

**FDA Model Base, Dome, and Nut:** FDA-grade copolyester

### Mounting

M22 by 1.5 threaded base, maximum torque 2.25 N·m (20 inch-lbf)

Mounting nut included

### Vibration and Mechanical Shock

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell)

Meets IEC 60068-2-27 requirements (Shock: 30G 11 ms duration, half sine wave)

### Indicators

7 colors or 14 colors, depending on model

Only one color can be on at a time

### Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates <sup>1</sup>		Lumen Output (Typical at 25 °C)
		x	y	
Green	527	0.178	0.700	1.9
Red	625	0.699	0.298	0.80
Yellow	571	0.424	0.511	2.5
Blue	465	0.139	0.052	0.3
White	5700K	0.328	0.337	2.5
Cyan	492	0.158	0.340	2.0
Magenta	–	0.345	0.161	1.2
Amber	585	0.517	0.438	1.8
Rose	–	0.491	0.215	0.9
Lime Green	557	0.347	0.571	2.2
Sky Blue	485	0.151	0.248	1.9
Orange	596	0.585	0.386	1.4
Violet	435	0.204	0.082	0.5
Spring Green	507	0.169	0.524	1.9

<sup>1</sup> Refer to the CIE 1930 (x,y) Chromaticity Diagram, to show equivalent color with indicated color coordinates.

**Environmental Rating**

**Standard Models:** IEC IP66, IEC IP67, IEC IP69  
 Cabled models also meet IEC IP69 if the cable and cable entrance are protected from high-pressure spray  
 Indicator side of terminal models meet IEC IP69 when installed in an enclosure  
 Screw connection points meet IEC IP00  
**FDA Models:** IEC IP66, IEC IP67, and IEC IP69

**Operating Conditions**

-40 °C to +50 °C (-40 °F to +122 °F)  
 90% at +50 °C maximum relative humidity (non-condensing)  
 Storage Temperature: -40 °C to +70 °C (-40 °F to +158 °F)

**Certifications**



**Required Overcurrent Protection**



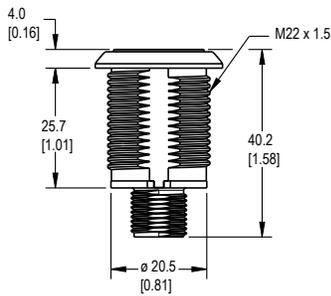
**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

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).

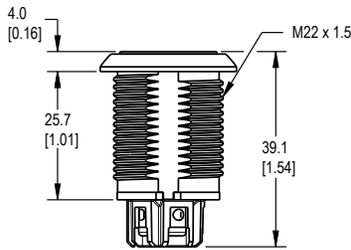
Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

**Dimensions**

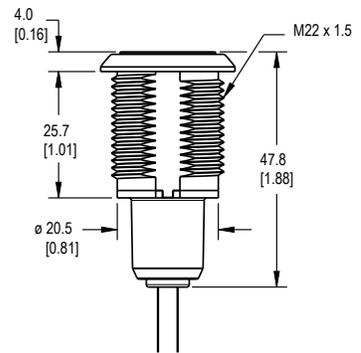
**Quick-Disconnect Models**



**Terminal Models**



**Cabled Models**



All measurements are listed in millimeters [inches], unless noted otherwise.

**Accessories**

**Cordsets**

5-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-501.5	0.50 m (1.5 ft)	Straight		<p>1 = Brown                  2 = White                  3 = Blue                  4 = Black                  5 = Gray</p>
MQDC1-506	1.83 m (6 ft)			
MQDC1-515	4.57 m (15 ft)			
MQDC1-530	9.14 m (30 ft)			

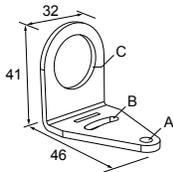
5-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

5-Pin Threaded M12/Euro-Style Cordsets—Washdown Stainless Steel				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0506	1.83 m (6 ft)	Straight		<p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray</p>
MQDC-WDSS-0515	4.57 m (15 ft)			
MQDC-WDSS-0530	9.14 m (30 ft)			

Brackets

**SMB22A**

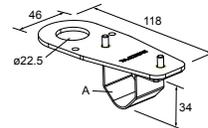
- Right-angle bracket with curved slot for versatile orientation
- 12-ga. stainless steel
- Mounting hole for 22 mm sensor



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

**SMB22FVK**

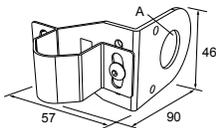
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



Hole size: A = ø 22.5

**SMB22RAVK**

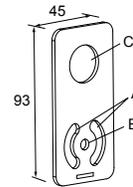
- V-clamp, right-angle bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



Hole size: A = ø 22.5

**SMBAMS22P**

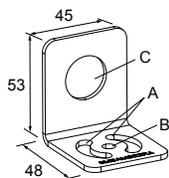
- Flat SMBAMS series bracket with 22 mm hole for mounting sensors
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel



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

**SMBAMS22FA**

- 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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## FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.