# K30 Pro Touch Button

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## Datasheet

30 mm Programmable Multicolor RGB Indicator with Independent Momentary or Latching Touch Button Output



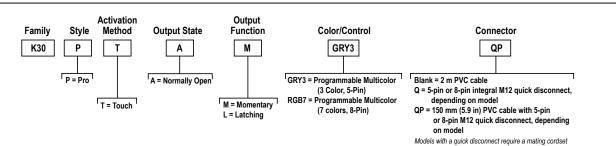
- Excellent immunity to false triggering by water spray, detergents, oils, and other foreign materials Programmable using Banner's Pro Editor software and Pro Converter Cable Up to 7 colors in one unit ٠
- ٠ •
- Devices are completely self-contained—no controller needed Rated IP67 and IP69K per DIN 40050-9 ٠
  - Ergonomically designed to eliminate hand, wrist, and arm stresses associated with repeated switch operation;
- no physical force required to operate 12 V DC to 30 V DC operation ٠
- Can be actuated with bare hands or gloves; adjustable sensitivity using Pro Editor software •



## WARNING:

- Do not use this device for personnel protection
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

## Models



## Pro Editor



Use Banner's Pro Editor software and Pro Converter Cable to create custom configurations by selecting different colors, flash patterns, and animations. For more information visit www.bannerengineering.com/proeditor.



## Wiring Diagrams

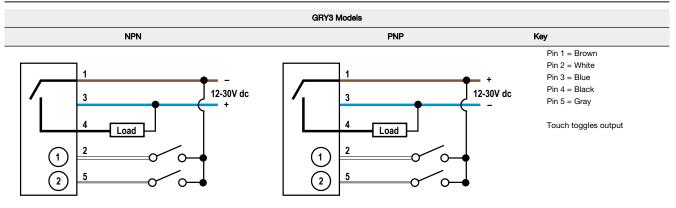
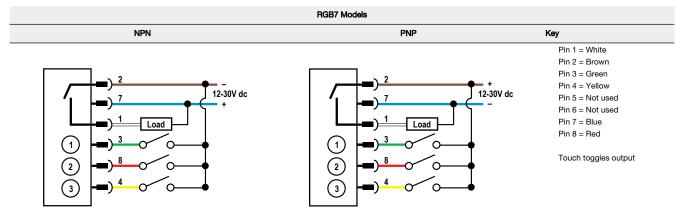


Table 1: GRY3 Multicolor Color/Function Definition

	Green	Yellow	Red
Input 1	Х	Х	
Input 2		Х	X



### Table 2: RGB Multicolor Color/Function Definition

	Red	Yellow	Green	Cyan	Blue	Magenta	White
Input 1	Х	Х				Х	Х
Input 2		X	Х	X			Х
Input 3				Х	Х	Х	Х

## Specifications

## Supply Voltage 12 V DC to 30 V DC

Supply Current

80 mA maximum current at 12 V DC (exclusive of load) 40 mA typical current at 24 V DC (exclusive of load)

#### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Leakage Current Immunity 400 µA

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 Output Rating

 Maximum load: 100 mA

 ON-state saturation voltage: < 2 V DC at 10 mA; < 2.5 V DC at 150 mA</td>

 OFF-state leakage current: < 10 μA at 30 V DC</td>

#### Output Response Time

Power-Up Delay: 500 milliseconds maximum Input Response: 40 milliseconds maximum Output Response: 300 milliseconds maximum

Touch Dwell Time

If touch dwells for longer than 60 seconds, the output will revert to the untouched state

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

Environmental Rating IP67, IP68K per DIN 40050-9 Cabled models also meet IP69K per DIN 40050-9 if the cable and cable entrance are protected from high-pressure spray

Mounting M22 × 1.5 threaded base, maximum torque 4.5 N·m (40 in lbf)

#### Construction

Base, Dome, and Nut: Polycarbonate 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)

#### Connections

S-pin or 8-pin integral M12/Euro-style quick disconnect, 2 m (6.5 ft) integral PVC cable, or 5-pin or 8-pin 150 mm (5.9 inch) PVC cable with a M12/Euro- style quick disconnect, depending on model Models with a quick disconnect require a mating cordset

Storage -40 °C to +70 °C (-40 °F to +158 °F) Certifications

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

Turck Banner LTD Blenheim House, Blenheim Court, Wickford, Essex SS11 8YT, Great Britain

### Pro Editor Configuration

Connection to Pro Editor software enables control of: .

- on to Pro Editor software enables control ot: Animation: Steady, Flash, Two Color Flash, 50/50, 50/50 Rotate, Chase, Intensity Sweep, Demo Color: Green, Red, Yellow, Blue, White, Cyan, Magenta, Amber, Rose, Lime Green, Orange, Sky Blue, Violet, Spring Green Intensity: Low, Medium, High Speed: Slow, Standard, Fast Output State: Normally Open, Normally Closed, Momentary, Latching, On Delay. Off Delay Delay, Off Delay Touch Sensitivity: Low, Standard, High
- Logic Type: Three State Advanced Control (F2 Mode), Seven State Advanced Control (F2 Mode), Four State Full Logic (Custom)

Pro Converter Cable required to interface between PC and indicator, see accessories

#### **Default Indicator Characteristics**

Color	Dominant Wavelength (nm)or Color	Color Coordinates <sup>1</sup>		Lumen Output (Typical at	
	Temperature (CCT)	x	У	(1 ypical at 25 °C)	
Green	522	0.154	0.700	7.7	
Red	620	0.689	0.309	3.1	
Yellow	576	0.467	0.463	7.8	
Blue	466	0.140	0.054	1.7	
White	5700K	0.328	0.337	9.6	
Cyan	493	0.157	0.331	8.7	
Magenta	-	0.392	0.186	4.2	
Amber	589	0.556	0.420	5.8	
Rose	-	0.525	0.237	3.5	
Lime Green	562	0.383	0.523	10	
Sky Blue	486	0.145	0.240	9.2	
Orange	599	0.616	0.370	4.6	
Violet	-	0.224	0.099	3.4	
Spring Green	508	0.155	0.524	8.0	

#### **Required Overcurrent Protection**



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

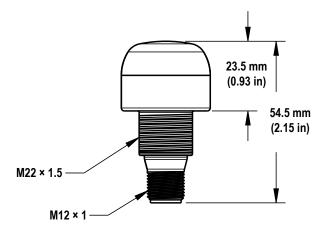
Overcurrent protection is required to be provided by end product application per the Supplied table. Overcurrent protection may be provided with external fusing or via Current Limiting,

Class 2 Power Supply. Supply wiring leads < 24 AWG shall not be spliced. For additional product support, go to www.bannerengineering.com.

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

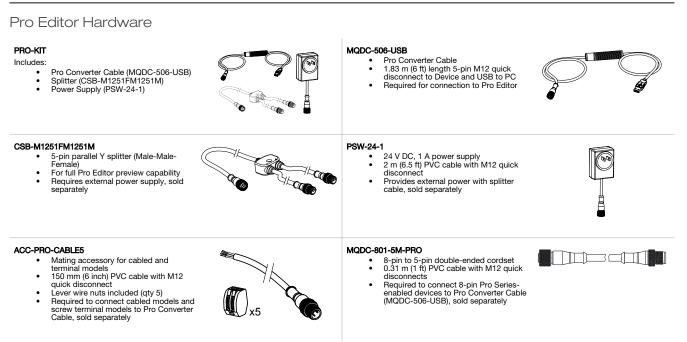
### Dimensions

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



1 Refer to the CIE 1931 (x,y) Chromaticity Diagram to show equivalent color with indicated color coordinates. Actual coordinates may differ ± 5%.

## Accessories

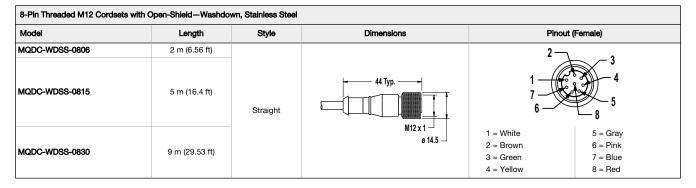


## Cordsets

5-Pin Threaded M12 Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-501.5	0.5 m (1.5 ft)		. <i>11</i> Too	
MQDC1-503	0.9 m (2.9 ft)			
MQDC1-506	2 m (6.5 ft)	Chroight		
MQDC1-515	5 m (16.4 ft)	Straight		
MQDC1-530	9 m (29.5 ft)		M12 x 1 –	
MQDC1-560	18 m (59 ft)		ø 14.5 <i>—</i>	1. 200 2
MQDC1-506RA	2 m (6.5 ft)			1000 3
MQDC1-515RA	5 m (16.4 ft)		32 Тур.	4 5 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
MQDC1-530RA	9 m (29.5 ft)		(1.26") 30 Typ. 11.18"] 6 14.5 [0.57"]	
MQDC1-560RA	19 m (62.3 ft)	Right-Angle		

5-Pin Threaded M12 Stainless Steel Washdown Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0506	2 m (6.56 ft)			
MQDC-WDSS-0515	5 m (16.4 ft)			1 200
MQDC-WDSS-0530	9 m (29.5 ft)	Straight	Ø15.5 mm 04.8 mm 04.8 mm	4 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray

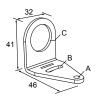
8-Pin Threaded M12 Cordsets with Open-Shield—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC2S-806	2.04 m (6.7 ft)			
MQDC2S-815	5.04 m (16.54 ft)		<b>→</b> 44 Typ. →	
MQDC2S-830	10.04 m (32.95 ft)			
MQDC2S-850	16 m (52.49 ft)	Straight	هــــراــــا المعالية المعالية M12 x 1 ـــــــــــــــــــــــــــــــــ	$\begin{array}{c}2\\1\\7\\7\\5\\5\end{array}$
MQDC2S-806RA	2 m (6.56 ft)			6
MQDC2S-815RA	5 m (16.4 ft)		32 Тур.	1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red
MQDC2S-830RA	10 m (32.81 ft)	Right-Angle	[1.26"]	
MQDC2S-850RA	16 m (52.49 ft)		M12 x 1 + + + + + + + + + + + + + + + + + +	



## Brackets

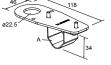
#### SMB22A

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



#### SMB22FVK

- V-clamp, flat bracket and fasteners for mounting to pipe or extensions Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions ٠
- •
- 22 mm hole for mounting sensor



Hole size: A = ø 22.5

Hole center spacing: A to B = 26.0Hole size:  $A = \emptyset 4.6$ ,  $B = 4.6 \times 16.9$ , C = 22.2

## SMB22RAVK

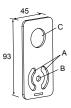
Hole size: A = ø 22.5

- 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

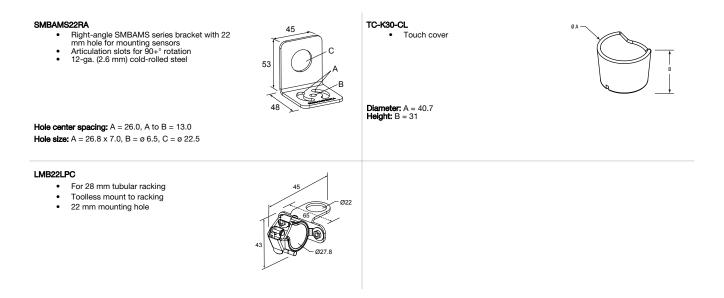
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### SMBAMS22P

- Flat SMBAMS series bracket with 22 mm hole for mounting sensors Articulation slots for 90+° rotation 12-ga. (2.6 mm) cold-rolled steel ٠
- :



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



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### FCC Part 15

This device complies with Part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. 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.

#### Industry Canada

This device complies with 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.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.



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