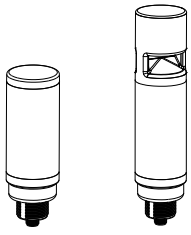
CL50 Pro Column Light with IO-Link

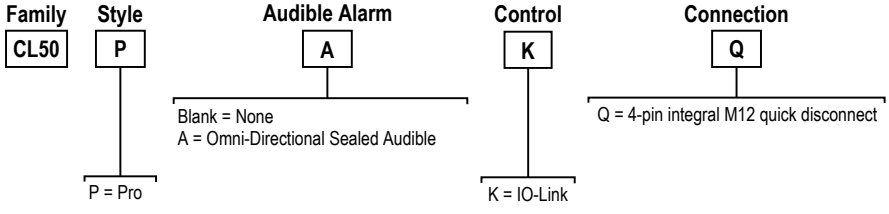
Datasheet

50 mm IO-Link Controlled Multicolor RGB Column Light

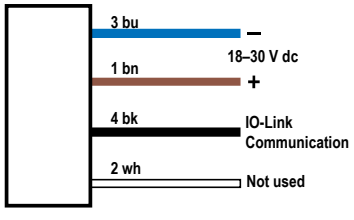


- Rugged, versatile, and easy-to-install multicolor indicators
- IO-Link gives full access to color, flashing, and dimming settings, as well as advanced animations which provide dynamic response to changing machine conditions
- Illumination provides easy-to-see operator guidance and indication of equipment status
- Audible models available with omni-directional audible element
- 18 V DC to 30 V DC operation
- No assembly required

Models



Wiring Diagram



Key

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

IO-Link Process Data Out (Master to Device)

IO-Link® is a point-to-point communication link between a master device and a sensor and/or light. It can be used to automatically parameterize sensors or lights and to transmit process data. For the latest IO-LINK protocol and specifications, please visit www.io-link.com.

For the latest IODD files, please refer to the Banner Engineering Corp website at: www.bannerengineering.com.

Use process data to select color, intensity, flash and animations. Use parameter data to create custom colors, intensity, and flash speeds.

Name	Values
Color 1	Green, Red, Orange, Amber, Yellow, Lime Green, Spring Green, Cyan, Sky Blue, Blue, Violet, Magenta, Rose, White, Custom 1, Custom 2
Color 2	
Animation	Off, Steady, Flash, Two Color Flash, Intensity Sweep
Pulse Pattern	Normal, Strobe, Three Pulse, SOS, Random
Speed	Medium, Fast, Slow
Color 1 Intensity	High, Low, Medium, Off, Custom
Color 2 Intensity	
Audible State	Off, On, Pulsed, SOS Pulse

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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Animation	Description
Off	Column is off
Steady	Color 1 is solid on at defined intensity
Flash	Color 1 flashes at defined speed, color intensity, and pattern (normal, strobe, three pulse, SOS, or random)
Two Color Flash	Color 1 and Color 2 flash alternately at defined speed, color intensities, and pattern (normal, strobe, three pulse, SOS, or random)
Intensity Sweep	Color 1 repeatedly increases and decreases intensity between 0% to 100% at defined speed and color intensity

Specifications

Supply Voltage and Current

18 V DC to 30 V DC

130 mA at 18 V DC
95 mA at 24 V DC
80 mA at 30 V DC

Maximum current for Omni-Directional Sealed Audible: 25 mA
Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Input Rating

Indicator On/Off Response Time: 20 ms (maximum)

Connections

Integral 4-pin M12 male quick-disconnect connector
Models with a quick disconnect require a mating cordset

Construction

Bases, Covers, Light Segment: Polycarbonate

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

Advanced Capabilities

IO-Link®

Environmental Rating

IP65, UL Type 4X

Vibration and Mechanical Shock

Vibration: 10 Hz to 55 Hz, 0.5 mm peak-to-peak amplitude per IEC 60068-2-6
Shock: 30G 11 ms duration, half sine wave per IEC 60068-2-27

Operating Conditions

Non-Audible: –40 °C to +50 °C (–40 °F to +122 °F)
Audible: –20 °C to +50 °C (–4 °F to +122 °F)
95% at +50 °C maximum relative humidity (non-condensing)

Audible Alarm

3.1 kHz ± 500 Hz oscillation frequency
Intensity: 93 dB at 1 m (typical)

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

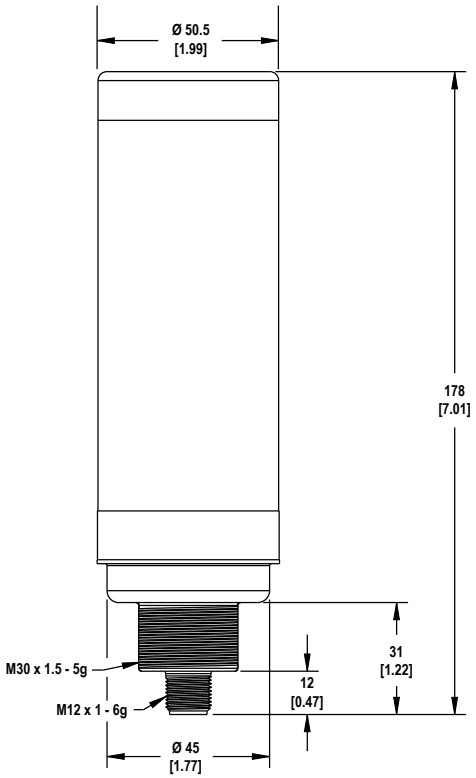
Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates [1]		Lumen Output Per Segment (Typical at 25 °C)
		X	Y	
Amber	589	0.539	0.431	57.2
Blue	466	0.139	0.083	11.6
Cyan	493	0.163	0.352	57.9
Green	522	0.195	0.710	52.2
Lime Green	562	0.367	0.567	64.0
Magenta	–	0.370	0.185	36.7
Orange	599	0.600	0.382	43.6
Red	620	0.668	0.318	29.1
Rose	–	0.494	0.238	30.3
Sky Blue	486	0.153	0.262	56.5
Spring Green	508	0.180	0.520	53.2
Violet	–	0.223	0.119	19.9
White	5700 K	0.326	0.347	79.4
Yellow	576	0.455	0.500	75.9

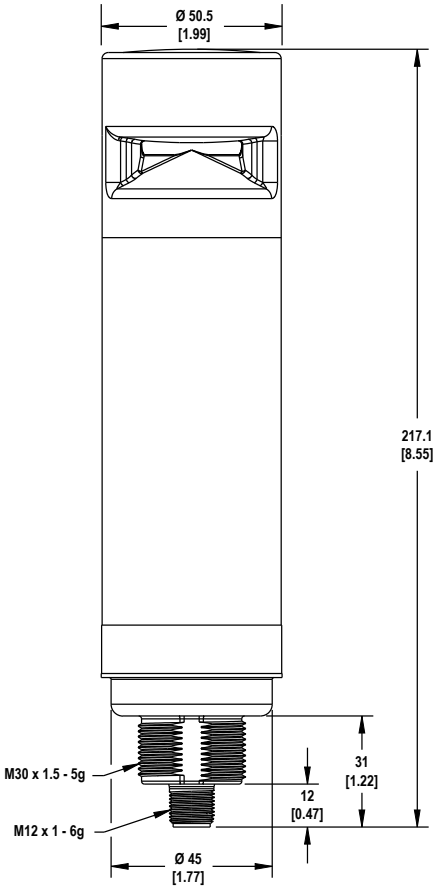
[1] Refer to CIE 1931 chromaticity diagram or color chart to show equivalent color with indicated color coordinates

Dimensions

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



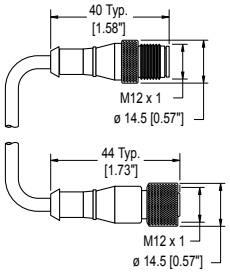
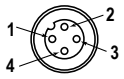
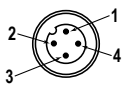
Standard Models



Audible Models

Accessories

Cordsets

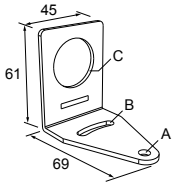
4-Pin Threaded M12 Cordsets—Double Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
MQDEC-401SS	0.31 m (1 ft)	Male Straight/ Female Straight		Female  Male  1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			

Mounting Brackets

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

SMB30A

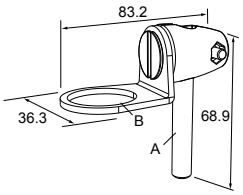
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

SMB30FA

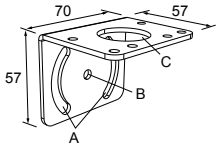
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50
Hole size: B= ø 30.1

SMB30MM

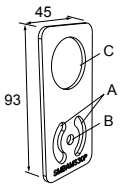
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



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

SMBAMS30P

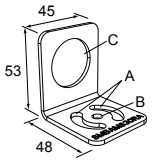
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel



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

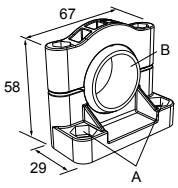
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



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

SMB30SC

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

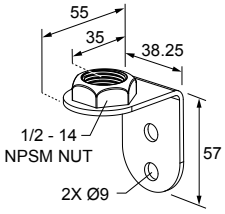


Hole center spacing: A=ø 50.8
Hole size: A=ø 7.0, B=ø 30.0

LMBE12RA35

- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 35 mm

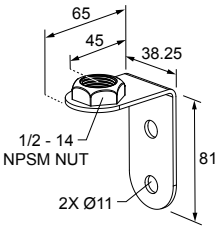
Hole center spacing: 20.0



LMBE12RA45

- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 45 mm

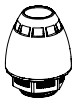
Hole center spacing: 35.0



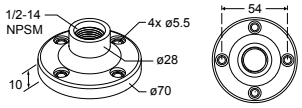
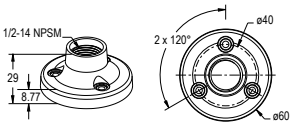
LMB Sealed Right-Angle Bracket

Model	Description	Construction	
LMB30RA	**Direct-Mount Models:** Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets.	Black polycarbonate	
LMB30RAC		Gray polycarbonate	
LMBE12RA	**Pipe-Mount Models:** Bracket kit with base, ½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).	Black polycarbonate	
LMBE12RAC		Gray polycarbonate	

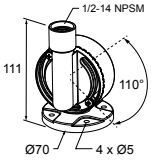
Elevated Mount System

<table>
<tr><th colspan="3">Model</th><th>Features</th><th>Components</th></tr>
<tr><td colspan="3">SA-M30TE12 - Black ABS</td><td rowspan="2">• Streamlined black ABS or white UHMW stand-off pipe adapter/cover
• Connects between 30 mm light base and ½ in. NPSM/DN15 pipe
• Mounting hardware included</td><td rowspan="2"></td></tr>
<tr><td colspan="3">SA-M30TE12C - White UHMW</td></tr>
<tr><td>Polished 304 Stainless Steel</td><td>Black Anodized Aluminum</td><td>Clear Anodized Aluminum</td><td rowspan="4">• Elevated-use stand-off pipe (½ in. NPSM/DN15)
• Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface
• ½ in. NPT thread at both ends
• Compatible with most industrial environments</td><td rowspan="4"></td></tr>
<tr><td>SOP-E12-150SS
150 mm (6 in) long</td><td>SOP-E12-150A
150 mm (6 in) long</td><td>SOP-E12-150AC
150 mm (6 in) long</td></tr>
<tr><td>SOP-E12-300SS
300 mm (12 in) long</td><td>SOP-E12-300A
300 mm (12 in) long</td><td>SOP-E12-300AC
300 mm (12 in) long</td></tr>
<tr><td>SOP-E12-900SS
900 mm (36 in) long</td><td>SOP-E12-900A
900 mm (36 in) long</td><td>SOP-E12-900AC
900 mm (36 in) long</td></tr>
<tr><td colspan="3">SA-E12M30 - Black ABS</td><td rowspan="2">• Streamlined black ABS or white UHMW mounting base adapter/cover
• Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole
• Mounting hardware included</td><td rowspan="2"></td></tr>
<tr><td colspan="3">SA-E12M30C - White UHMW</td></tr>
</table>

Pipe Mounting Flange

Pipe Mounting Flange			
Model	**Features**	**Construction**	
SA-F12	• Elevated-use stand-off pipes (½ in, NPSM/DN15) • M5 mounting hardware and nitrile gasket included	Die-cast zinc base with black paint	
SA-F12-3	• Elevated-use stand-off pipes (½ in, NPSM/DN15) • M4 mounting hardware and nitrile blend gasket included	Black Polycarbonate	

Foldable Mounting Brackets

Foldable Mounting Brackets			
Model	**Features**	**Construction**	
SA-FFB12	• For use with 1/2 inch stand-off pipes • Stainless steel hardware	Black polycarbonate	
SA-FFB12C		Gray polycarbonate	

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This device complies with Part 15 of the FCC Rules. 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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