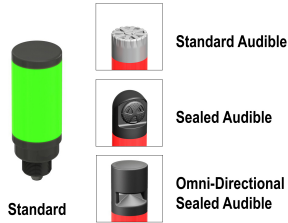


CL50 Column Light



Datasheet

Multi-Color General Purpose or Audible Indicators



- Rugged, cost-effective, and easy-to-install multi-color indicators
- Illumination provides easy-to-see operator guidance and equipment status indication
- 1-, 2-, or 3-color models available
- Available in black or light gray housing
- Audible models available with standard, sealed, or omni-directional audible element
- Continuous, pulsed, and staccato tones available
- 18 V to 30 V dc operation
- Compact devices are completely self-contained, no controller needed
- No assembly required

Non-Audible Models

Models ¹	# of LED Colors	LED Colors ²			Connection ³	Inputs
		Color 1	Color 2	Color 3		
CL50GXXPQ	1	Green	-	-	Integral 4-pin M12/Euro-style quick disconnect	PNP
CL50GXXNQ		Green	-	-		NPN
CL50XRX PQ		-	Red	-		PNP
CL50XRXNQ		-	Red	-		NPN
CL50GRXPQ	2	Green	Red	-		PNP
CL50GRXNQ		Green	Red	-		NPN
CL50GRYPQ	3	Green	Red	Yellow		PNP
CL50GRYNQ		Green	Red	Yellow		NPN

Audible Models

Standard Audible Models ¹	# of LED Colors	LED Colors ²			Connection ³	Inputs
		Color 1	Color 2	Color 3		
CL50GXXAPQ	1	Green	-	-	Integral 5-pin M12/Euro-style quick disconnect	PNP
CL50GXXANQ		Green	-	-		NPN
CL50XRXAPQ		-	Red	-		PNP
CL50XRXANQ		-	Red	-		NPN
CL50GRXAPQ	2	Green	Red	-		PNP
CL50GRXANQ		Green	Red	-		NPN
CL50GRYAPQ	3	Green	Red	Yellow		PNP
CL50GRYANQ		Green	Red	Yellow		NPN

Sealed Audible Models ¹			# of LED Colors	LED Colors ²			Connection ³	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato		Color 1	Color 2	Color 3		
CL50GXXALSPQ	CL50GXXALS3PQ	CL50GXXALS4PQ	1	Green	-	-	Integral 5-pin M12/Euro-style quick disconnect	PNP
CL50GXXALSNQ	CL50GXXALS3NQ	CL50GXXALS4NQ		Green	-	-		NPN
CL50XRXALSPQ	CL50XRXALS3PQ	CL50XRXALS4PQ		-	Red	-		PNP
CL50XRXALSNQ	CL50XRXALS3NQ	CL50XRXALS4NQ		-	Red	-		NPN
CL50GRXALSPQ	CL50GRXALS3PQ	CL50GRXALS4PQ	2	Green	Red	-		PNP
CL50GRXALSNQ	CL50GRXALS3NQ	CL50GRXALS4NQ		Green	Red	-		NPN
CL50GRYALSPQ	CL50GRYALS3PQ	CL50GRYALS4PQ	3	Green	Red	Yellow		PNP

¹ Models with black housing are listed. For gray housing, add the suffix "C" at the end of the cabled model number or before the "Q" of quick disconnect model numbers. For example, CL50GXXAPC or CL50GXXAPCQ.

² Available colors include: Green (G), Red (R), Yellow (Y), Blue (B), and White (W). Contact Banner Engineering for other colors and color combinations.

³

- To order the 150 mm (6 in) PVC cable model with a M12/Euro-style quick disconnect, replace the suffix "Q" with "QP" in the model number. For example, CL50GXXAPQP.
- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, CL50GXXAP.
- Models with a quick disconnect require a mating cordset.

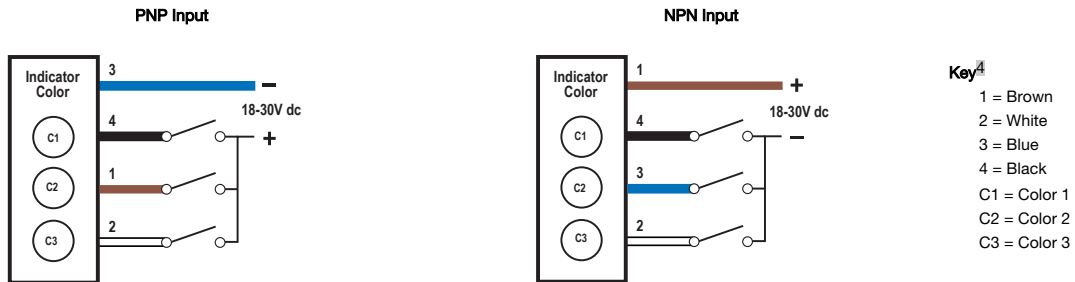


Sealed Audible Models ¹			# of LED Colors	LED Colors ²			Connection ³	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato		Color 1	Color 2	Color 3		
CL50GRYALS3N	CL50GRYALS3N	CL50GRYALS4N		Green	Red	Yellow		NPN

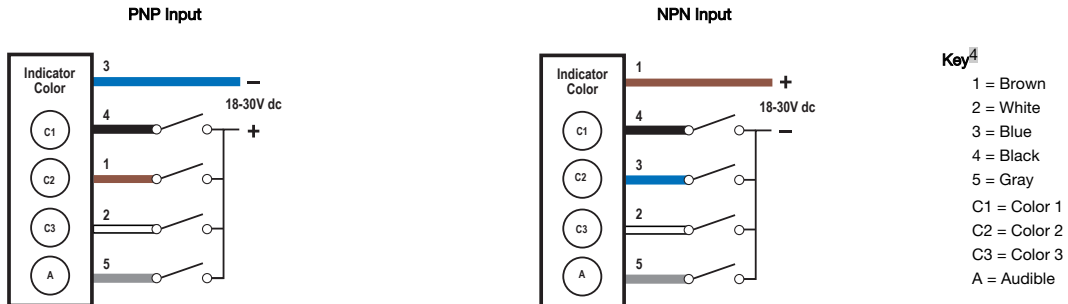
Omni-Directional Sealed Audible Models ¹			# of LED Colors	LED Colors ²			Connection ³	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato		Color 1	Color 2	Color 3		
CL50GXXAOSPQ	CL50GXXAOS3PQ	CL50GXXAOS4PQ	1	Green	-	-	Integral 5-pin M12/Euro-style quick disconnect	PNP
CL50GXXAOS3N	CL50GXXAOS3N	CL50GXXAOS4N		Green	-	-		NPN
CL50XRXAOSPQ	CL50XRXAOS3PQ	CL50XRXAOS4PQ		-	Red	-		PNP
CL50XRXAOS3N	CL50XRXAOS3N	CL50XRXAOS4N	-	Red	-	NPN		
CL50GRXAOSPQ	CL50GRXAOS3PQ	CL50GRXAOS4PQ	2	Green	Red	-		PNP
CL50GRXAOS3N	CL50GRXAOS3N	CL50GRXAOS4N		Green	Red	-		NPN
CL50GRYAOSPQ	CL50GRYAOS3PQ	CL50GRYAOS4PQ	3	Green	Red	Yellow		PNP
CL50GRYAOS3N	CL50GRYAOS3N	CL50GRYAOS4N		Green	Red	Yellow		NPN

Omni-Directional Sealed Audible Models with Intensity Adjustment ¹			# of LED Colors	LED Colors ²			Connection ³	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato		Color 1	Color 2	Color 3		
CL50GXXAOSIPQ	CL50GXXAOS3IPQ	CL50GXXAOS4IPQ	1	Green	-	-	Integral 5-pin M12/Euro-style quick disconnect	PNP
CL50GXXAOSINQ	CL50GXXAOS3INQ	CL50GXXAOS4INQ		Green	-	-		NPN
CL50XRXAOSIPQ	CL50XRXAOS3IPQ	CL50XRXAOS4IPQ		-	Red	-		PNP
CL50XRXAOSINQ	CL50XRXAOS3INQ	CL50XRXAOS4INQ	-	Red	-	NPN		
CL50GRXAOSIPQ	CL50GRXAOS3IPQ	CL50GRXAOS4IPQ	2	Green	Red	-		PNP
CL50GRXAOSINQ	CL50GRXAOS3INQ	CL50GRXAOS4INQ		Green	Red	-		NPN
CL50GRYAOSIPQ	CL50GRYAOS3IPQ	CL50GRYAOS4IPQ	3	Green	Red	Yellow		PNP
CL50GRYAOSINQ	CL50GRYAOS3INQ	CL50GRYAOS4INQ		Green	Red	Yellow		NPN

Wiring Diagrams — Non-Audible Models



Wiring Diagrams — Audible Models



⁴ If there is an "X" in the model number, the corresponding wire will not be used.

Functional Truth Table: PNP Models

LED Function	Pin 4 (Black Wire)	Pin 1 (Brown Wire)	Pin 2 (White Wire)	
Color 1 On	+V dc			Pin 3 (blue wire) connected to ground (-). Alarm models: Alarm function is independent of light functions.
Color 2 On		+V dc		
Color 3 On			+V dc	
Color 3 On (color 3 inhibits color 1)	+V dc		+V dc	
Color 2 On (color 2 inhibits color 1)	+V dc	+V dc		
Color 3 On (color 3 inhibits color 2)		+V dc	+V dc	
Color 3 On (color 3 inhibits colors 1 & 2)	+V dc	+V dc	+V dc	

Functional Truth Table: NPN Models

LED Function	Pin 4 (Black Wire)	Pin 3 (Blue Wire)	Pin 2 (White Wire)	
Color 1 On	-V dc			Pin 1 (brown wire) connected to +V dc. Alarm models: Alarm function is independent of light functions.
Color 2 On		-V dc		
Color 3 On			-V dc	
Color 3 On (color 3 inhibits color 1)	-V dc		-V dc	
Color 2 On (color 2 inhibits color 1)	-V dc	-V dc		
Color 3 On (color 3 inhibits color 2)		-V dc	-V dc	
Color 3 On (color 3 inhibits colors 1 & 2)	-V dc	-V dc	-V dc	

Specifications

Supply Voltage and Current

- 18 V dc to 30 V dc
Indicators—maximum current per LED color:
- 100 mA at 18 V dc
 - 70 mA at 30 V dc

Standard Audible Alarm: 25 mA maximum current
Sealed Audible Alarm: 35 mA maximum current
Omni-Directional Sealed Audible Alarm: 45 mA maximum current

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Indicator Response Time

Indicator On/Off: 10 milliseconds maximum

Audible Alarm

Standard Audible Alarm: 2.7 KHz ± 500 Hz oscillation frequency; maximum intensity 92 db at 1 meter (3.3 ft) (typical)
Sealed Audible Alarm: 2.9 KHz ± 250 Hz oscillation frequency; maximum intensity 94 db at 1 meter (3.3 ft) (typical)
Omni-Directional Sealed Audible Alarm: 2.1 KHz ± 250 Hz oscillation frequency; maximum intensity 99 db at 1m (3.3 ft) (typical)
Omni-Directional Sealed Audible Alarm with Intensity Adjustment: 2.1 KHz ± 250 Hz oscillation frequency; maximum intensity 95 dB at 1m (3.3 ft) (typical)

Audible Adjustment

Standard Audible Alarm: Unscrew the cover (up to 1.5 turns maximum) to adjust the audible intensity. Do not exceed 1.5 turns or the cover may detach during operation. For maximum intensity, rotate the center plug 180° counterclockwise to remove it.
Sealed Audible Alarm and Omni-Directional Sealed Audible Alarm with Intensity Adjustment: Rotate the front cover until the desired intensity is reached
Typical Reduction in Sound Intensity with Audible Adjustment (maximum to minimum):

- **Standard Audible:** 30 dB
- **Sealed Audible:** 20 dB
- **Omni-Directional Sealed Audible:** 12 dB

Construction

Bases and Covers: ABS
Light Segment: 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)

Operating Conditions

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

Environmental Rating

UL Type 4X Indoor and UL Type 13
Non-Audible and Sealed Audible: IEC IP67
Standard Audible: IEC IP50

Certifications



Indicators

LEDs or audible are independently selected

Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Lumen Output (Typical at 25 °C)
Green	525 nm	72
Red	625 nm	38
Yellow	590 nm	30
Blue	475 nm	28
White	5000 K	85

Connections

Integral 4-pin or 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

Required Overcurrent Protection

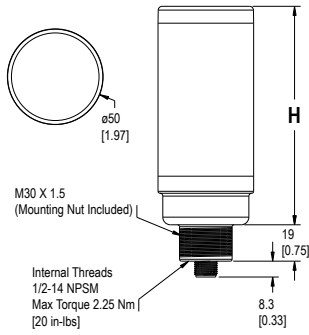


WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

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



Column Light Height (H)	
Non-Audible	114.2mm (4.5 in)
Standard Audible*	145.3mm (5.7 in)
Sealed Audible	168.2mm (6.6 in)
Omni-Directional Sealed Audible	182.2mm (7.2 in)

*Column Light (H) with top unscrewed approximately 3.5 mm to allow sound to escape

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

Accessories

Cordsets

4-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	1.83 m (6 ft)	Straight		<p> 1 = Brown 2 = White 3 = Blue 4 = Black </p>
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			
MQDC-450	15.2 m (50 ft)	Right-Angle		
MQDC-406RA	1.83 m (6 ft)			
MQDC-415RA	4.57 m (15 ft)			
MQDC-430RA	9.14 m (30 ft)			
MQDC-450RA	15.2 m (50 ft)			

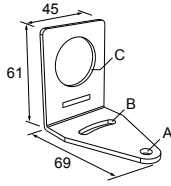
5-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-501.5	0.50 m (1.5 ft)	Straight		<p> 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray </p>
MQDC1-506	1.83 m (6 ft)			
MQDC1-515	4.57 m (15 ft)			
MQDC1-530	9.14 m (30 ft)	Right-Angle		
MQDC1-506RA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

Mounting Brackets

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

SMB30A

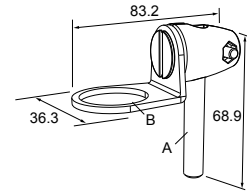
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



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

SMB30FA

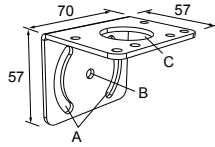
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



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

SMB30MM

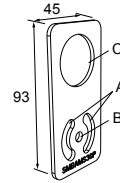
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



Hole center spacing: A= 51, A to B= 25.4
Hole size: A= 42.6 x 7, B= ø 6.4, C= ø 31.0

SMBAMS30P

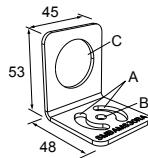
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel



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

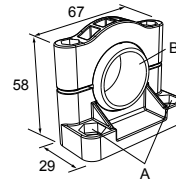
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



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

SMB30SC

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

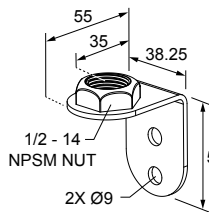


Hole center spacing: A=ø 50.8
Hole size: A=ø 7.0, B=ø 30.0

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

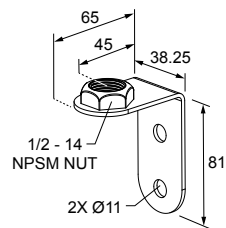
Hole center spacing: 20.0



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	