CL50 Column Light

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 or sealed audible element
- 18 to 30V dc operation
- Compact devices are completely self-contained — no controller needed
- Immune to EMI and RFI interference
- No assembly required

L to R: General-Purpose, Audible and Sealed Audible Models

Multi-Color General-Purpose Models

Model*	# of LED Colors	LED Function[†] – Lights Independently Selected			Connection**	Inputs
		Color 1	Color 2	Color 3		
CL50GXXPQ	1	Green	–	–	4-pin Euro integral QD connector	PNP
CL50GXXNQ		Green	–	–		NPN
CL50XRXPQ		–	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

[†]Contact factory for other colors and color combinations.

* Models with black housing are listed. For models with gray housing, add a **C** at the end of model number (cabled models) or before the **Q** (QD models) (e.g., **CL50GRYPC** or **CL50GRYPCQ**).

** Integral QD models only are listed.

- For 150 mm PVC pigtail with QD, replace **Q** with **QP** in model number (example, **CL50GRYPQP**).
- For 2 m (6.5') cable, omit suffix **Q** from model number (example, **CL50GRYP**).
- A model with a QD requires a mating cable (see *4-Pin Euro-Style Cordsets* on page 5).

⚠ **WARNING: . . . Not To Be Used for Personnel Protection**

Never use this product as a sensing device for personnel protection. Doing so could lead to serious injury or death. This product does NOT include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or denergized sensor output condition. Consult your Banner Safety Products catalog for safety products that meet OSHA, ANSI and IEC standards for personnel protection.

0 145315 7

Multi-Color Audible Models

Model*		# of LED Colors	LED Function† – Lights Independently Selected			Connection**	Inputs
Standard Audible	Sealed Audible		Color 1	Color 2	Color 3		
CL50GXXAPQ	CL50GXXALSPQ	1	Green	–	–	5-pin Euro integral QD connector	PNP
CL50GXXANQ	CL50GXXALSNQ		Green	–	–		NPN
CL50XRXAPQ	CL50XRXALSPQ		–	Red	–		PNP
CL50XRXANQ	CL50XRXALSNQ		–	Red	–		NPN
CL50GRXAPQ	CL50GRXALSPQ	2	Green	Red	–		PNP
CL50GRXANQ	CL50GRXALSNQ		Green	Red	–		NPN
CL50GRYAPQ	CL50GRYALSPQ	3	Green	Red	Yellow		PNP
CL50GRYANQ	CL50GRYALSNQ		Green	Red	Yellow		NPN

†Contact factory for other colors and color combinations.

* Models with black housing are listed. For models with gray housing, add a **C** at the end of model number (cabled models) or before the **Q** (QD models) (e.g., **CL50GRYPC** or **CL50GRYPCQ**).

** Integral QD models only are listed.

- For 150 mm PVC pigtail with QD, replace **Q** with **QP** in model number (example, **CL50GRYPQP**).
- For 2 m (6.5') cable, omit suffix **Q** from model number (example, **CL50GRYP**).
- A model with a QD requires a mating cable (see *5-Pin Euro-Style Cordsets* on page 5).

Selecting the Best Audible Option

Audible measurements are made in the direction sound exits the device. For standard audible models, this is the top of the unit (when mounted vertically, sound is directed toward the ceiling). For sealed audible models, sound exits the vented openings in the side of the unit, which should be oriented so that the sound is directed toward the machine operator(s). In environments with high ambient noise levels or high ceilings that absorb sound, the sealed version is recommended.

Specifications

Supply Voltage and Current
18 to 30V dc (10% max. ripple)
Indicators: @ 100 mA max. current @ 18V dc; 70 mA max. current @ 30V dc
Standard Audible Alarm: 25 mA max. current
Sealed Audible Alarm: 35 mA max. current

Indicators
Green, Red, Yellow; 1-3 colors, depending on model
LEDs or audible alarm are independently selected

Supply Protection Circuitry:
Protected against reverse polarity and transient voltage

Input Response Time
Indicator ON/OFF: 10 ms (max.)

Audible Adjustment
Standard Audible Alarm: Unscrew the cover (up to 1.5 turns max.) to adjust the audible intensity. (Do not exceed 1.5 turns or the cover may detach during operation.) For max. intensity, rotate the center plug 180° counterclockwise to remove it.
Sealed Audible Alarm: Rotate the front cover until the desired intensity is reached.

Audible Alarm
Standard Audible Alarm: 2.7 KHz ± 500 Hz oscillation frequency; max. intensity 92 db @ 1 meter (typical)
Sealed Audible Alarm: 2.9 KHz ± 250 Hz oscillation frequency; max. intensity 94 db @ 1 meter (typical)

Construction:
Bases and Covers: ABS
Light Segment: Polycarbonate

Environmental Rating
General-Purpose and Sealed Audible: IEC IP67
Standard Audible: IEC IP50

Connections
Integral 4-pin or 5-pin M12/Euro-style QD, 150 mm PVC pigtail with QD, or 2 m (6.5') integral cable, depending on model

Operating Conditions:
General-Purpose: −40° to +50° C (−40° to +122° F)
Standard and Sealed Audible: −20° to +50° C (−4° to +122° F)
Max. Rel. Humidity: 95% @ 50° C (non-condensing)

Vibration and Mechanical Shock:
All models meet Mil. Std. 202F requirements method 201A (vibration: 10 to 60 Hz max., double amplitude 0.06", maximum acceleration 10G). Also meets IEC 947-5-2; 30G 11 ms duration, half sine wave.
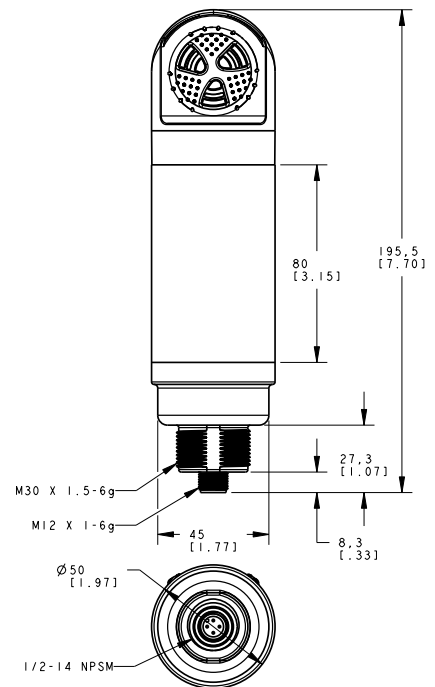
Certifications

CE

Dimensions

General-Purpose Models

Ø50 [1.97]

114.2 [4.50]

M30 X 1.5 (MOUNTING NUT INCLUDED)

19 [.75]

8.3 [.33]

INTERNAL THREADS 1/2-14 NPSM MAX TORQUE 2.25 Nm [20in-lbs]

Standard Audible Models[†]

Ø50 [1.97]

145.3 [5.72]

M30 X 1.5 (MOUNTING NUT INCLUDED)

19 [.75]

8.3 [.33]

INTERNAL THREADS 1/2-14 NPSM MAX TORQUE 2.25 Nm [20in-lbs]

Sealed Audible Models

195.5 [7.70]

80 [3.15]

M30 X 1.5-6g

M12 X 1-6g

27.3 [1.07]

45 [1.77]

8.3 [.33]

Ø50 [1.97]

1/2-14 NPSM
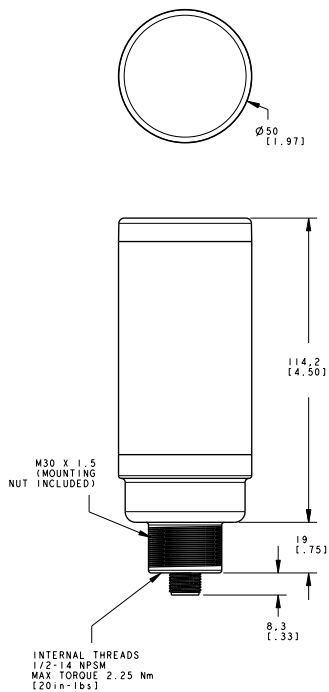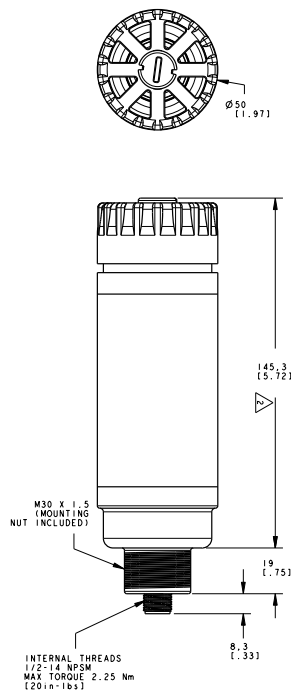
[†]Height with top unscrewed approximately 3.5 mm to allow sound to escape

Wiring – Multi-Color General-Purpose Models

Sourcing (PNP) Input	Sinking (NPN) Input	Key:
		1 = Brown 2 = White 3 = Blue 4 = Black C1 = Color 1 C2 = Color 2 C3 = Color 3
If there is an X in the model number, that corresponding wire will not be used		

Wiring – Multi-Color Audible Models

Sourcing (PNP) Input	Sinking (NPN) Input	Key:
		1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray C1 = Color 1 C2 = Color 2 C3 = Color 3 A = Audible
If there is an X in the model number, that 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	+Vdc		
Color 2 ON		+Vdc	
Color 3 ON			+Vdc
Color 3 ON (color 3 inhibits color 1)	+Vdc		+Vdc
Color 2 ON (color 2 inhibits color 1)	+Vdc	+Vdc	
Color 3 ON (color 3 inhibits color 2)		+Vdc	+Vdc
Color 3 ON (color 3 inhibits colors 1 & 2)	+Vdc	+Vdc	+Vdc

NOTES:

- Pin 3 (blue wire) connected to ground (–)
- **Alarm models:** Alarm function is independent of light functions

Functional Truth Table: NPN Models

LED Function	Pin 4 (Black Wire)	Pin 3 (Blue Wire)	Pin 2 (White Wire)
Color 1 ON	–Vdc		
Color 2 ON		–Vdc	
Color 3 ON			–Vdc
Color 3 ON (color 3 inhibits color 1)	–Vdc		–Vdc
Color 2 ON (color 2 inhibits color 1)	–Vdc	–Vdc	
Color 3 ON (color 3 inhibits color 2)		–Vdc	–Vdc
Color 3 ON (color 3 inhibits colors 1 & 2)	–Vdc	–Vdc	–Vdc

NOTES:

• Pin 1 (brown wire) connected to +Vdc
• **Alarm models:** Alarm function is independent of light functions

Quick-Disconnect (QD) Cordsets

4-Pin Euro-Style Cordsets

4-Pin M12/Euro-Style Cordsets (straight connector)	**4-Pin M12/Euro-Style Cordsets (right-angle connector)**
MQDC-406, 2 m (6.5')	**MQDC-406RA,** 2 m (6.5')
MQDC-415, 5 m (15')	**MQDC-415RA,** 5 m (15')
MQDC-430, 9 m (30')	**MQDC-430RA,** 9 m (30')

5-Pin Euro-Style Cordsets

5-Pin M12/Euro-Style Cordsets (straight connector)	**5-Pin M12/Euro-Style Cordsets (right-angle connector)**
MQDC1-506, 2 m (6')	**MQDC1-506RA,** 2 m (6')
MQDC1-515, 5 m (15')	**MQDC1-515RA,** 5 m (15')
MQDC1-530, 9 m (30')	**MQDC1-530RA,** 9 m (30')

Mounting Brackets

All measurements in mm

SMB30A

- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼") hardware
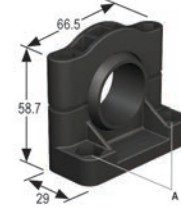- 30 mm mounting hole
- 12-ga. stainless steel
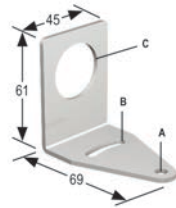
Hole center spacing: A to B=40.0

Hole size: A=ø 6.3, B=27.3 x 6.3, C=ø 30.5

SMB30SC

- Swivel bracket with 30 mm mounting hole
- Black reinforced thermo-plastic polyester
- Stainless steel mounting and swivel locking hardware included

Hole center spacing: A to B=50.8

Hole size: A=ø 7.0

SMB30FA

- Swivel bracket with tilt and pan movement for precision adjustment
- 30 mm mounting hole
- 12-ga. 304 stainless steel

A=3/8 - 16 x 50.8

Hole size: B=ø 30.1

SMBAMS30P

- Flat SMBAMS series bracket
- 30 mm mounting hole
- 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

SMB30MM

- 12-ga. stainless steel bracket with curved mounting slots for versatility and orientation
- Clearance for M6 (¼") hardware
- 30 mm mounting hole
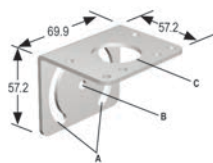
Hole center spacing: A=51.0, A to B=25.4

Hole size: A=42.6 x 7.0, B=ø 6.4, C=ø 30.1

SMBAMS30RA

- Right-angle SMBAMS series bracket
- 30 mm mounting hole
- Articulation slots for 90+° rotation
- 12-ga. cold rolled stainless steel
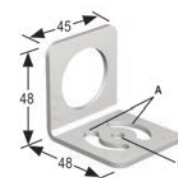
Hole center spacing: A=26.0, A to B=13.0

Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

Mounting Systems — Elevated Mount

Model		Features	Mounting System	
SA-M30TE12		• Streamlined acetal stand-off pipe adapter/cover • Connects between TL50 Tower Light and ½" NPSM/DN15 pipe • Mounting hardware included		
Stainless Steel	**Aluminum**	• Elevated-use stand-off pipe (½" NPSM/DN15) • Polished 304 stainless steel or anodized aluminum surface • ½ NPT thread at both ends • Compatible with most industrial environments		
SOP-E12-150SS 150 mm (6") long	**SOP-E12-150A** 150 mm (6") long			
SOP-E12-300SS 300 mm (12") long	**SOP-E12-300A** 300 mm (12") long			
SA-E12M30		• Streamlined acetal mounting base adapter/cover • Connects between ½" NPSM/DN15 pipe and 30 mm (1-3/16") drilled hole • Mounting hardware included		

Contact Us

For more information: Contact your local Banner representative or Banner Corporate Offices around the world.

Corporate Headquarters: Banner Engineering Corp. 9714 Tenth Ave. North, Mpls., MN 55441, Tel: 763-544-3164, *www.bannerengin-eering.com*, *sensors@bannerengineering.com*

Europe: Banner Engineering Europe Park Lane, Culliganlaan 2F, Diegem B-1831 BELGIUM,Tel: 32-2 456 07 80, Fax: 32-2 456 07 89, *www.bannereurope.com*, *mail@bannereurope.com*

Latin America: Contact Banner Engineering Corp. (US) or e-mail **Mexico:** *mexico@bannerengineering.com*; or **Brazil:** *brasil@banner-engineering.com*

Asia:

Banner Engineering China Shanghai Rep Office Rm. G/H/I, 28th Flr. Cross Region Plaza No. 899, Lingling Road, Shanghai 200030 CHINA, Tel: 86-21-54894500, Fax: 86-21-54894511, *www.bannerengineering.com.cn*, *sensors@bannerengineering.com.cn*

Banner Engineering Japan Cent-Urban Building 305 3-23-15, Nishi-Nakajima Yodogawa-Ku, Osaka 532-0011 JAPAN, Tel: 81-6-6309-0411, Fax: 81-6-6309-0416, *www.bannerengineering.co.jp*, *mail@bannerengineering.co.jp*

Banner Engineering Asia — Taiwan Neihu Technology Park 5F-1, No. 51, Lane 35, Jihu Rd., Taipei 114 TAIWAN, Tel: 886-2-8751-9966, Fax: 886-2-8751-2966, *www.bannerengineering.com.tw*, *info@bannerengineering.com.tw*

Banner Engineering India Pune Head Quarters Office, No. 1001 Sai Capital, Opp. ICC Senapati Bapat Road, Pune 411016 INDIA, Tel: 91-20-66405624, Fax: 91-20-66405623, *www.bannerengineering.co.in*, *india@bannerengineering.com*

BANNER ®
more sensors, more solutions