

Datasheet

Multi-Color General-Purpose or Audible Indicators

	**	Standard Audible	 Rugged, cost-effective, and easy-to-install multi-segment indicators Illuminated segments provide easy-to-see operator guidance and indication of equipment status Up to 7 stacked colors available
	C	Sealed Audible	 Available in black or light gray housing Audible models available with standard, sealed, or omni-directional audible element
Standard		Omni-Directional Sealed Audible	 Compact devices are completely self-contained, no controller needed Models with 1 to 5 segments, 18 V dc to 30 V dc or 24 V ac operation Models with 6 to 7 segments, 12 V dc to 30 V dc or 24 V ac operation No assembly required

Non-Audible Models

Model ¹	# of LED LED Colors ²		Connection ³	Inputs
TL50RQ	1	Red		
TL50GRQ	2	Green, Red	Integral 4-pin M12/Euro-style quick disconnect	
TL50GYRQ	3	Green, Yellow, Red		Bimodal (NPN or PNP)
TL50BGYRQ	4	Blue, Green, Yellow, Red	Integral 5-pin M12/Euro-style quick disconnect	
TL50WBGYRQ	5	White, Blue, Green, Yellow, Red	Integral 8-pin M12/Euro-style quick disconnect	

Audible Models

Standard Audible # of LED Model ¹ Colors		LED Colors ²	Connection ³	Inputs	
TL50RAQ	1	Red	Integral 4-pin M12/Euro-style quick disconnect		
TL50GRAQ	2 Green, Red		integral 4-pin M12/Euro-style quick disconnect		
TL50GYRAQ	3	Green, Yellow, Red	Integral 5-pin M12/Euro-style quick disconnect	Bimodal (NPN or PNP)	
TL50BGYRAQ	4	Blue, Green, Yellow, Red	Interval Quein M10/Euro atula quiale disconnect		
TL50WBGYRAQ	5	White, Blue, Green, Yellow, Red	Integral 8-pin M12/Euro-style quick disconnect		

Sealed Audible Model ¹			# of LED	LED Colors ²	Connection ³	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato	Colors			inputs
TL50RALSQ	TL50RALS3Q	TL50RALS4Q	1	Red	Integral 4-pin M12/Euro-style	Bimodal (NPN or
TL50GRALSQ	TL50GRALS3Q	TL50GRALS4Q	2	Green, Red	quick disconnect	
TL50GYRALSQ	TL50GYRALS3Q	TL50GYRALS4Q	3	Green, Yellow, Red	Integral 5-pin M12/Euro-style quick disconnect	
TL50BGYRALSQ	TL50BGYRALS3Q	TL50BGYRALS4Q	4	Blue, Green, Yellow, Red	Integral 8-pin M12/Euro-style	PNP)
TL50WBGYRALSQ	TL50WBGYRALS3Q	TL50WBGYRALS4Q	5	White, Blue, Green, Yellow, Red	quick disconnect	

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" in quick disconnect model numbers. For example, TL50RAC or TL50RACQ.

The first color listed is the bottom color, going up in successive order. Other available colors include: Turquoise (T), Orange (O), Violet (V), Sky Blue (S) and Magenta (M).

Magena (w).
 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, TL50RAQP.

[•] To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, TL50RA.

[•] Models with a quick disconnect require a mating cordset.

or PNP)

Omni-I	Directional ⁴ Sealed Audi	ble Model ¹	# of LED	LED Colors ²	Occurrentian B	Inputs	
Continuous	Pulsed at 1.6 Hz	Staccato	Colors		Connection ³		
TL50RAOSQ	TL50RAOS3Q	TL50RAOS4Q	1	Red	Integral 4-pin M12/Euro-style		
TL50GRAOSQ	TL50GRAOS3Q	TL50GRAOS4Q	2	Green, Red	quick disconnect	Bimodal	
TL50GYRAOSQ	TL50GYRAOS3Q	TL50GYRAOS4Q	3	Green, Yellow, Red	Integral 5-pin M12/Euro-style quick disconnect	(NPN or PNP)	
TL50BGYRAOSQ	TL50BGYRAOS3Q	TL50BGYRAOS4Q	4	Blue, Green, Yellow, Red	Integral 8-pin M12/Euro-style		
TL50WBGYRAOSQ	TL50WBGYRAOS3Q	TL50WBGYRAOS4Q	5	White, Blue, Green, Yellow, Red	quick disconnect		
Omni-Directional ⁴ S	Sealed Audible Model wi	th Intensity Adjustment 1	# of LED	LED Colors ²	Connection ³	long de	
Continuous	Pulsed at 1.6 Hz	Staccato	Colors	LED Colors =	Connection =	Inputs	
TL50RAOSIQ	TL50RAOS3IQ	TL50RAOS4IQ	1	Red	Integral 4-pin M12/Euro-style		
TL50GRAOSIQ	TL50GRAOS3IQ	TL50GRAOS4IQ	2	Green, Red	quick disconnect	Bimodal (NPN	
TL50GYRAOSIQ	TL50GYRAOS3IQ	TL50GYRAOS4IQ	3	Green, Yellow, Red	Integral 5-pin M12/Euro-style		

4

5

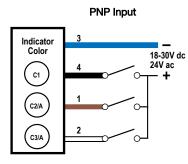
Blue, Green, Yellow, Red

White, Blue, Green, Yellow, Red

Wiring Diagram — 4-Pin Models with 1 to 3 Segments

TL50BGYRAOS4IQ

TL50WBGYRAOS4IQ

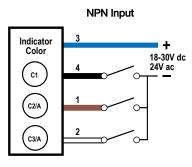


TL50BGYRAOS3IQ

TL50WBGYRAOS3IQ

TL50BGYRAOSIQ

TL50WBGYRAOSIQ



Key:

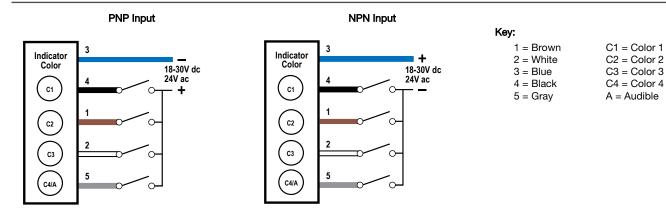
1 = Brown	C1 = Color 1
2 = White	C2 = Color 2
3 = Blue	C3 = Color 3
4 = Black	A = Audible

Pins 1 and 2 can activate the corresponding color or the audible function, if available.

quick disconnect

Integral 8-pin M12/Euro-style quick disconnect

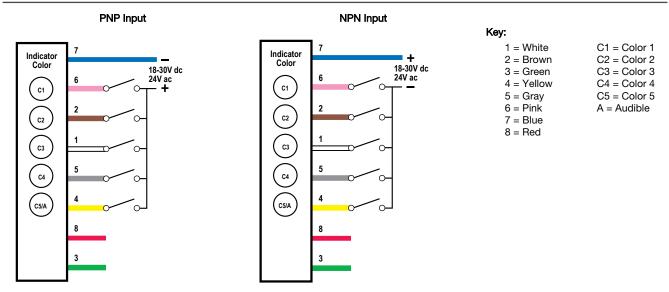
Wiring Diagram – 5-Pin Models with 4 Segments



Pin 5 can activate the corresponding color or the audible function, if available.

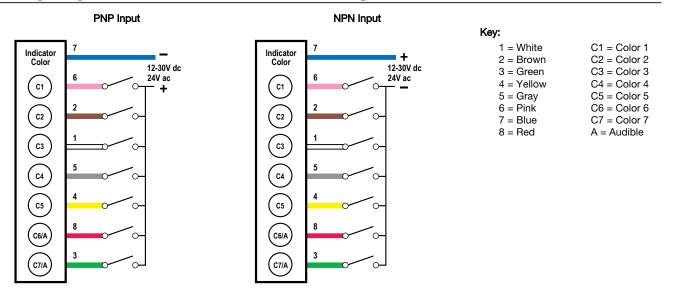
⁴ Sound exits at 45°.

Wiring Diagram — 8-Pin Models with 5 Segments



Pin 4 can activate the corresponding color or the audible function, if available. Pins 3 and 8 are not used.

Wiring Diagram — 8-Pin Models with 6 to 7 Segments



Pins 3 and 8 can activate the corresponding color or the audible function, if available.

Specifications

Supply Voltage and Current

Models with 1 to 5 segments: 18 V dc to 30 V dc; or 24 V ac (± 3 V) at 50 Hz to 60 Hz (both lights and audible alarms are counted as segments) Indicators – maximum current per LED color: 45 mA at 18 V to 30 V dc Models with 6 to 7 segments: 12 V dc to 30 V dc or 24 V ac (\pm 3 V) at 50 Hz to 60 Hz (both lights and audible alarms are counted as segments)

- Indicators maximum current per LED color: 135 mA at 12 V dc
 - 45 mA at 30 V dc
 - 60 mA at 24 V ac

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 transient voltages

Input 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 m (3.3 ft) (typical) Sealed Audible Alarm: 2.9 kHz ± 250 Hz oscillation frequency; maximum

Seared Audible Alarm; 2.9 Kn2 ± 200 H2 Oscillation in equatory, maximum intensity 94 dB at 1 m (3.3 ft) (typical) Omni-Directional Sealed Audible Alarm; 2.1 kHz ± 250 Hz oscillation frequency; maximum intensity 99 dB at 1 m (3.3 ft) (typical) Omni-Directional Sealed Audible Alarm with Intensity Adjustment: 2.1 kHz ± 250 Hz oscillation frequency; maximum intensity 95 dB at 1 m (3.3 ft) (typical)

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

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

Omni-Directional Sealed Audible Alarm: No adjustment.

Connections

Integral 4-pin, 5-pin, or 8-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

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

us listed

Indicators

LEDs are independently selected; 1 to 7 colors depending on model Indicator Characteristics

Color	Dominant Wavelength (nm) or Color	Co Coordi	Lumen Output	
	Temperature (CCT)	x	У	- (Typical at 25 °C)
Green	528 nm	-	-	23.0
Red	625 nm	-	-	7.5
Yellow	590 nm	-	-	5.0
Blue	470 nm	-	-	4.0
Orange	608 nm	-	-	15.5
White	6000 K	-	-	21.0
Turquoise	-	0.19	0.37	5.5
Violet	-	0.20	0.08	2.5
Magenta	-	0.35	0.15	3.0
Sky Blue	-	0.19	0.26	12.0

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.

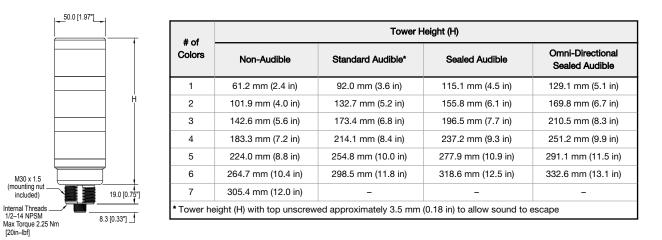
Supply wiring leads < 24 AWG shall not be spliced.

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

⁵ 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.

Accessories

Cordsets

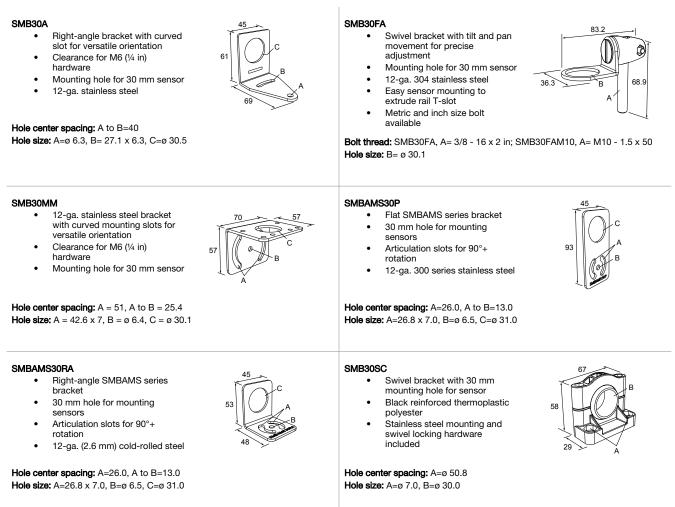
4-Pin Threaded M12/Euro-Style Cordsets—Single Ended					
Length	Style	Dimensions	Pinout (Female)		
1.83 m (6 ft)					
4.57 m (15 ft)		- 44 Tun - I	-2		
9.14 m (30 ft)					
15.2 m (50 ft)	Straight	M12 x 1 ø 14.5	1 = Brown 2 = White 3 = Blue 4 = Black		
	Length 1.83 m (6 ft) 4.57 m (15 ft) 9.14 m (30 ft)	Length Style 1.83 m (6 ft) 4.57 m (15 ft) 9.14 m (30 ft) Straight	Length Style Dimensions 1.83 m (6 ft) 4.57 m (15 ft) 4.57 m (30 ft) 9.14 m (30 ft) Straight M12 x 1		

5-Pin Threaded M12/Euro-Style Cordsets—Single Ended					
Model	Length	Style	Dimensions	Pinout (Female)	
MQDC1-501.5	0.50 m (1.5 ft)		44 Typ		
MQDC1-506	1.83 m (6 ft)				
MQDC1-515	4.57 m (15 ft)	Straight			
MQDC1-530	9.14 m (30 ft)		M12 x 1 → ø 14.5 →		
MQDC1-506RA	1.83 m (6 ft)		32 Typ. [1.26"] 30 Typ. 1.18"] 0 14.5 [0.57"] 30 Typ. 1.18"]		
MQDC1-515RA	4.57 m (15 ft)				
MQDC1-530RA	9.14 m (30 ft)	Right-Angle		1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray	

8-Pin Threaded M12/Euro	-Style Cordsets with Open-	Shield		
Model	Length	Style	Dimensions	Pinout (Female)
MQDC2S-806	1.83 m (6 ft)			
MQDC2S-815	4.57 m (15 ft)		44 Typ	
MQDC2S-830	9.14 m (30 ft)	0 ,	M12 x 1 ø 14.5	
MQDC2S-850	15.2 m (50 ft)	Straight		$\begin{array}{c}2\\1\\7\\7\\\end{array}$
MQDC2S-806RA	1.83 m (6 ft)			6
MQDC2S-815RA	4.57 m (15 ft)		32 Тур	1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red
MQDC2S-830RA	9.14 m (30 ft)		[1.26"]	
MQDC2S-850RA	15.2 m (50 ft)	Right-Angle	30 Typ. [1.18"] φ 14.5 [0.57"]	

Mounting Brackets

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



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

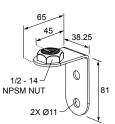
Hole center spacing: 20.0



LMBE12RA45

- Direct mounting of stand-off pipe, with ٠ 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		Black polycarbonate	0	
LMB30RAC	Direct-Mount Models: Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets.	Gray polycarbonate		
LMBE12RA	Pipe-Mount Models: Bracket kit with base, ½-14 pipe	Black polycarbonate	Q	
LMBE12RAC	adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).	Gray polycarbonate		

Elevated Mount System

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

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	1/2-14 NPSM 10 10 10 10 10 10 10 10 10 10 10 10 10			

Pipe Mounting Flange						
Model	Features	Construction				
SA-F12-3	 Elevated-use stand-off pipes (½ in, NPSM/DN15) M4 mounting hardware and nitrile blend gasket included 	Black Polycarbonate	1/2-14 NPSM			

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TL50B TL50BGYRAQ TL50BGYRAQP TL50BGYRQ TL50BQ TL50BYGRAOSIQ TL50GBYRALSQ TL50GBYRAQ TL50GQ TL50GRAOSIQ TL50GRAQ TL50GRYBQ TL50GYRA TL50GYRALSQ TL50GYRAOS4IQ TL50GYRAOSIQ TL50GYRAQ TL50GYRQ TL50RALSQ TL50RGQ TL50RQ TL50RYGAOSQ TL50WGYRQ TL50BALSQ TL50BAOS3Q TL50BAOS4IQ TL50BAOSCQ8 TL50BAOSIQ TL50BAQ TL50BBBAOSICQ TL50BBBBBAOS4Q TL50BBQP TL50BCQ TL50BGGYRALSQ TL50BGORACQ TL50BGBORQ TL50BGQ TL50BGR TL50BGRALS TL50BGRAOS4IQ TL50BGGYRALSQ TL50BGRAQ TL50BGRQ TL50BGRYA TL50BGRYAQ TL50BGRYQ TL50BGWRAOSQ TL50BGWRAQ TL50BGWRQ TL50BGWYRQ TL50BGYRA TL50BGYRA TL50BGYRA TL50BGYRAC TL50BGYRACQ TL50BGWRAQ TL50BGWRQ TL50BGYRALSQ TL50BGYRALSQ TL50BGYRAC TL50BGYRACQ TL50BGYRALS TL50BGYRALS3Q TL50BGYRALSCQ TL50BGYRALSQ TL50BGYRAQ TL50BGYRAQ TL50BGYRAOS3Q TL50BGYRAOSIQ TL50BGYRAOS3Q TL50BGYRAOS3Q TL50BGYRC TL50BGYRCQ TL50BGYROQ TL50BGYRAOS3Q TL50BGYRAOSIQ TL50BGYRAOS3Q TL50BGYRAOSQ TL50BGYRC TL50BGYRCQ TL50BGYROQ TL50BGYRAOS3Q TL50BGYRAOSIQ TL50BGYRAOS3Q TL50BGYRAOS3Q TL50BGYRC TL50BGYRQ TL50BGYRQ TL50BGYRAQ TL50BGYRAOSIQ TL50BGYRAOS3Q TL50BGYRAOS3Q TL50BGYRC TL50BGYRQ TL50BGYRQ TL50BGYRAQ TL50BGYRAOSIQ TL50BGYRAOS3Q TL50BGYRC TL50BGYRQ TL50BGYRQ TL50BGYRQP TL50BGYWALS TL50BGRAOS3Q TL50BGRA TL50BGYRQ TL50BORGYAQ TL50BGYRQ TL50BGYRAQ TL50BGYRAQ TL50BWBWBWQ TL50BRGALSQ TL50BROGACQ TL50BRQ TL50BRYGAQ TL50BRYGQ TL50BWBWBWQ TL50BWGRQ TL50BWGYRAQ TL50BWQ TL50BWRAOS4Q TL50BWYGRQ TL50BWYRAQ TL50BWGRQ TL50BWGYRAQ TL50BWYR TL50BWRAOS4Q TL50BWYGRQ TL50BWYRAQ