TL50BLZ Beacon Universal AC Voltage Tower Light

BANNER®
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Datasheet

Multi-Color General-Purpose or Audible Indicators

Standard Audible

Sealed Audible

Omni-Directional Sealed Audible

Standard

The TL50 Beacon Tower Light is a cross between the TL50 tower light and the K50 beacon. This compact design is extremely intense and can even be used in areas with high levels of ambient light.

- Rugged, cost-effective, and easy-to-install multi-segment indicators
- Illuminated segments provide easy-to-see operator guidance and indication of equipment status
- Displays up to 5 colors
- Steady on, flashing, and rotating 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
- 100 V ac to 240 V ac operation
- No assembly required

Non-Audible Models

Model [1]	# of LED Colors	LED Colors [2]	Connection[3]	Inputs
TL50BLZR	1	Red	4-wire PVC cable	100 V ac to 240 V ac
TL50BLZGR	2	Green, Red		
TL50BLZGYR	3	Green, Yellow, Red		
TL50BLZBGYR	4	Blue, Green, Yellow, Red	5-wire PVC cable	
TL50BLZWBGYR	5	White, Blue, Green, Yellow, Red	6-wire PVC cable	

Audible Models

Standard Audible Model [1]	# of LED Colors	LED Colors [2]	Connection[3]	Inputs
TL50BLZRA	1	Red	4-wire PVC cable	100 V ac to 240 V ac
TL50BLZGRA	2	Green, Red		
TL50BLZGYRA	3	Green, Yellow, Red	5-wire PVC cable	
TL50BLZBGYRA	4	Blue, Green, Yellow, Red	6-wire PVC cable	

Sealed Audible Model [1]			# of LED Colors	LED Colors [2]	Connection[3]	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50BLZRALS	TL50BLZRALS3	TL50BLZRALS4	1	Red	4-wire PVC cable	100 V ac to 240 V ac
TL50BLZGRALS	TL50BLZGRALS3	TL50BLZGRALS4	2	Green, Red		
TL50BLZGYRALS	TL50BLZGYRALS3	TL50BLZGYRALS4	3	Green, Yellow, Red	5-wire PVC cable	
TL50BLZBGYRALS	TL50BLZBGYRALS3	TL50BLZBGYRALS4	4	Blue, Green, Yellow, Red	6-wire PVC cable	

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[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 "QP" in 150 mm (6 in) PVC cable model numbers. For example, TL50BLZRC or TL50BLZRCQP.

[2] The first color listed is the bottom color, going up in successive order. Four color options are only available in audible cabled models. Five color options are only available in non-audible cabled models.

[3]
- To order the 150 mm (6 in) PVC cable model, add the suffix "QP" to the model number.
- Models with a quick disconnect require a mating cordset.

Omni-Directional Sealed Audible Model [1]			# of LED Colors	LED Colors [2]	Connection[3]	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50BLZRAOS	TL50BLZRAOS3	TL50BLZRAOS4	1	Red	4-wire PVC cable	100 V ac to 240 V ac
TL50BLZGRAOS	TL50BLZGRAOS3	TL50BLZGRAOS4	2	Green, Red		
TL50BLZGYRAOS	TL50BLZGYRAOS3	TL50BLZGYRAOS4	3	Green, Yellow, Red	5-wire PVC cable	
TL50BLZBGYRAOS	TL50BLZBGYRAOS3	TL50BLZBGYRAOS4	4	Blue, Green, Yellow, Red	6-wire PVC cable	

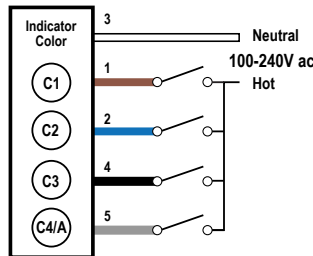| Omni-Directional Sealed Audible Model with Intensity Adjustment [1]			# of LED Colors	LED Colors [2]	Connection[3]	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50BLZRAOSI	TL50BLZRAOS3I	TL50BLZRAOS4I	1	Red	4-wire PVC cable	100 V ac to 240 V ac
TL50BLZGRAOSI	TL50BLZGRAOS3I	TL50BLZGRAOS4I	2	Green, Red		
TL50BLZGYRAOSI	TL50BLZGYRAOS3I	TL50BLZGYRAOS4I	3	Green, Yellow, Red	5-wire PVC cable	
TL50BLZBGYRAOSI	TL50BLZBGYRAOS3I	TL50BLZBGYRAOS4I	4	Blue, Green, Yellow, Red	6-wire PVC cable	

Note: See Banner Engineering catalog or *www.bannerengineering.com* for additional models and complete information.
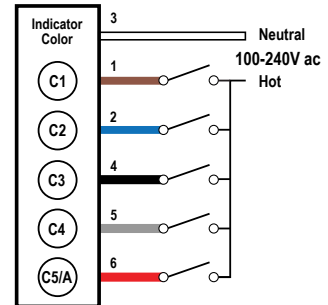
Wiring Diagrams

Models with 1 to 3 Segments 4-Wire
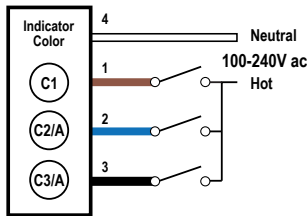
Models with 4 Segments 5-Wire

Models with 5 Segments 6-Wire

4-Wire Key:

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

C1 = Color 1
C2 = Color 2
C3 = Color 3
A = Audible

5-Wire Key:

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

C1 = Color 1
C2 = Color 2
C3 = Color 3
C4 = Color 4
A = Audible

6-Wire Key:

1 = Brown
2 = Blue
3 = White
4 = Black
5 = Gray
6 = Red

C1 = Color 1
C2 = Color 2
C3 = Color 3
C4 = Color 4
C5 = Color 5
A = Audible

Specifications

Supply Voltage and Current

100 V ac to 240 V ac at 50 Hz or 60 Hz
Indicators—maximum current per LED color:
- 55 mA at 100 V ac
- 50 mA at 120 V ac
- 35 mA at 240 V ac

Standard Audible Alarm: 30 mA maximum current
Sealed Audible Alarm: 30 mA maximum current
Omni-Directional Sealed Audible Alarm: 35 mA maximum current

Supply Protection Circuitry

Protected against transient voltages

Input Response Time

Indicator On/Off: 500 milliseconds maximum

Leakage Current Immunity

500 µA
Application Note: The use of relay output PLC is recommended since there is no leakage current. Solid state output PLCs often have leakage current above 1 mA and, therefore, turn the light on in the off state. To counteract the leakage current, a shunt resistor must be used. A resistor must be applied from the neutral wire of the device to the hot wire of each channel of the device.

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 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)
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

4-wire, 5-wire, or 6-wire 2 m (6.5 ft) integral cable; 4-pin or 5-pin 150 mm (6 in) PVC cable with a M12/Euro-style quick disconnect, 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)

Certifications

CE   c(UL)US LISTED

Indicators

LEDs are independently selected; 1 to 5 colors depending on model

Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Lumen Output (Typical at 25 °C)
Green	525 nm	52
Red	626 nm	24
Yellow	590 nm	15
Blue	470 nm	16
White	5000 K	56

Indicator Functions

A color designation followed by an LED option number, indicates the LED status. For example: TL50BLZR2Q, or TL50BLZG1RQ.

LED Option	LED Status	Rotation or Flash Rate
Blank	Steady On	–
1	Rotating	200 RPM ± 15%
2	Flashing	1.6 Hz rate ± 15%

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

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.
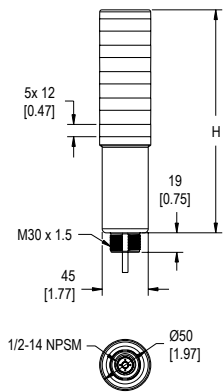Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
Supply wiring leads < 24 AWG shall not be spliced.
For additional product support, go to *www.bannerengineering.com*.

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
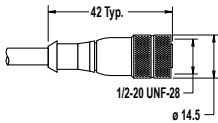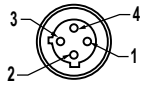
# of Colors	Tower Height (H)			
	Non-Audible	Standard Audible*	Sealed Audible	Omni-Directional Sealed Audible
1	115.2 mm (4.5 in)	146.1 mm 5.8 in)	169.2 mm (6.7 in)	183.2 mm (7.2 in)
2	141.0 mm (5.6 in)	171.9 mm (6.8 in)	195.0 mm (7.7 in)	209.0 mm (8.2 in)
3	166.8 mm (6.6 in)	197.7 mm (7.8 in)	220.8 mm (8.7 in)	234.8 mm (9.2 in)
4	192.6 mm (7.6 in)	223.5 mm (8.8 in)	246.6 mm (9.7 in)	260.6 mm (10.3 in)
5	218.4 mm (8.6 in)	-	-	-
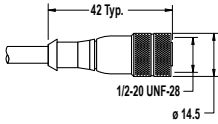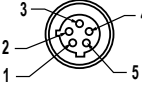
* Tower height (H) with top unscrewed approximately 3.5 mm to allow sound to escape

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

Accessories

Cordsets

4-Pin Micro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQAC2-406	1.83 m (6 ft)	Straight		 1 = Brown 2 = Blue 3 = Black 4 = White
MQAC2-415	4.57 m (15 ft)			
MQAC2-430	9.14 m (30 ft)			

5-Pin Micro-Style Cordsets				
Model	Length	Style	Dimensions	Pinout
MQAC2-506	1.83 m (6 ft)	Straight		 1 = Brown 2 = Blue 3 = White 4 = Black 5 = Gray
MQAC2-515	4.57 m (15 ft)			
MQAC2-530	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
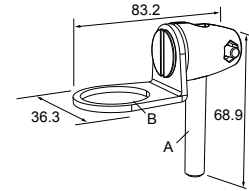- 12-ga. stainless steel
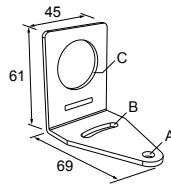
Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

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
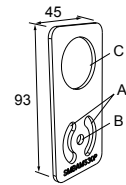- Mounting hole for 30 mm sensor
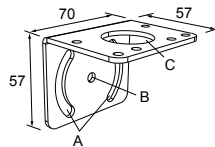
Hole center spacing: A = 51, A to B = 25.4
Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

SMBAMS30P
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
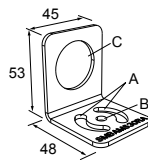- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel

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
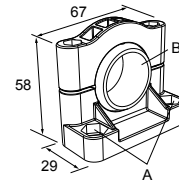- 12-ga. (2.6 mm) cold-rolled steel

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
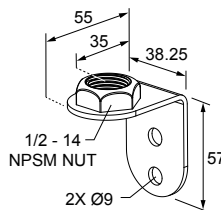- Stainless steel mounting and swivel locking hardware included

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

1/2 - 14 NPSM NUT

2X Ø9

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
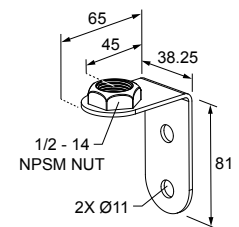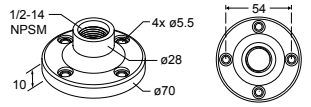
Hole center spacing: 35.0

1/2 - 14 NPSM NUT

2X Ø11
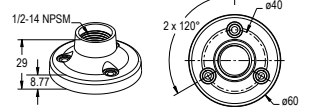
LMB Sealed Right-Angle Bracket

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

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**	• 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	
SOP-E12-150SS 150 mm (6 in) long	SOP-E12-150A 150 mm (6 in) long	SOP-E12-150AC 150 mm (6 in) long		
SOP-E12-300SS 300 mm (12 in) long	SOP-E12-300A 300 mm (12 in) long	SOP-E12-300AC 300 mm (12 in) long		
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 SA-E12M30C - White UHMW			• Streamlined black acetal 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	

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	

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  TL50BLZB1   TL50BLZB1ALS3QP   TL50BLZB1AOS4I   TL50BLZB1B1B1B1   TL50BLZB1G1   TL50BLZB1G1W1Y1R1
TL50BLZB1GRAOS   TL50BLZB1R1Y1Y1   TL50BLZB1RY1W1G   TL50BLZB1Y1R1AOS4   TL50BLZB1Y1R1QP
TL50BLZB1YRQP   TL50BLZB2   TL50BLZB2AOS3C   TL50BLZB2B2B2B2   TL50BLZB2C   TL50BLZB2Y2G2R2
TL50BLZB2Y2R1ALS4   TL50BLZB2Y2R2AOS3   TL50BLZB2Y2R2AOS4I   TL50BLZBALS3QP   TL50BLZBGYR
TL50BLZBGYRALS   TL50BLZBGYRALS3   TL50BLZBGYRAOS3I   TL50BLZBGYRAOS4I   TL50BLZBQP   TL50BLZBR
TL50BLZBR2   TL50BLZBYRAOS3I   TL50BLZG   TL50BLZG1   TL50BLZG1R1ALS4   TL50BLZG1R1QP
TL50BLZG1R2ALS3   TL50BLZG1RAOSI   TL50BLZG1Y1R1   TL50BLZG1Y1R1QP   TL50BLZG2   TL50BLZG2AOS4
TL50BLZG2R2C   TL50BLZG2Y2R2   TL50BLZG2Y2R2ALS4C   TL50BLZG2YR1AOS   TL50BLZGBY
TL50BLZGBY1R2AC   TL50BLZGBY2YR1   TL50BLZGG   TL50BLZGGRR   TL50BLZGR   TL50BLZGR1
TL50BLZGR1AOS3   TL50BLZGR2   TL50BLZGR2ALSQP   TL50BLZGR2AOS   TL50BLZGR2AOS3I
TL50BLZGR2AOS4   TL50BLZGR2B1AOS3   TL50BLZGR2CQP   TL50BLZGR2QP   TL50BLZGRAOS
TL50BLZGRAOS3I   TL50BLZGRQP   TL50BLZGW   TL50BLZGY1R1   TL50BLZGY2   TL50BLZGY2ALS3QP
TL50BLZGY2QP   TL50BLZGY2R1ALS3   TL50BLZGY2R1AOS3   TL50BLZGY2R2AOS4IQP   TL50BLZGY2R2C
TL50BLZGY2R2QP   TL50BLZGY2RQP   TL50BLZGYBAOS   TL50BLZGYR   TL50BLZGYR1   TL50BLZGYR2AOS3
TL50BLZGYR2C   TL50BLZGYRA   TL50BLZGYRALS   TL50BLZGYRALS3   TL50BLZGYRALSQP   TL50BLZGYRAOS
TL50BLZGYRAOS3   TL50BLZGYRAOS3I   TL50BLZGYRAOSI   TL50BLZGYRAOSQP   TL50BLZGYRB
TL50BLZGYRCQP   TL50BLZGYRQP   TL50BLZR   TL50BLZR1   TL50BLZR1ALS   TL50BLZR1ALS3
TL50BLZR1ALS3QP   TL50BLZR1AOS   TL50BLZR1AOS4   TL50BLZR1B1G1   TL50BLZR1GCQP