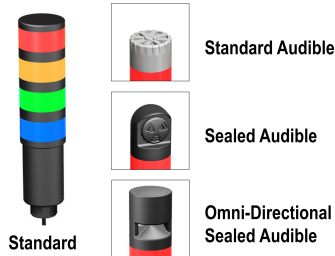


EZ-LIGHT® TL50 Universal AC Voltage Tower Light



Datasheet

Multi-Color General-Purpose or Audible Indicators



- 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
- Available in black or light gray housing
- Audible models available with standard, sealed, or omni-directional audible element
- Compact devices are completely self-contained - no controller needed
- 85 to 264 V ac operation
- No assembly required

Non-Audible Models

Model ¹	# of LED Colors	LED Function ²	Connection ³	Inputs
TL50ZR	1	Red	4-wire PVC cable	85-264 V ac
TL50ZGR	2	Green, Red		
TL50ZGYR	3	Green, Yellow, Red		
TL50ZBGYR	4	Blue, Green, Yellow, Red	5-wire PVC cable	
TL50ZWBGYR	5	White, Blue, Green, Yellow, Red	6-wire PVC cable	



NOTE: Audible Models are listed on the next page.

For additional models and colors, visit Banner Engineering website at www.bannerengineering.com.

¹ Cabled Black models only are listed. For gray housing, add suffix C at the end of the model number (cabled models) or before the QP (pigtail models), for example, TL50ZRC or TL50ZRCQP.
² The first color listed is the bottom color, going up in successive order. Contact the factory for other colors and color combinations. Five color options are only available in non-audible cabled models. Four color options are only available in audible cabled models.
³ Cabled models only are listed; mating cordset required for pigtail models (see [Cordsets](#) on page 4). For 150 mm (5.9 in) PVC pigtail with QD, add QP to the end of the model number, for example, TL50ZRQP.



Audible Models

Standard Audible Models ⁴		# of LED Colors	LED Function ⁵		Connection ⁶	Inputs
TL50ZRA		1	Red		4-wire PVC cable	85-264 V ac
TL50ZGRA		2	Green, Red			
TL50ZGYRA		3	Green, Yellow, Red		5-wire PVC cable	
TL50ZBGYRA		4	Blue, Green, Yellow, Red		6-wire PVC cable	
Sealed Audible Models ⁴			# of LED Colors	LED Function ⁵	Connection ⁶	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50ZRALS	TL50ZRALS3	TL50ZRALS4	1	Red	4-wire PVC cable	85-264 V ac
TL50ZGRALS	TL50ZGRALS3	TL50ZGRALS4	2	Green, Red		
TL50ZGYRALS	TL50ZGYRALS3	TL50ZGYRALS4	3	Green, Yellow, Red	5-wire PVC cable	
TL50ZBGRALS	TL50ZBGRALS3	TL50ZBGRALS4	4	Blue, Green, Yellow, Red	6-wire PVC cable	
Omni-Directional Sealed Audible Models ⁴			# of LED Colors	LED Function ⁵	Connection ⁶	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50ZRAOS	TL50ZRAOS3	TL50ZRAOS4	1	Red	4-wire PVC cable	85-264 V ac
TL50ZGRAOS	TL50ZGRAOS3	TL50ZGRAOS4	2	Green, Red		
TL50ZGYRAOS	TL50ZGYRAOS3	TL50ZGYRAOS4	3	Green, Yellow, Red	5-wire PVC cable	
TL50ZBGYRAOS	TL50ZBGYRAOS3	TL50ZBGYRAOS4	4	Blue, Green, Yellow, Red	6-wire PVC cable	
Omni-Directional Sealed Audible Models with Intensity Adjustment ⁴			# of LED Colors	LED Function ⁵	Connection ⁶	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50ZRAOSI	TL50ZRAOS3I	TL50ZRAOS4I	1	Red	4-wire PVC cable	85-264 V ac
TL50ZGRAOSI	TL50ZGRAOS3I	TL50ZGRAOS4I	2	Green, Red		
TL50ZGYRAOSI	TL50ZGYRAOS3I	TL50ZGYRAOS4I	3	Green, Yellow, Red	5-wire PVC cable	
TL50ZBGYRAOSI	TL50ZBGYRAOS3I	TL50ZBGYRAOS4I	4	Blue, Green, Yellow, Red	6-wire PVC cable	

⁴ Cabled Black models only are listed. For gray housing, add suffix C at the end of the model number (cabled models) or before the QP (pigtail models), for example, TL50ZRC or TL50ZRCQP.

⁵ The first color listed is the bottom color, going up in successive order. Contact the factory for other colors and color combinations. Five color options are only available in non-audible cabled models. Four color options are only available in audible cabled models.

⁶ Cabled models only are listed; mating cordset required for pigtail models (see [Cordsets](#) on page 4). For 150 mm (5.9 in) PVC pigtail with QD, add QP to the end of the model number, for example, TL50ZRQP.

Specifications

Supply Voltage and Current

85 - 264 V ac; 50 or 60 Hz

Indicators: Max. current per LED color:

- at 85 V ac: 35 mA
- at 120 V ac: 30 mA
- at 240 V ac: 20 mA
- at 264 V ac: 18 mA

Standard Audible Alarm: 30 mA max. current

Sealed Audible Alarm: 35 mA max. current

Omni-Directional Sealed Audible Alarm: 45 mA max. current

Indicators

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

Supply Protection Circuitry:

Protected against reverse polarity and transient voltages

Input Response Time

Indicator On/Off: 500 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 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.

Leakage Current Immunity

500µA

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 1mA 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.

Vibration and Mechanical Shock:

All models meet Mil. Std. 202F requirements method 201A (vibration: 10 to 60 Hz max., double amplitude 0.06 in, maximum acceleration 10G). Also meets IEC 947-5-2; 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)

Max. Rel. Humidity: 95% at 50 °C (non-condensing)

Audible Alarm

Standard Audible Alarm: 2.7 KHz ± 500 Hz oscillation frequency; max. intensity 92 db at 1 m (3.3 ft) (typical)

Sealed Audible Alarm: 2.9 KHz ± 250 Hz oscillation frequency; max. intensity 94 db at 1 m (3.3 ft) (typical)

Omni-Directional Sealed Audible Alarm: 2.1 KHz ± 250 Hz oscillation frequency; max intensity 99 db at 1m (3.3 ft) (typical)

Omni-Directional Sealed Audible Alarm with Intensity Adjustment: 2.1 KHz ± 250 Hz oscillation frequency; max intensity 95 dB at 1m (3.3 ft) (typical)

Construction:

Bases and Covers: ABS

Light Segment: Polycarbonate

Connections

4-wire, 5-wire, or 6-wire 2m (6.5 ft) integral cable; 4-pin or 5-pin 150 mm (5.9 in) PVC pigtail with QD, depending on model

Environmental Rating

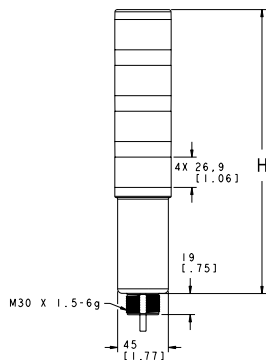
Non-Audible and Sealed Audible: IEC IP67

Standard Audible: IEC IP50

Certifications



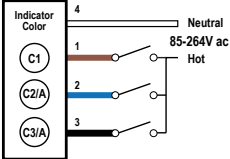
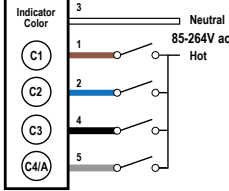
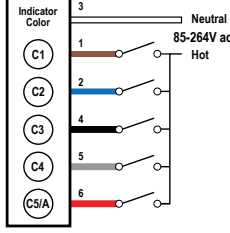
Dimensions



# of Colors	Tower Height (H)			
	Non-Audible	Standard Audible*	Sealed Audible	Omni-Directional Sealed Audible
1	130.2 mm (5.1 in)	161.0 mm (6.3 in)	184.1 mm (7.2 in)	198.1 mm (7.8 in)
2	170.9 mm (6.7 in)	201.7 mm (7.9 in)	224.8 mm (8.9 in)	238.8 mm (9.4 in)
3	211.6 mm (8.3 in)	242.4 mm (9.5 in)	265.5 mm (10.5 in)	279.5 mm (11.0 in)
4	252.3 mm (9.9 in)	283.1 mm (11.1 in)	306.2 mm (12.1 in)	320.2 mm (12.6 in)
5	293.0 mm (11.5 in)	-	-	-

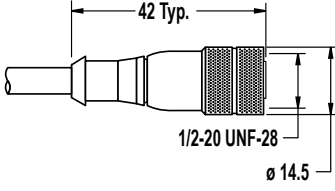
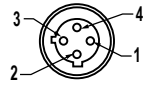
* Tower height (H) with top unscrewed approximately 3.5 mm to allow sound to escape

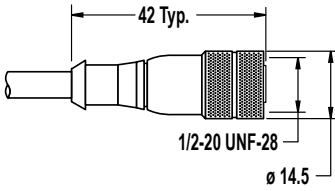
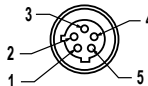
Wiring Diagram

4-wire	5-wire	6-wire
 <p>1 = Brown 2 = Blue 3 = Black 4 = White</p> <p>C1 = Color 1 C2 = Color 2 C3 = Color 3 A = Audible</p>	 <p>1 = Brown 2 = Blue 3 = White 4 = Black 5 = Gray</p> <p>C1 = Color 1 C2 = Color 2 C3 = Color 3 C4 = Color 4 A = Audible</p>	 <p>1 = Brown 2 = Blue 3 = White 4 = Black 5 = Gray 6 = Red</p> <p>C1 = Color 1 C2 = Color 2 C3 = Color 3 C4 = Color 4 C5 = Color 5 A = Audible</p>

Accessories

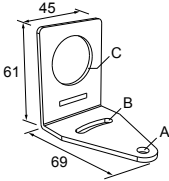
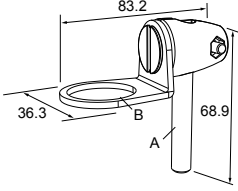
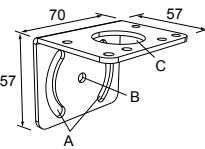
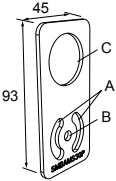
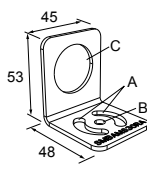
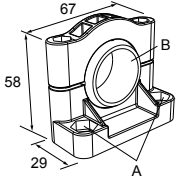
Cordsets

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

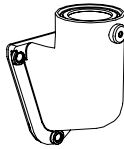

5-Pin Micro-Style Cordsets				
Model	Length	Style	Dimensions	Pinout
MQAC2-506	1.83 m (6 ft)	Straight		 <p>1 = Brown 2 = Blue 3 = White 4 = Black 5 = Gray</p>
MQAC2-515	4.57 m (15 ft)			
MQAC2-530	9.14 m (30 ft)			

Mounting Brackets




All measurements are in mm

<p>SMB30A</p> <ul style="list-style-type: none"> 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  <p>Hole center spacing: A to B=40 Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5</p>	<p>SMB30FA</p> <ul style="list-style-type: none"> 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  <p>Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50 Hole size: B= ø 30.1</p>
<p>SMB30MM</p> <ul style="list-style-type: none"> 12-ga. stainless steel bracket with curved mounting slots for versatile orientation Clearance for M6 (¼ in) hardware Mounting hole for 30 mm sensor  <p>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</p>	<p>SMBAMS30P</p> <ul style="list-style-type: none"> Flat SMBAMS series bracket 30 mm hole for mounting sensors Articulation slots for 90° + rotation 12-ga. 300 series stainless steel  <p>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</p>
<p>SMBAMS30RA</p> <ul style="list-style-type: none"> Right-angle SMBAMS series bracket 30 mm hole for mounting sensors Articulation slots for 90° + rotation 12-ga. (2.6 mm) cold-rolled steel  <p>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</p>	<p>SMB30SC</p> <ul style="list-style-type: none"> Swivel bracket with 30 mm mounting hole for sensor Black reinforced thermoplastic polyester Stainless steel mounting and swivel locking hardware included  <p>Hole center spacing: A=ø 50.8 Hole size: A=ø 7.0, B=ø 30.0</p>

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	

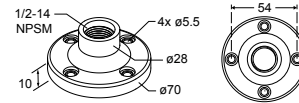
Elevated Mount System

Model			Features	Components
SA-M30TE12 - Black Acetal			<ul style="list-style-type: none"> 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 	
SA-M30TE12C - White UHMW				
Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum	<ul style="list-style-type: none"> 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			<ul style="list-style-type: none"> 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 	
SA-E12M30C - White UHMW				

Pipe Mounting Flange

SA-F12

- Die-cast zinc base with black paint
- For use elevated stand-off pipes (½ in, NPSM/DN15)
- M5 mounting hardware and nitrile gasket included



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Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

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