EZ-LIGHT® TL50 High Brightness Tower Light

Datasheet

Multi-Color General-Purpose or Audible Indicators



- Similar in design and construction to standard TL50 Tower Lights, but more than 4 times brighter, improving visibility 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
- 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
- 18 to 30 V dc or 24 V ac operation
- No assembly required

Non-Audible Models

Model[1]	# of LED Colors	LED Function[2]	Connection[3]	Inputs
TL50HRQ	1	Red	4-pin Euro integral QD connector	Bimodal (NPN or PNP)
TL50HGRQ	2	Green, Red		
TL50HGYRQ	3	Green, Yellow, Red		
TL50HBGYRQ	4	Blue, Green, Yellow, Red	5-pin Euro integral QD connector	
TL50HWBGYRQ	5	White, Blue, Green, Yellow, Red	8-pin Euro integral QD connector	

NOTE: Audible Models are listed on the next page.

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

1 Models with black housing are listed. For gray housing, add suffix C at the end of the model number (cabled models) or before the Q (QD models), for example, TL50HRC or TL50HRCQ.
2 The first color listed is the bottom color, going up in successive order. Contact the factory for other colors and color combinations
3 Integral QD models only are listed; mating cordset required (see *Cordsets* on page 5).
- For 150 mm (5.9 in) PVC pigtail with QD, replace Q with QP in the model number, for example, TL50HRQP.
- For 2 m (6.5 ft) cable, omit suffix Q from the model number, for example, TL50HR.

Audible Models

Standard Audible Models[4]	# of LED Colors	LED Function[5]	Connection[6]	Inputs
TL50HRAQ	1	Red	4-pin Euro integral QD connector	Bimodal (NPN or PNP)
TL50HGRAQ	2	Green, Red		
TL50HGYRAQ	3	Green, Yellow, Red	5-pin Euro integral QD connector	
TL50HBGYRAQ	4	Blue, Green, Yellow, Red	8-pin Euro integral QD connector	

Sealed Audible Models[4]			# of LED Colors	LED Function[5]	Connection[6]	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50HRALSQ	TL50HRALS3Q	TL50HRALS4Q	1	Red	4-pin Euro integral QD connector	Bimodal (NPN or PNP)
TL50HGRALSQ	TL50HGRALS3Q	TL50HGRALS4Q	2	Green, Red		
TL50HGYRALSQ	TL50HGYRALS3Q	TL50HGYRALS4Q	3	Green, Yellow, Red	5-pin Euro integral QD connector	
TL50HBGYRALSQ	TL50HBGYRALS3Q	TL50HBGYRALS4Q	4	Blue, Green, Yellow, Red	8-pin Euro integral QD connector	

Omni-Directional Sealed Audible Models[4]			# of LED Colors	LED Function[5]	Connection[6]	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato				
TL50HRAOSQ	TL50HRAOS3Q	TL50HRAOS4Q	1	Red	4-pin Euro integral QD connector	Bimodal (NPN or PNP)
TL50HGRAOSQ	TL50HGRAOS3Q	TL50HGRAOS4Q	2	Green, Red		
TL50HGYRAOSQ	TL50HGYRAOS3Q	TL50HGYRAOS4Q	3	Green, Yellow, Red	5-pin Euro integral QD connector	
TL50HBGYRAOSQ	TL50HBGYRAOS3Q	TL50HBGYRAOS4Q	4	Blue, Green, Yellow, Red	8-pin Euro integral QD connector	

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				
TL50HRAOSIQ	TL50HRAOS3IQ	TL50HRAOS4IQ	1	Red	4-pin Euro integral QD connector	Bimodal (NPN or PNP)
TL50HGRAOSIQ	TL50HGRAOS3IQ	TL50HGRAOS4IQ	2	Green, Red		
TL50HGYRAOSIQ	TL50HGYRAOS3IQ	TL50HGYRAOS4IQ	3	Green, Yellow, Red	5-pin Euro integral QD connector	
TL50HBGYRAOSIQ	TL50HBGYRAOS3IQ	TL50HBGYRAOS4IQ	4	Blue, Green, Yellow, Red	8-pin Euro integral QD connector	

[4] Models with black housing are listed. For gray housing, add suffix C at the end of the model number (cabled models) or before the Q (QD models), for example, TL50HRC or TL50HRCQ.
[5] The first color listed is the bottom color, going up in successive order. Contact the factory for other colors and color combinations
[6] Integral QD models only are listed; mating cordset required (see *Cordsets* on page 5).

- For 150 mm (5.9 in) PVC pigtail with QD, replace Q with QP in the model number, for example, TL50HRQP.
- For 2 m (6.5 ft) cable, omit suffix Q from the model number, for example, TL50HR.

Specifications

Supply Voltage and Current
18 to 30V dc (10% max. ripple); or 21 to 27 V ac
Indicators - max. current per LED color:
· at 18V dc: 100 mA
· at 30V dc: 60 mA
· at 21V ac: 80 mA
· at 27V ac: 70 mA
Standard Audible Alarm: 25 mA max. current
Sealed Audible Alarm: 35 mA max. current
Omni-Directional Sealed Audible Alarm: 45 mA max. current

Indicators
1 to 5 colors; Green, Red, Yellow, Blue, White;
LEDs are independently selected

Supply Protection Circuitry:
Protected against reverse polarity and transient voltages

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 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.

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.

Connections
Integral 4-pin, 5-pin, or 8-pin M12/Euro-style QD, 150 mm (5.9 in) PVC pigtail with QD, or 2 m (6.5 ft) integral cable, depending on model

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 50º C (non-condensing)

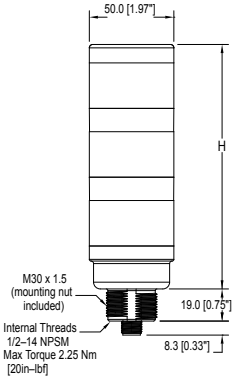
Audible Alarm
Standard Audible Alarm: 2.7 KHz ± 500 Hz oscillation frequency; max. intensity 92 db at 1 m (3.3 ft) (typical)
Sealed Audible Alarm: 2.9 KHz ± 250 Hz oscillation frequency; max. intensity 94 db at 1 m (3.3 ft) (typical)
Omni-Directional Sealed Audible Alarm: 2.1 KHz ± 250 Hz oscillation 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

Environmental Rating
Non-Audible and Sealed Audibles: IEC IP67
Standard Audible:IEC IP50

Certifications

CE c UL us LISTED

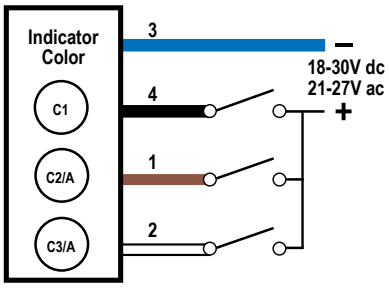


# of Colors	Tower Height (H)			
	Non-Audible	Standard Audible*	Sealed Audible	Omni-Directional Sealed Audible
1	61.2 mm (2.4 in)	92.0 mm (3.6 in)	115.1 mm (4.5 in)	129.1 mm (5.1 in)
2	101.9 mm (4.0 in)	132.7 mm (5.2 in)	155.8 mm (6.1 in)	169.8 mm (6.7 in)
3	142.6 mm (5.6 in)	173.4 mm (6.8 in)	196.5 mm (7.7 in)	210.5 mm (8.3 in)
4	183.3 mm (7.2 in)	214.1 mm (8.4 in)	237.2 mm (9.3 in)	251.2 mm (9.9 in)
5	224.0 mm (8.8 in)	-	-	-

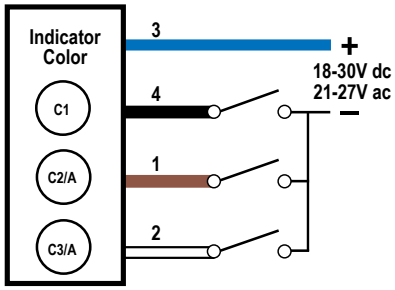
* Tower height (H) with top unscrewed approximately 3.5 mm to allow sound to escape

Wiring Diagram – 4-Pin Models

Sourcing (PNP) Input



Sinking (NPN) Input



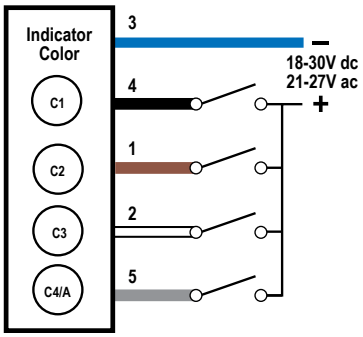
Key:

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

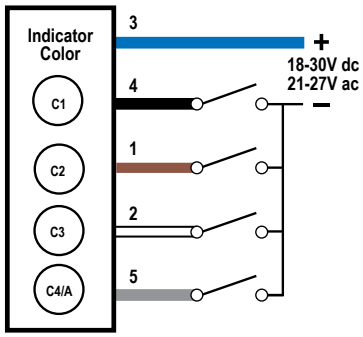
Pins 1 and 2 can activate the corresponding color or the audible function, if available.

Wiring Diagram – 5-Pin Models

Sourcing (PNP) Input



Sinking (NPN) Input



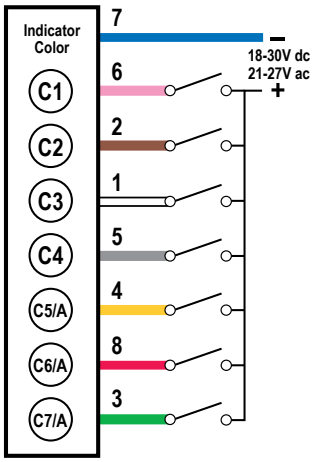
Key:

1 = Brown	C1 = Color 1
2 = White	C2 = Color 2
3 = Blue	C3 = Color 3
4 = Black	C4 = Color 4
5 = Gray	A = Audible

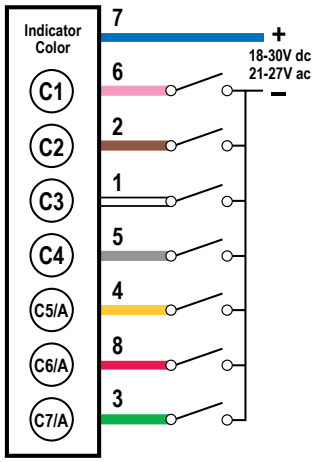
Pin 5 can activate the corresponding color or the audible function, if available.

Wiring Diagram – 8-Pin Models

Sourcing (PNP) Input



Sinking (NPN) Input



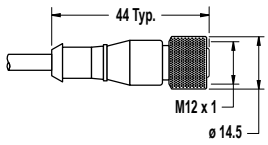
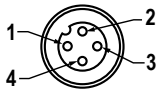
Key:

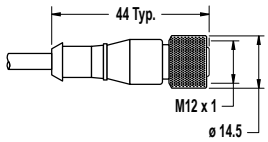
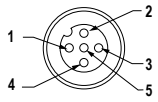
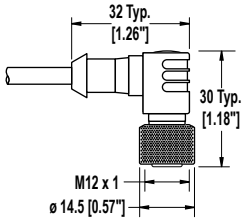
1 = White	C1 = Color 1
2 = Brown	C2 = Color 2
3 = Green	C3 = Color 3
4 = Yellow	C4 = Color 4
5 = Gray	C5 = Color 5
6 = Pink	C6 = Color 6
7 = Blue	C7 = Color 7
8 = Red	A = Audible

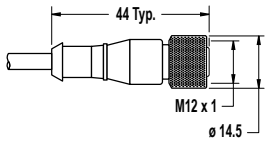
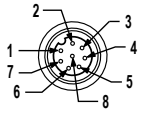
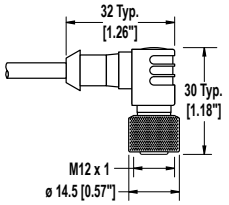
Pins 3, 4 and 8 can activate the corresponding color or the audible function, if available.

Accessories

Cordsets

4-Pin Threaded M12/Euro-Style Cordsets				
Model	Length	Style	Dimensions	Pinout
MQDC-406	1.83 m (6 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			
MQDC-450	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		 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
MQDC1-506	1.83 m (6 ft)			
MQDC1-515	4.57 m (15 ft)			
MQDC1-530	9.14 m (30 ft)			
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

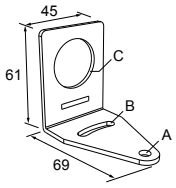
8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield				
Model	Length	Style	Dimensions	Pinout
MQDC2S-806	1.83 m (6 ft)	Straight		 1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red
MQDC2S-815	4.57 m (15 ft)			
MQDC2S-830	9.14 m (30 ft)			
MQDC2S-850	15.2 m (50 ft)			
MQDC2S-806RA	1.83 m (6 ft)	Right-Angle		
MQDC2S-815RA	4.57 m (15 ft)			
MQDC2S-830RA	9.14 m (30 ft)			
MQDC2S-850RA	15.2 m (50 ft)			

Mounting Brackets

All measurements are in mm

SMB30A

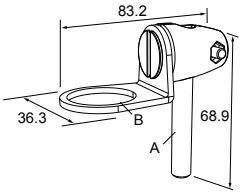
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



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

SMB30FA

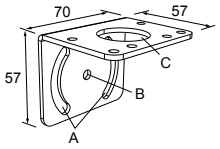
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



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

SMB30MM

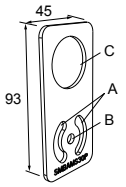
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



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

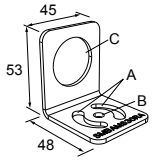
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel



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

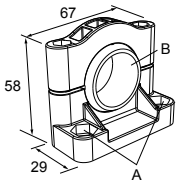
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



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

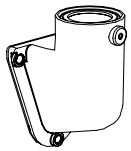
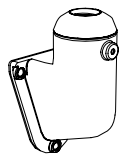
SMB30SC

- 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

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	

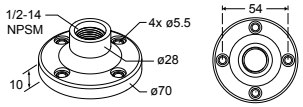
Elevated Mount System

<table>
<tr><th colspan="3">Model</th><th>Features</th><th>Components</th></tr>
<tr><td colspan="3">SA-M30TE12 - Black Acetal</td><td rowspan="2">• 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</td><td rowspan="2"></td></tr>
<tr><td colspan="3">SA-M30TE12C - White UHMW</td></tr>
<tr><td>Polished 304 Stainless Steel</td><td>Black Anodized Aluminum</td><td>Clear Anodized Aluminum</td><td rowspan="4">• 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</td><td rowspan="4"></td></tr>
<tr><td>SOP-E12-150SS
150 mm (6 in) long</td><td>SOP-E12-150A
150 mm (6 in) long</td><td>SOP-E12-150AC
150 mm (6 in) long</td></tr>
<tr><td>SOP-E12-300SS
300 mm (12 in) long</td><td>SOP-E12-300A
300 mm (12 in) long</td><td>SOP-E12-300AC
300 mm (12 in) long</td></tr>
<tr><td>SOP-E12-900SS
900 mm (36 in) long</td><td>SOP-E12-900A
900 mm (36 in) long</td><td>SOP-E12-900AC
900 mm (36 in) long</td></tr>
<tr><td colspan="3">SA-E12M30 - Black Acetal</td><td rowspan="2">• 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</td><td rowspan="2"></td></tr>
<tr><td colspan="3">SA-E12M30C - White UHMW</td></tr>
</table>

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



Banner Engineering Corp. Limited Warranty

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