

TL30 Basic Tower Light



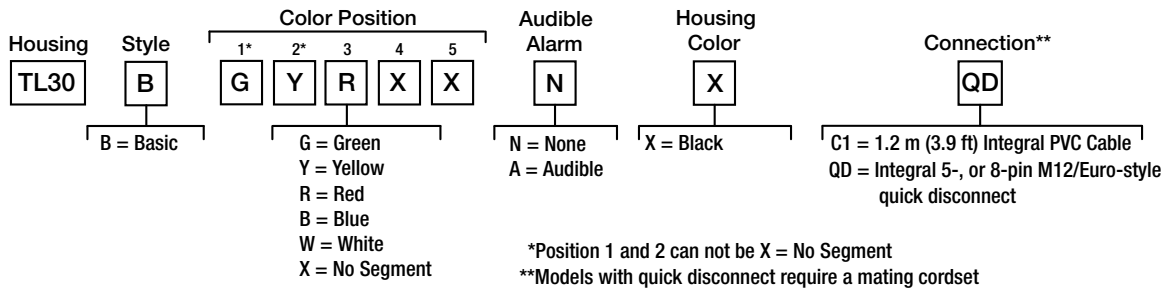
Datasheet

30 mm Multi-Color General-Purpose or Audible Indicators



- Rugged, affordable, and easy-to-install multi-segment indicators
- Compact 30 mm diameter
- Illuminated segments provide easy-to-see operator guidance and indication of equipment status
- Uniform indicator segments appear gray when off to eliminate false indication from ambient light
- Models with 2, 3, 4, and 5 color segments plus audible
- 12 V dc to 30 V dc operation
- No assembly required, mounting nut and gasket supplied

Models



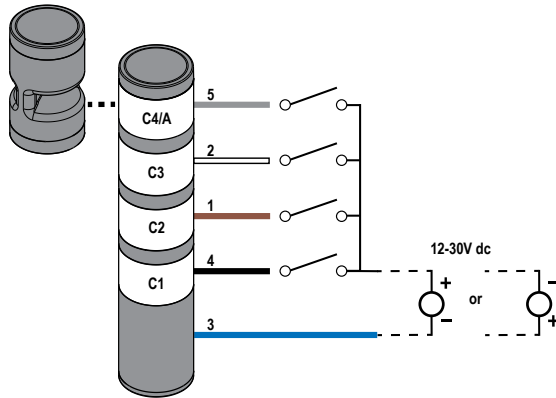
Wiring Diagrams



Note: All models are bimodal and can be wired as PNP or NPN devices.



5-Pin/Wire Models



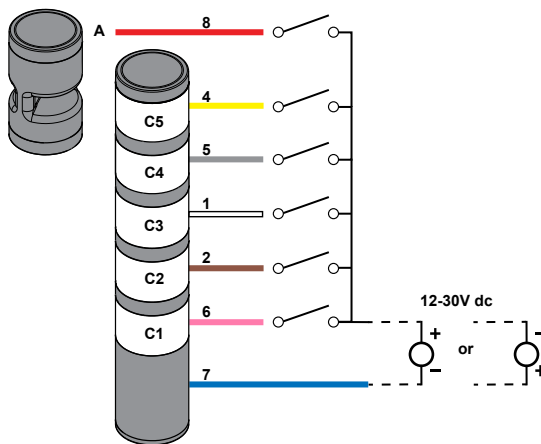
Key

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

Pin 5 (Gray wire) activates the corresponding color or the audible function, if available.

2 and 3 segment models only require associated wires to be connected.

8-Pin / 7-Wire Models



Key

- 1 = White
- 2 = Brown
- 3 = Green (Not Used)
- 4 = Yellow
- 5 = Gray
- 6 = Pink
- 7 = Blue
- 8 = Red
- C1 = Color 1
- C2 = Color 2
- C3 = Color 3
- C4 = Color 4
- C5 = Color 5
- A = Audible

Green wire not used.

Specifications

Supply Voltage and Current

- 12 V dc to 30 V dc
- Maximum current per LED segment: 40 mA
- Omni-Directional Sealed Audible Alarm:** 20 mA maximum current

Supply Protection Circuitry

Protected against transient voltages

Input Leakage Current Immunity

400 μ A¹

Audible Alarm

Omni-Directional Sealed Audible Alarm: 2.8 kHz \pm 500 Hz oscillation frequency, maximum intensity 90 dB at 1 m (3.3 ft) (typical)

Operating Conditions

- 40 °C to +50 °C (-40 °F to +122 °F)
- 90% maximum relative humidity (non-condensing)
- Storage Temperature: -40 °C to +70 °C (-40 °F to +158 °F)

Environmental Rating

All Models:

- IEC IP65
- UL Type 4X when mounted in a suitable enclosure

Non-Audible: UL Type 13 when mounted in a suitable enclosure

Indicators

LEDs are independently selected; 2 to 5 colors depending on model

Indicator Response Time

Indicator On/Off: 1 millisecond maximum

Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates ²		Lumen Output (Typical at 25 °C)
		x	y	
Green	524 nm	0.160	0.708	7.5
Red	620 nm	0.690	0.308	2.5
Yellow	592 nm	0.582	0.413	6.5
Blue	468 nm	0.136	0.062	2.0
White	5500K	0.332	0.360	7.5

¹ Any current above this value may activate the TL30.

² Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.

Construction

Base, Segments and Audible: UV stabilized polycarbonate
Grommet: TPV
Mounting Nut: PBT
Sealing Gasket: PVC/NBR/CR

Mounting

M22 x 1.5 threaded base, maximum torque 2.25 N-m (20 in-lbf)
 Mounting nut and sealing gasket included

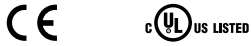
Connections

Integral 5-pin, or 8-pin M12/Euro-style quick disconnect, or 1.2 m (3.9 ft) integral PVC cable, depending on model
 Models with a quick disconnect require a mating cordset

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)
 IK07 (EN 60068-2-75 with SMBAMS22RA bracket)

Certifications



Required Overcurrent Protection

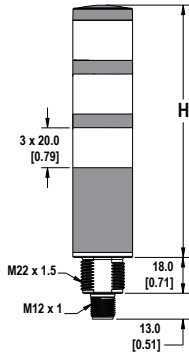


WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

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	Omni-Directional Sealed Audible
2	99.7 mm (3.9 in)	145.6 mm (5.7 in)
3	126.7 mm (5.0 in)	172.6 mm (6.8 in)
4	153.7 mm (6.0 in)	199.6 mm (7.9 in)
5	180.7 mm (7.1 in)	226.6 mm (8.9 in)

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

Accessories

Cordsets

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		<p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray</p>
MQDC1-506	1.83 m (6 ft)			
MQDC1-515	4.57 m (15 ft)			
MQDC1-530	9.14 m (30 ft)			

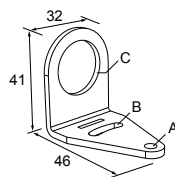
5-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

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

Brackets

SMB22A

- Right-angle bracket with curved slot for versatile orientation
- 12-ga. stainless steel
- Mounting hole for 22 mm sensor

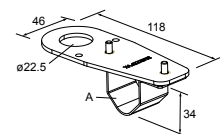


Hole center spacing: A to B = 26.0

Hole size: A = ø 4.6, B = 4.6 x 16.9, C = 22.2

SMB22FVK

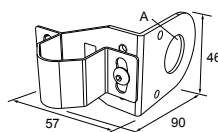
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



Hole size: A = ø 22.5

SMB22RAVK

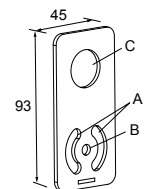
- V-clamp, right-angle bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



Hole size: A = ø 22.5

SMBAMS22P

- Flat SMBAMS series bracket with 22 mm hole for mounting sensors
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

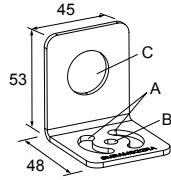


Hole center spacing: A = 26.0, A to B = 13.0

Hole size: A = 26.8 x 7.0, B = ø 6.5, C = ø 22.5

SMBAMS22RA

- Right-angle SMBAMS series bracket with 22 mm hole for mounting sensors
- Articulation slots for 90+° rotation
- 12-ga. (2.6 mm) cold-rolled steel

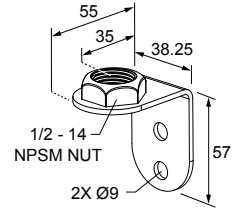


Hole center spacing: A = 26.0, A to B = 13.0

Hole size: A = 26.8 x 7.0, B = ø 6.5, C = ø 22.5

LMBE12RA35

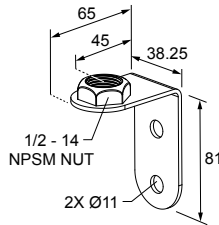
- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 35 mm



Hole center spacing: 20.0

LMBE12RA45

- Direct mounting of stand-off pipe, with 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	
LMBE12RA	Pipe-Mount Models: Bracket kit with base, 1/2-14 pipe adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).	Black polycarbonate	

Elevated Mount System

Model	Features			Components
SA-M22E12 - Black Polycarbonate	<ul style="list-style-type: none"> • Streamlined black polycarbonate stand-off pipe adapter/cover • Connects between 22 mm light base and 1/2 in. NPSM/DN15 pipe 			
Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum	<ul style="list-style-type: none"> • Elevated-use stand-off pipe (1/2 in. NPSM/DN15) • Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface • 1/2 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 mounting base adapter/cover • Connects between 1/2 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	<ul style="list-style-type: none"> Elevated-use stand-off pipes (1/2 in, NPSM/DN15) M5 mounting hardware and nitrile gasket included 	Die-cast zinc base with black paint	
SA-F12-3	<ul style="list-style-type: none"> Elevated-use stand-off pipes (1/2 in, NPSM/DN15) M4 mounting hardware and nitrile blend gasket included 	Black Polycarbonate	

Foldable Mounting Bracket

Foldable Mounting Brackets			
Model	Features	Construction	
SA-FFB12	<ul style="list-style-type: none"> For use with 1/2 inch stand-off pipes Stainless steel hardware 	Black polycarbonate	

Banner Engineering Corp. Limited Warranty

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.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to:

www.bannerengineering.com.

For patent information, see www.bannerengineering.com/patents.