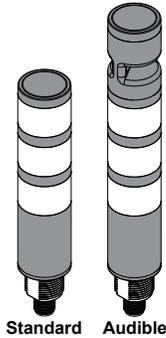


# TL30 Basic Tower Light



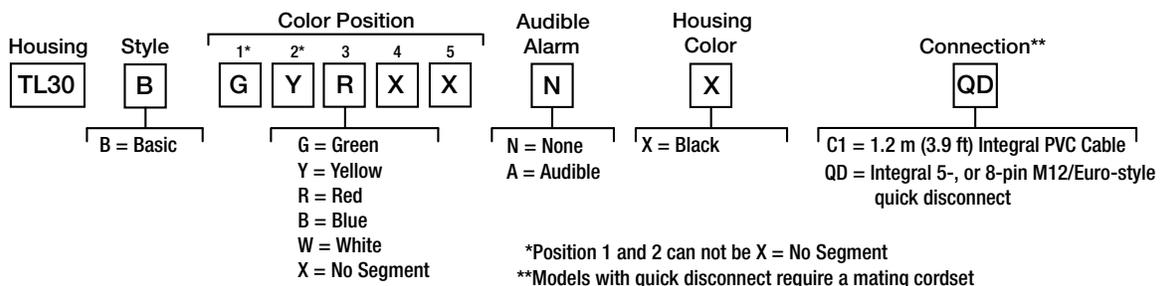
## Datasheet

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

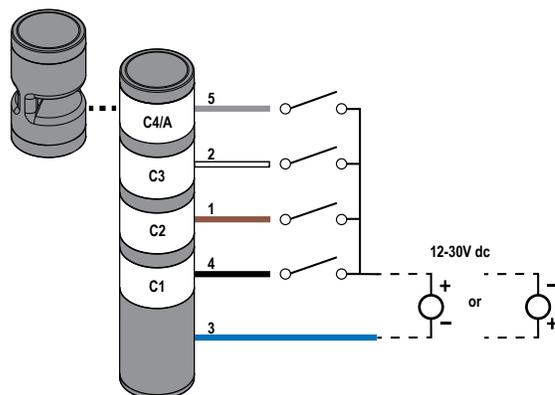


## Wiring Diagrams



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

### 5-Pin/Wire Models



### Key

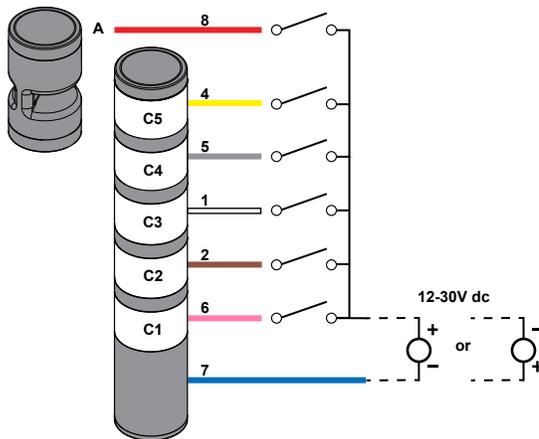
- 1 = Brown
- 2 = White
- 3 = Blue
- 4 = Black
- 5 = Gray
- C1 = Color 1
- C2 = Color 2
- C3 = Color 3
- C4 = Color 4
- A = Audible

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  $\mu$ A<sup>1</sup>

### 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

### Construction

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

### Mounting

- M22  $\times$  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



### 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 <sup>2</sup>		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

### Required Overcurrent Protection



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

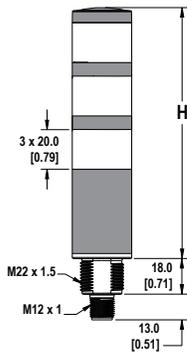
Overcurrent protection is required to be provided by end product application per the supplied table. Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply. Supply wiring leads < 24 AWG shall not be spliced. For additional product support, go to [www.bannerengineering.com](http://www.bannerengineering.com).

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

<sup>1</sup> Any current above this value may activate the TL30.

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

## 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)			
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

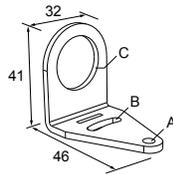
8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC2S-806	1.83 m (6 ft)	Straight		<p>1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red</p>
MQDC2S-815	4.57 m (15 ft)			
MQDC2S-830	9.14 m (30 ft)			
MQDC2S-850	15.2 m (50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

8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield				
Model	Length	Style	Dimensions	Pinout (Female)
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)			

## Brackets

### SMB22A

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

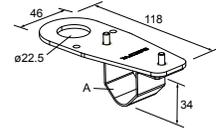


Hole center spacing: A to B = 26.0

Hole size: A =  $\phi$  4.6, B = 4.6 x 16.9, C = 22.2

### SMB22FVK

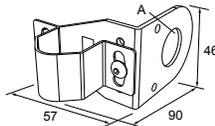
- V-clamp, flat bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



Hole size: A =  $\phi$  22.5

### SMB22RAVK

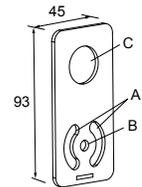
- V-clamp, right-angle bracket and fasteners for mounting to pipe or extensions
- Clamp accommodates 28 mm diameter tubing or 1 in. square extrusions
- 22 mm hole for mounting sensor



Hole size: A =  $\phi$  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

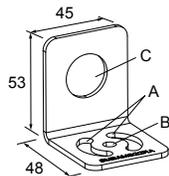


Hole center spacing: A = 26.0, A to B = 13.0

Hole size: A = 26.8 x 7.0, B =  $\phi$  6.5, C =  $\phi$  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 =  $\phi$  6.5, C =  $\phi$  22.5

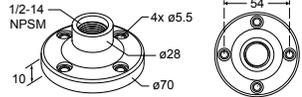
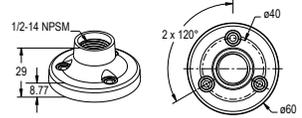
## LMB Sealed Right-Angle Bracket

Model	Description	Construction	
LMBE12RA	<b>Pipe-Mount Models:</b> 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	

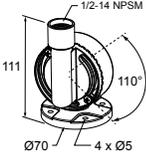
## Elevated Mount System

Model			Features	Components
<b>SA-M22E12</b> - Black Polycarbonate			<ul style="list-style-type: none"> <li>Streamlined black polycarbonate stand-off pipe adapter/cover</li> <li>Connects between 22 mm light base and ½ in. NPSM/DN15 pipe</li> </ul>	
<b>Polished 304 Stainless Steel</b>	<b>Black Anodized Aluminum</b>	<b>Clear Anodized Aluminum</b>	<ul style="list-style-type: none"> <li>Elevated-use stand-off pipe (½ in. NPSM/DN15)</li> <li>Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface</li> <li>½ in. NPT thread at both ends</li> <li>Compatible with most industrial environments</li> </ul>	
<b>SOP-E12-150SS</b> 150 mm (6 in) long	<b>SOP-E12-150A</b> 150 mm (6 in) long	<b>SOP-E12-150AC</b> 150 mm (6 in) long		
<b>SOP-E12-300SS</b> 300 mm (12 in) long	<b>SOP-E12-300A</b> 300 mm (12 in) long	<b>SOP-E12-300AC</b> 300 mm (12 in) long		
<b>SOP-E12-900SS</b> 900 mm (36 in) long	<b>SOP-E12-900A</b> 900 mm (36 in) long	<b>SOP-E12-900AC</b> 900 mm (36 in) long		
<b>SA-E12M30</b> - Black Acetal			<ul style="list-style-type: none"> <li>Streamlined black acetal mounting base adapter/cover</li> <li>Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole</li> <li>Mounting hardware included</li> </ul>	

## Pipe Mounting Flange

Pipe Mounting Flange			
Model	Features	Construction	
<b>SA-F12</b>	<ul style="list-style-type: none"> <li>Elevated-use stand-off pipes (½ in, NPSM/DN15)</li> <li>M5 mounting hardware and nitrile gasket included</li> </ul>	Die-cast zinc base with black paint	
<b>SA-F12-3</b>	<ul style="list-style-type: none"> <li>Elevated-use stand-off pipes (½ in, NPSM/DN15)</li> <li>M4 mounting hardware and nitrile blend gasket included</li> </ul>	Black Polycarbonate	

## Foldable Mounting Bracket

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

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