

# TL50BL Beacon Tower Light



## Datasheet

Compact Beacon Tower Light



Standard Audible



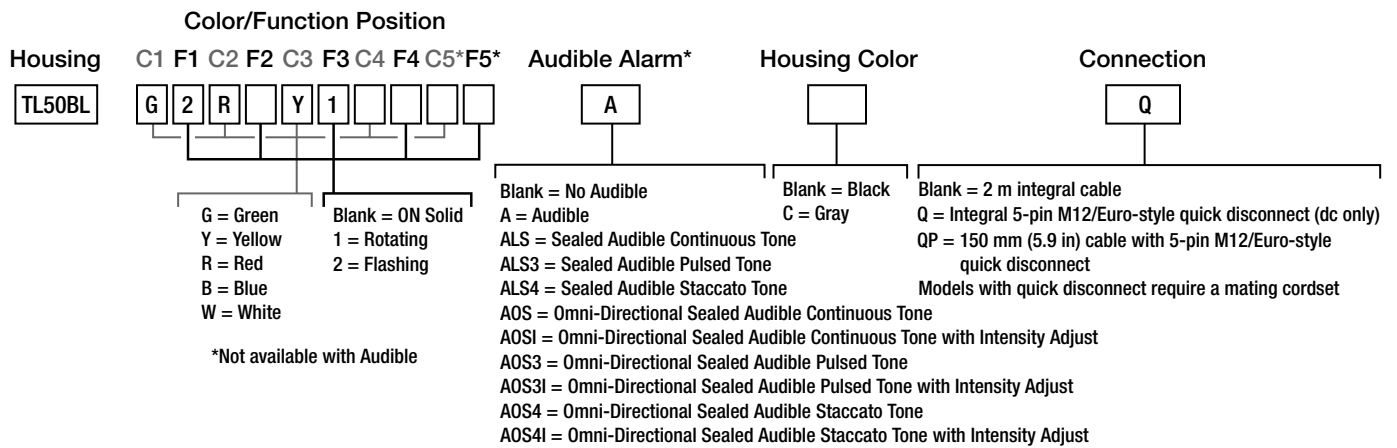
Sealed Audible



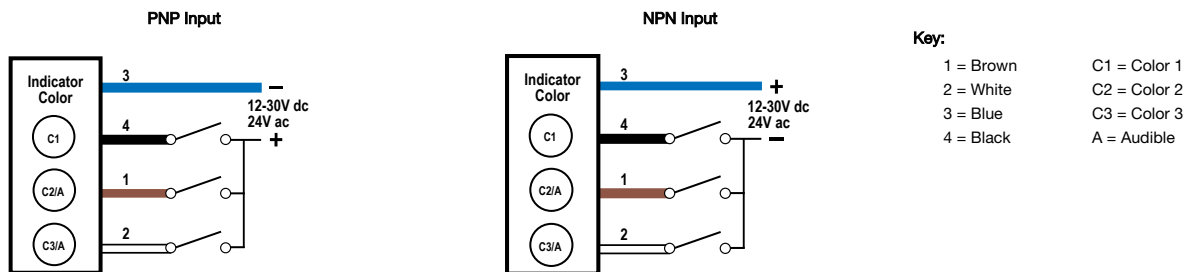
Omni-Directional Sealed Audible

- 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
- Audible models available with standard, sealed, or omni-directional audible element
- Available in black or light gray housing
- Continuous, pulsed, and staccato tones available
- 12 V dc to 30 V dc or 24 V ac operation
- No assembly required

## Models



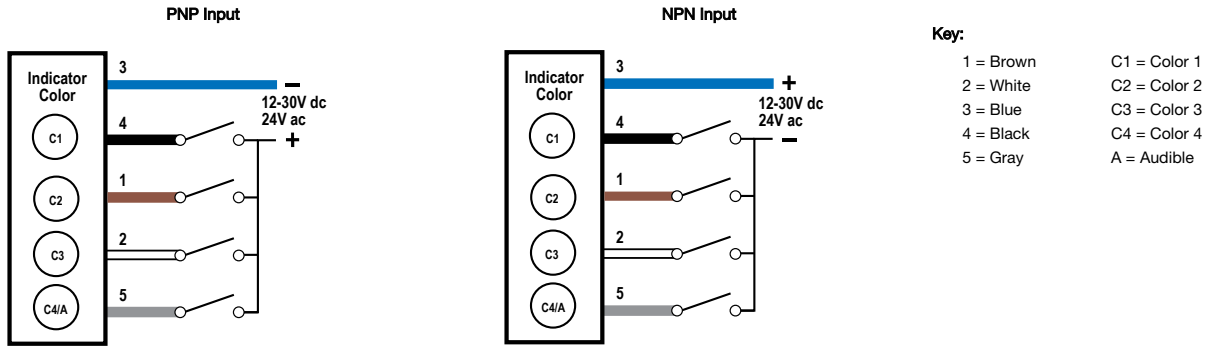
## Wiring Diagrams — 4-Pin Models with 1 to 3 Segments



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

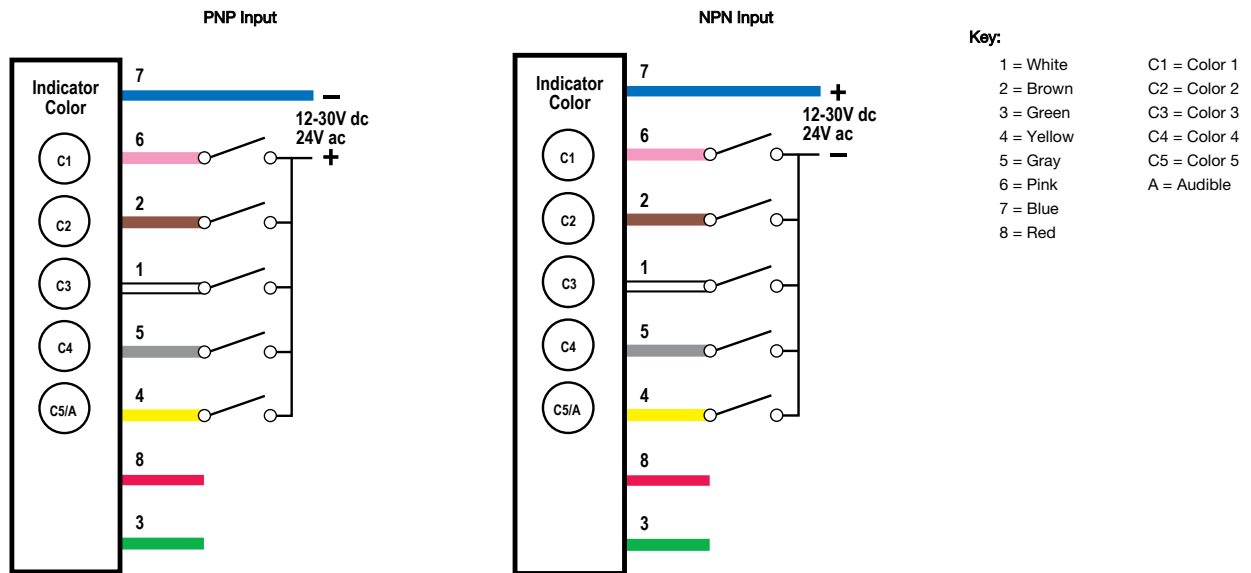


## Wiring Diagrams — 5-Pin Models with 4 Segments



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

## Wiring Diagrams — 8-Pin Models with 5 Segments



Pin 4 could activate the corresponding color or the audible function, if available. Pins 3 and 8 are not used.

## Specifications

### Supply Voltage and Current

12 V dc to 30 V dc; or 24 V ac ( $\pm 3$  V) at 50 Hz to 60 Hz

#### Indicators—maximum current per LED color:

- 125 mA at 12 V dc
- 60 mA at 30 V dc
- 75 mA at 24 V ac

**Standard Audible Alarm:** 25 mA maximum current

**Sealed Audible Alarm:** 35 mA maximum current

**Omni-Directional Sealed Audible Alarm:** 45 mA maximum current

Use only with a suitable Class 2 power supply or transformer

### Supply Protection Circuitry

Protected against transient voltages

### Input Response Time

Indicator On/Off: 1 millisecond maximum

### Audible Alarm

**Standard Audible Alarm:** 2.7 kHz  $\pm$  500 Hz oscillation frequency; maximum intensity 92 dB at 1 m (3.3 ft) (typical)

**Sealed Audible Alarm:** 2.9 kHz  $\pm$  250 Hz oscillation frequency; maximum intensity 94 dB at 1 m (3.3 ft) (typical)

**Omni-Directional Sealed Audible Alarm:** 2.1 kHz  $\pm$  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  $\pm$  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

Integral 4-pin, 5-pin, or 8-pin M12/Euro-style quick disconnect, 150 mm (6 in) PVC cable with a M12/Euro-style quick disconnect, or 2 m (6.5 ft) integral PVC cable, 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



### Indicators

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

### Indicator Functions

A color designation followed by an LED option number, indicates the LED status. For example: TL50BLR2Q or TL50BLG1AQ.

LED Option	LED Status	Rotation or Flash Rate
Blank	Steady On	—
1	Rotating	200 RPM $\pm$ 15%
2	Flashing	1.6 Hz rate $\pm$ 15%

### 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

### 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.

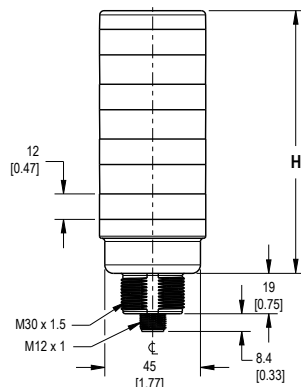
Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to [www.bannerengineering.com](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

## Dimensions



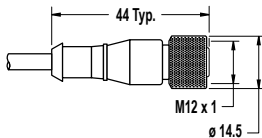
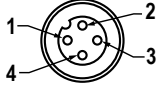
# of Colors	Tower Height (H)			
	Non-Audible	Standard Audible*	Sealed Audible	Omni-Directional Sealed Audible
1	46.2 mm (1.8 in)	77.1 mm (3.1 in)	100.2 mm (4.0 in)	114.2 mm (4.5 in)
2	72.0 mm (2.8 in)	102.9 mm (4.1 in)	126.0 mm (5.0 in)	140.0 mm (5.5 in)
3	97.8 mm (3.8 in)	128.7 mm (5.1 in)	151.8 mm (6.0 in)	165.8 mm (6.5 in)
4	123.6 mm (4.8 in)	154.5 mm (6.1 in)	177.6 mm (7.0 in)	191.6 mm (7.5 in)
5	149.4 mm (5.8 in)	-	-	-

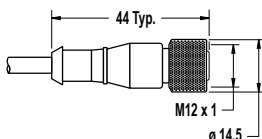
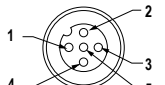
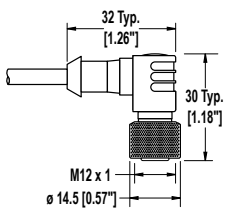
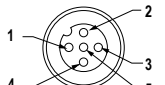
\* Tower height (H) with top unscrewed approximately 3.5 mm to allow sound to escape

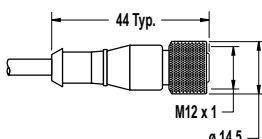
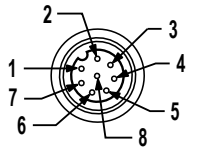
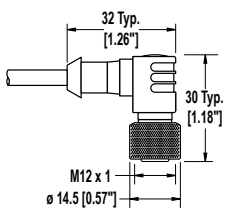
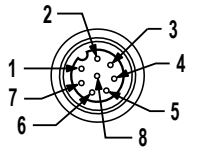
All measurements are listed in millimeters [inches], unless noted otherwise.

Accessories

Cordsets

4-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	1.83 m (6 ft)	Straight		 <p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
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		 <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		 <p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray</p>
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

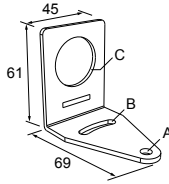
8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC2S-806	1.83 m (6 ft)	Straight		 <p>1 = White 2 = Brown 3 = Green 4 = Yellow 5 = Gray 6 = Pink 7 = Blue 8 = Red</p>
MQDC2S-815	4.57 m (15 ft)			
MQDC2S-830	9.14 m (30 ft)			
MQDC2S-850	15.2 m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

### SMB30A

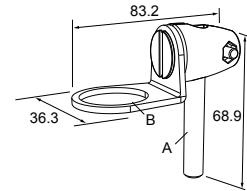
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



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

### SMB30FA

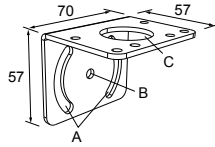
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



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

### SMB30MM

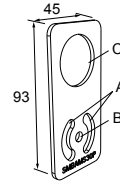
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



**Hole center spacing:** A= 51, A to B= 25.4  
**Hole size:** A= 42.6 x 7, B= ø 6.4, C= ø 31.0

### SMBAMS30P

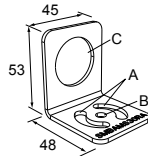
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel



**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

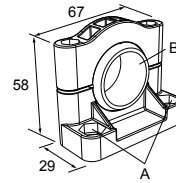
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



**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

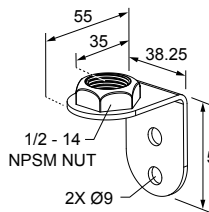


**Hole center spacing:** A=ø 50.8  
**Hole size:** A=ø 7.0, B=ø 30.0

### 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

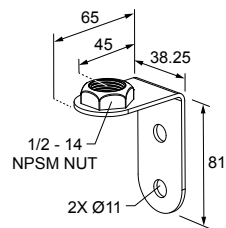
Hole center spacing: 20.0



### 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



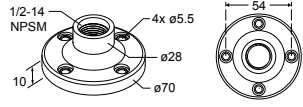
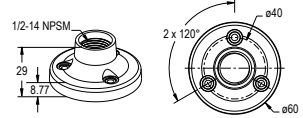
## LMB Sealed Right-Angle Bracket

Model	Description	Construction	
LMB30RA	<b>Direct-Mount Models:</b> Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets.	Black polycarbonate	
LMB30RAC		Gray polycarbonate	
LMBE12RA	<b>Pipe-Mount Models:</b> 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"> <li>Streamlined black acetal or white UHMW stand-off pipe adapter/cover</li> <li>Connects between 30 mm light base and ½ in. NPSM/DN15 pipe</li> <li>Mounting hardware included</li> </ul>															
SA-M30TE12C - White UHMW																
<table border="1"> <tr> <th>Polished 304 Stainless Steel</th> <th>Black Anodized Aluminum</th> <th>Clear Anodized Aluminum</th> </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> </table>	Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum	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	<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>			
Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum														
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"> <li>Streamlined black acetal or white UHMW 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>															
SA-E12M30C - White UHMW																

## Pipe Mounting Flange

Pipe Mounting Flange			
Model	Features	Construction	
SA-F12	<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	
SA-F12-3	<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	

## 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.

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For patent information, see [www.bannerengineering.com/patents](http://www.bannerengineering.com/patents).

## FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.