Datasheet

Compact Beacon Tower 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
- 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

<table>
<thead>
<tr>
<th>Housing</th>
<th>Audible Alarm*</th>
<th>Housing Color</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>TL50BL</td>
<td>A</td>
<td>Q</td>
<td>Q</td>
</tr>
</tbody>
</table>

G = Green
Y = Yellow
R = Red
B = Blue
W = White
Blank = ON Solid
1 = Rotating
2 = Flashing

ALS = Sealed Audible Continuous Tone
ALS3 = Sealed Audible Pulsed Tone
ALS4 = Sealed Audible Staccato Tone
AOS = Omni-Directional Sealed Audible Continuous Tone
AOSI = Omni-Directional Sealed Audible Continuous Tone with Intensity Adjust
AOS3 = Omni-Directional Sealed Audible Pulsed Tone
AOS3I = Omni-Directional Sealed Audible Pulsed Tone with Intensity Adjust
AOS4 = Omni-Directional Sealed Audible Staccato Tone
AOS4I = Omni-Directional Sealed Audible Staccato Tone with Intensity Adjust

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

PNP Input

<table>
<thead>
<tr>
<th>Indicator Color</th>
<th>Color</th>
<th>12-30 V dc</th>
<th>24 V ac</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2A</td>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3A</td>
<td>Blue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NPN Input

<table>
<thead>
<tr>
<th>Indicator Color</th>
<th>Color</th>
<th>12-30 V dc</th>
<th>24 V ac</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2A</td>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>Blue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3A</td>
<td>Black</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key:

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

Pins 1 and 2 could activate the corresponding color or the audible function, if available.
Wiring Diagrams — 5-Pin Models with 4 Segments

PNP Input

- Indicator Color
  - C1
  - C2
  - C3
  - C4
  - CA

12-30V dc
24V ac

NPN Input

- Indicator Color
  - C1
  - C2
  - C3
  - C4
  - CA

12-30V dc
24V ac

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

Wiring Diagrams — 8-Pin Models with 5 Segments

PNP Input

- Indicator Color
  - C1
  - C2
  - C3
  - C4
  - C5
  - CA

12-30V dc
24V ac

NPN Input

- Indicator Color
  - C1
  - C2
  - C3
  - C4
  - C5
  - CA

12-30V dc
24V ac

Key:

1 = White
2 = Brown
3 = Green
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

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 (± 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 ± 50 Hz oscillation frequency; maximum intensity 92 dB at 1 m (3.3 ft) (typical)
Sealed Audible Alarm: 2.1 kHz ± 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 ± 250 Hz oscillation frequency; maximum intensity 90 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

Certifications
UL Type 4X Indoor and UL Type 13
Non-Audible and Sealed Audible: IEC IP67
Standard Audible: IEC IP50

Required Overcurrent Protection

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.

<table>
<thead>
<tr>
<th>Supply Wiring (AWG)</th>
<th>Required Overcurrent Protection (Amps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>5.0</td>
</tr>
<tr>
<td>22</td>
<td>3.0</td>
</tr>
<tr>
<td>24</td>
<td>2.0</td>
</tr>
<tr>
<td>26</td>
<td>1.0</td>
</tr>
<tr>
<td>28</td>
<td>0.8</td>
</tr>
<tr>
<td>30</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Dimensions

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

### Cordsets

#### 4-Pin Threaded M12/Euro-Style Cordsets — Single Ended

<table>
<thead>
<tr>
<th>Model</th>
<th>Length</th>
<th>Style</th>
<th>Dimensions</th>
<th>Pinout (Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQDC-406</td>
<td>1.83 m (6 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC-415</td>
<td>4.57 m (15 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC-430</td>
<td>9.14 m (30 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC-450</td>
<td>15.2 m (50 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![4-Pin Cordset Diagram]

1 = Brown
2 = White
3 = Blue
4 = Black

#### 5-Pin Threaded M12/Euro-Style Cordsets — Single Ended

<table>
<thead>
<tr>
<th>Model</th>
<th>Length</th>
<th>Style</th>
<th>Dimensions</th>
<th>Pinout (Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQDC1-501.5</td>
<td>0.50 m (1.5 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-506</td>
<td>1.83 m (6 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-515</td>
<td>4.57 m (15 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-530</td>
<td>9.14 m (30 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-506RA</td>
<td>1.83 m (6 ft)</td>
<td>Right-Angle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-515RA</td>
<td>4.57 m (15 ft)</td>
<td>Right-Angle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-530RA</td>
<td>9.14 m (30 ft)</td>
<td>Right-Angle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![5-Pin Cordset Diagram (Straight)]

1 = Brown
2 = White
3 = Blue
4 = Black
5 = Gray

![5-Pin Cordset Diagram (Right-Angle)]

1 = Brown
2 = White
3 = Blue
4 = Black
5 = Gray

#### 8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield

<table>
<thead>
<tr>
<th>Model</th>
<th>Length</th>
<th>Style</th>
<th>Dimensions</th>
<th>Pinout (Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQDC2S-806</td>
<td>1.83 m (6 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC2S-815</td>
<td>4.57 m (15 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC2S-830</td>
<td>9.14 m (30 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC2S-850</td>
<td>15.2 m (50 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC2S-806RA</td>
<td>1.83 m (6 ft)</td>
<td>Right-Angle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC2S-815RA</td>
<td>4.57 m (15 ft)</td>
<td>Right-Angle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC2S-830RA</td>
<td>9.14 m (30 ft)</td>
<td>Right-Angle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC2S-850RA</td>
<td>15.2 m (50 ft)</td>
<td>Right-Angle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![8-Pin Cordset Diagram (Straight)]

1 = White
2 = Brown
3 = Green
4 = Yellow
5 = Gray
6 = Pink
7 = Blue
8 = Red

![8-Pin Cordset Diagram (Right-Angle)]

1 = White
2 = Brown
3 = Green
4 = Yellow
5 = Gray
6 = Pink
7 = Blue
8 = Red
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= ø 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 = ø 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

**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

**SMBAMS30SC**
- 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

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMB30RA</td>
<td>Direct-Mount Models: Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets.</td>
<td>Black polycarbonate</td>
</tr>
<tr>
<td>LMB30RAC</td>
<td>Pipe-Mount Models: Bracket kit with base, 1½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).</td>
<td>Gray polycarbonate</td>
</tr>
<tr>
<td>LMBE12RA</td>
<td>Pipe-Mount Models: Bracket kit with base, 1½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).</td>
<td>Black polycarbonate</td>
</tr>
<tr>
<td>LMBE12RAC</td>
<td>Pipe-Mount Models: Bracket kit with base, 1½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).</td>
<td>Gray polycarbonate</td>
</tr>
</tbody>
</table>
Elevated Mount System

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA-M30TE12 - Black Acetal</td>
<td>• Streamlined black acetal or white UHMW stand-off pipe adapter/cover</td>
<td></td>
</tr>
<tr>
<td>SA-M30TE12C - White UHMW</td>
<td>• Connects between 30 mm light base and ½ in. NPSM/DN15 pipe</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mounting hardware included</td>
<td></td>
</tr>
</tbody>
</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 |

Pipe Mounting Flange

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA-F12</td>
<td>• Elevated-use stand-off pipes (½ in, NPSM/ DN15) • M5 mounting hardware and nitrile gasket included</td>
<td>Die-cast zinc base with black paint</td>
</tr>
<tr>
<td>SA-F12-3</td>
<td>• Elevated-use stand-off pipes (½ in, NPSM/ DN15) • M4 mounting hardware and nitrile blend gasket included</td>
<td>Black Polycarbonate</td>
</tr>
</tbody>
</table>

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.

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:

1. This device may not cause harmful interference, and
2. 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.