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

Housing Style Color Position Audible Alarm Housing Color Connection**
TL30 B G Y R X X N X QD
B = Basic G = Green Y = Yellow R = Red B = Blue W = White X = No Segment N = None A = Audible X = Black
C1 = 1.2 m (3.9 ft) Integral PVC Cable QD = Integral 5-, or 8-pin M12/Euro-style quick disconnect

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

Supplement Protection Circuitry
Protected against transient voltages

Input Leakage Current Immunity
400 µA

Audible Alarm
Omni-Directional Sealed Audible Alarm: 2.8 kHz ± 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

<table>
<thead>
<tr>
<th>Color</th>
<th>Dominant Wavelength (nm) or Color Temperature (CCT)</th>
<th>Color Coordinates</th>
<th>Lumen Output (Typical at 25 °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>524 nm</td>
<td>0.160</td>
<td>0.708</td>
</tr>
<tr>
<td>Red</td>
<td>620 nm</td>
<td>0.690</td>
<td>0.368</td>
</tr>
<tr>
<td>Yellow</td>
<td>592 nm</td>
<td>0.582</td>
<td>0.413</td>
</tr>
<tr>
<td>Blue</td>
<td>468 nm</td>
<td>0.136</td>
<td>0.062</td>
</tr>
<tr>
<td>White</td>
<td>5500K</td>
<td>0.332</td>
<td>0.360</td>
</tr>
</tbody>
</table>

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 × 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

Dimensions

Required Overcurrent Protection

<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>

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.

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) |       |             |               |
| MQDC1-506                         | 1.83 m (6 ft)   |       |             |               |
| MQDC1-515                         | 4.57 m (15 ft)  |       |             |               |
| MQDC1-530                         | 9.14 m (30 ft)  |       |             |               |

All measurements are listed in millimeters [inches], unless noted otherwise.
### 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>MQDC1-506RA</td>
<td>1.83 m (6 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-515RA</td>
<td>4.57 m (15 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MQDC1-530RA</td>
<td>9.14 m (30 ft)</td>
<td>Right-Angle</td>
<td>ø 14.5</td>
<td>M12 x 1</td>
</tr>
</tbody>
</table>

### 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>Straight</td>
<td>ø 22.5</td>
<td>1 = White</td>
</tr>
<tr>
<td>MQDC2S-815</td>
<td>4.57 m (15 ft)</td>
<td></td>
<td></td>
<td>2 = Brown</td>
</tr>
<tr>
<td>MQDC2S-830</td>
<td>9.14 m (30 ft)</td>
<td></td>
<td></td>
<td>3 = Green</td>
</tr>
<tr>
<td>MQDC2S-850</td>
<td>15.2 m (50 ft)</td>
<td></td>
<td></td>
<td>4 = Yellow</td>
</tr>
<tr>
<td>MQDC2S-806RA</td>
<td>1.83 m (6 ft)</td>
<td>Right-Angle</td>
<td>ø 14.5</td>
<td>M12 x 1</td>
</tr>
<tr>
<td>MQDC2S-815RA</td>
<td>4.57 m (15 ft)</td>
<td></td>
<td></td>
<td>5 = Gray</td>
</tr>
<tr>
<td>MQDC2S-830RA</td>
<td>9.14 m (30 ft)</td>
<td></td>
<td></td>
<td>6 = Pink</td>
</tr>
<tr>
<td>MQDC2S-850RA</td>
<td>15.2 m (50 ft)</td>
<td></td>
<td></td>
<td>7 = Blue</td>
</tr>
<tr>
<td>MQDC2S-850RA</td>
<td>15.2 m (50 ft)</td>
<td></td>
<td></td>
<td>8 = Red</td>
</tr>
</tbody>
</table>

### 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. (2.8 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
**LMB Sealed Right-Angle Bracket**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMBE12RA</td>
<td>Pipe-Mount Models: Bracket kit with ½-14 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>
</tbody>
</table>

**Elevated Mount System**

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
<th>Components</th>
</tr>
</thead>
</table>
| SA-M22E12 - Black Polycarbonate | • Streamlined black polycarbonate stand-off pipe adapter/cover  
   • Connects between 22 mm light base and ½ in. NPSM/DN15 pipe | ![SA-M22E12.png] |
| Polished 304 Stainless Steel | Black Anodized Aluminum  
   Clear Anodized Aluminum | ![Polished 304 Stainless Steel.png] |
| 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-E12-150SS.png] |
| 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-E12-300SS.png] |
| SOP-E12-900SS 900 mm (36 in) long | SOP-E12-900A 900 mm (36 in) long  
   SOP-E12-900AC 900 mm (36 in) long | ![SOP-E12-900SS.png] |
| SA-E12M30 - Black Acetal | • Streamlined black acetal mounting base adapter/cover  
   • Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole  
   • Mounting hardware included | ![SA-E12M30.png] |
### Pipe Mounting Flange

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

### Foldable Mounting Bracket

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
<th>Construction</th>
</tr>
</thead>
</table>
| SA-FFB12 | • For use with 1/2 inch stand-off pipes  
            • Stainless steel hardware | Black polycarbonate |

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