Datarasheet

DC-Operated Indicators with Steady or Pulsed Sound Indication

To view or download the latest technical information about this product, including specifications, dimensions, accessories, and wiring, see www.bannerengineering.com.

- Rugged, cost-effective, and easy-to-install bright indicators with audible alarm
- Fully sealed and rated at IP67 or IP69K per DIN 40050-9, depending on model
- Compact devices are completely self-contained, no controller needed
- Immune to EMI and RFI interference
- Loud audible alarm with intensity adjustment (IEC IP67 models)
- 12 V dc to 30 V dc operation
- Available in continuous and staccato tones (IP67 models)

**WARNING: Not To Be Used for Personnel Protection**

Never use this device as a sensing device for personnel protection. Doing so could lead to serious injury or death. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

### Models

<table>
<thead>
<tr>
<th>Model</th>
<th>LED Function</th>
<th>Input</th>
<th>Audible Tone†</th>
<th>Connection‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>K50LGXASXPQ</td>
<td>1 Color: Green</td>
<td>PNP</td>
<td>Fixed tone volume</td>
<td>5-pin M12/Euro-style quick disconnect (QD)</td>
</tr>
<tr>
<td>K50LGXASYPQ</td>
<td>2 Color: Green, Red</td>
<td>NPN</td>
<td>Continuous tone with volume adjustment</td>
<td>5-pin M12/Euro-style quick disconnect (QD)</td>
</tr>
<tr>
<td>K50LGXASXNQ</td>
<td>2 Color: Green, Red</td>
<td>PNP</td>
<td>Staccato tone with volume adjustment</td>
<td>5-pin M12/Euro-style quick disconnect (QD)</td>
</tr>
<tr>
<td>K50LGXASXQ</td>
<td>3 Color: Green, Red, Yellow</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRASXNPQ</td>
<td>1 Color: Green</td>
<td>PNP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRASXYNQ</td>
<td>2 Color: Green, Red</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRASYXPQ</td>
<td>3 Color: Green, Red, Yellow</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRASYNQ</td>
<td>2 Color: Green, Red</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRASYPQ</td>
<td>3 Color: Green, Red, Yellow</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALSXNPQ</td>
<td>1 Color: Green</td>
<td>PNP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALSXYNQ</td>
<td>2 Color: Green, Red</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALSYPQ</td>
<td>3 Color: Green, Red, Yellow</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALSXNQ</td>
<td>2 Color: Green, Red</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALSYNQ</td>
<td>3 Color: Green, Red, Yellow</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALS4XPQ</td>
<td>1 Color: Green</td>
<td>PNP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALS4XNQ</td>
<td>2 Color: Green, Red</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K50LGRALS4YNQ</td>
<td>3 Color: Green, Red, Yellow</td>
<td>NPN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Installation in Very Wet Environments**

For best sound quality and volume when mounting an IP67 audible indicator model in an extremely wet environment, consider the mounting orientation. Mount the indicator horizontally or facing downward to allow water to drain easily. Upright mounting will allow water to collect in the alarm cavity, which will muffle the sound.

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1. Contact Banner Engineering for other colors and color combinations.
2. Integral 5-pin M12/Euro-style quick disconnect models are listed.
3. To order the 150 mm (6 in) PVC cable model, replace the suffix "Q" with "QP" in the model number. For example, K50LGXASXPQP.
4. To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, K50LGXASXP.
5. Models with a quick disconnect require a mating cordset.
Wiring Diagrams

**PNP**

**NPN**

**Key:**
- 1 = Brown
- 2 = White
- 3 = Blue
- 4 = Black
- 5 = Gray
- G = Green
- R = Red LED
- Y = Yellow LED
- A = Alarm

**Note:** When fewer than three LED colors are used, the corresponding wires are unused.

### Specifications

**Supply Voltage and Current**
- 12 V dc to 30 V dc
- 65 mA at 12 V dc; 35 mA at 30 V dc maximum current per LED
- Audible: 35 mA maximum current

**Supply Protection Circuitry**
- Protected against reverse polarity and transient voltages

**Input Response Time**
- Indicator ON/OFF: 1 ms maximum
- Audible ON/OFF: 10 ms maximum

**Audible Alarm**
- IP67 Models: 2.9 kHz ± 250 Hz oscillation frequency; max. intensity 94 db at 1 m (3.3 ft) (typical)
- IP69K Models: 2.9 kHz ± 250 Hz oscillation frequency; max. intensity 65 db at 1 m (3.3 ft) (typical)

**Vibration and Mechanical Shock**
- All models meet MIL-STD-202F, Method 201A (Vibration: 10 Hz to 60 Hz maximum, 0.06 inch (1.52 mm) double amplitude, 10G maximum acceleration) requirements. Also meets IEC 60947-5-2 (Shock: 30G 11 ms duration, half sine wave) requirements.

**Environmental Rating**
- Fixed Audible Sealed Models: IEC IP67/IP69K per DIN 40050-9
- Adjustable Loud Audible Sealed Models: IEC IP67
- NEMA/UL Type 4X, 13

**Operating Conditions**
- -20 °C to +50 °C (–4 °F to +122 °F)
- 95% maximum relative humidity (non-condensing)

**Certifications**
- CE
- UL US LISTED

### 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.

<table>
<thead>
<tr>
<th>Supply Wiring (AWG)</th>
<th>Required Overcurrent Protection (kAmps)</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>28</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

**Cabled Dimensions**

**QD Dimensions**
## Accessories

### 5-Pin Euro-Style Cordsets

<table>
<thead>
<tr>
<th>Model</th>
<th>Length</th>
<th>Style</th>
<th>Dimensions</th>
<th>Pinout (Female)</th>
</tr>
</thead>
</table>
| MQDC1-501.5 | 0.50 m  | Straight | 44 Typ. M12 x 1 ø 14.5 | 1 = Brown  
|             | (1.5 ft)|        |            | 2 = White       |
| MQDC1-506   | 1.83 m  |         | 32 Typ.    | 3 = Blue        |
|             | (6 ft)  | Right-Angle | ø 30.1 Typ. M12 x 1 | 4 = Black       |
| MQDC1-515   | 4.57 m  |         | 30 Typ.    | 5 = Gray        |
|             | (15 ft) |         | [1.18”]    |                |
| MQDC1-630   | 9.14 m  |         | 32 Typ.    |                |
|             | (30 ft) |         | [1.26”]    |                |
| MQDC1-506RA | 1.83 m  | Right-Angle | 32 Typ. ø 30.1 |                |
| MQDC1-515RA | 4.57 m  |         | 32 Typ.    |                |
| MQDC1-530RA | 9.14 m  |         | 32 Typ.    |                |
|             | (30 ft) |         | [1.26”]    |                |

### Mounting Brackets

#### 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 30.1

#### 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

#### SMB30SK
- Flat-mount swivel bracket with extended range of motion
- Black reinforced thermoplastic polyester and 316 stainless steel
- Stainless steel swivel locking hardware included

**Hole center spacing:** A = 50.8  
**Hole size:** A = ø 7, B = ø 18

#### 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

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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, 38.25, 81

2X Ø11

1/2 - 14 NPSM NUT

Elevated Mount System

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
<th>Components</th>
</tr>
</thead>
</table>
| SA-M30E12 - Black Acetal | • Streamlined black acetal stand-off pipe adapter/cover  
                      • Connects between 30 mm light base and ¼ in. NPSM/DN15 pipe  
                      • Mounting hardware included | ![Black Acetal Adapter](image) |
| Polished 304 Stainless Steel | • Elevated-use stand-off pipe (½ in. NPSM/DN15)  
                        • Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface  
                        • ½ in. NPT thread at both ends  
                        • Compatible with most industrial environments | ![304 Stainless Steel Adapter](image) |
| 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 | • 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 | ![Black Acetal Adapter](image) |

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 select or from the use or inability to use the product, whether arising in contract or warranty, statute, tort, strict liability, negligence, or otherwise.

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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 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.