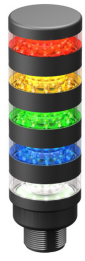
# TL50BL Beacon Tower Light

## Features

*Compact Beacon Tower Light*



Standard



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

**Color/Function Position**

| Housing | C1 F1 | C2 F2 | C3 F3 | C4 F4 | C5*F5* | Audible Alarm* | Housing Color | Connection** |
|---|---|---|---|---|---|---|---|---|
| TL50BL | G | 2 | R | | Y | 1 | A | | Q |

G = Green
Y = Yellow
R = Red
B = Blue
W = White

Blank = ON Solid
1 = Rotating
2 = Flashing

*Not available with Audible

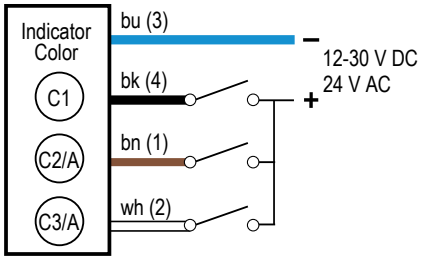
Blank = No Audible
A = Audible
ALS = Sealed Audible Continuous Tone
ALS3 = Sealed Audible Pulsed Tone
ALS4 = Sealed Audible Staccato Tone
AOS = Omni-Directional Sealed Audible Continuous Tone
AOSI = Omni-Directional Sealed Audible Continuous Tone with Intensity Adjust
AOS3 = Omni-Directional Sealed Audible 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

Blank = Black
C = Gray

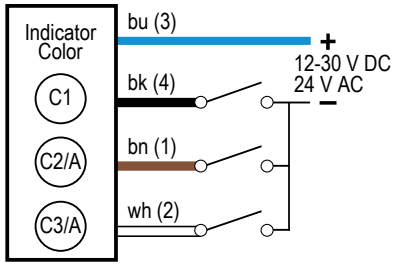
Blank = 2 m integral cable
Q = Integral 5-pin M12 male quick-disconnect connector (DC only)
QP = 150 mm (5.9 in) cable with 5-pin M12 male quick-disconnect connector
**Models with quick-disconnect connector require a mating cordset

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

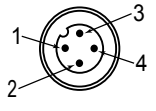
**PNP Input**




**NPN Input**




**4-pin M12 Male Pinout**




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

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

Original Instructions
21-Jul-25

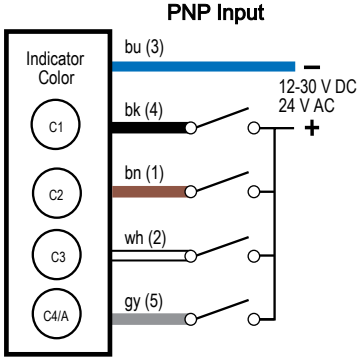
© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

159857
p/n: 159857 Rev. S

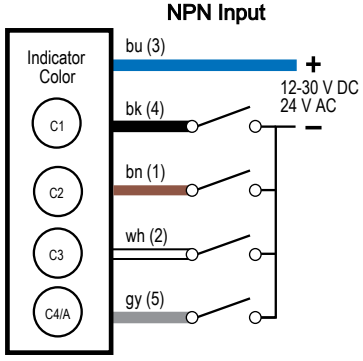
ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

# Wiring Diagrams — 5-Pin Models with 4 Segments

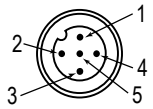
**PNP Input**




**NPN Input**




**5-pin M12 Male Pinout**

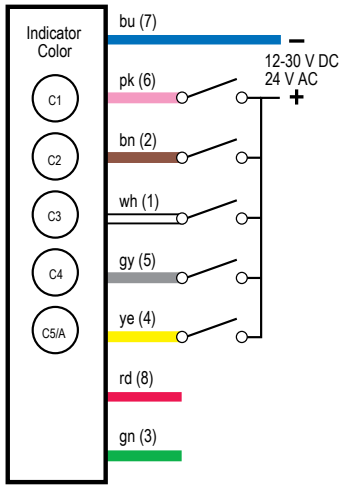



1 = Brown
2 = White
3 = Blue
4 = Black
5 = Gray
C1 = Color 1
C2 = Color 2
C3 = Color 3
C4 = Color 4
A = Audible

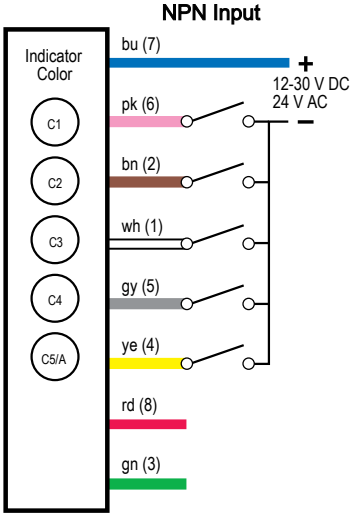
Pin 5 can activate the corresponding color or the audible function, if available.

# Wiring Diagrams — 8-Pin Models with 5 Segments

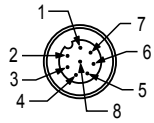
**PNP Input**




**NPN Input**




**8-pin M12 Male Pinout**




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 can 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 ± 500 Hz oscillation frequency; maximum intensity 92 dB at 1 m (3.3 ft) (typical)

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

**Omni-Directional 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 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

**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 ± 15% |
| 2 | Flashing | 1.6 Hz rate ± 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 |


© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

**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 male quick-disconnect connector, 150 mm (6 in) PVC-jacketed cable with an M12 male quick-disconnect connector, or 2 m (6.5 ft) integral PVC-jacketed cable, depending on model

Models with a quick-disconnect connector require a mating cordset

**Construction**

**Bases and Covers:** ABS

**Light Segment:** Polycarbonate

**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:** IP67

**Standard Audible:** IP50

**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**

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

c 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.

| Supply Wiring (AWG) | Required Overcurrent Protection (A) | Supply Wiring (AWG) | Required Overcurrent Protection (A) |
|---|---|---|---|
| 20 | 5.0 | 26 | 1.0 |
| 22 | 3.0 | 28 | 0.8 |
| 24 | 2.0 | 30 | 0.5 |

## FCC Part 15 Class B for Unintentional Radiators

(Part 15.105(b)) 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. 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 dealer or an experienced radio/TV technician for help.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

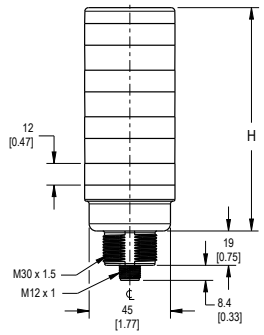
## Industry Canada ICES-003(B)

This device complies with 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.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

## Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

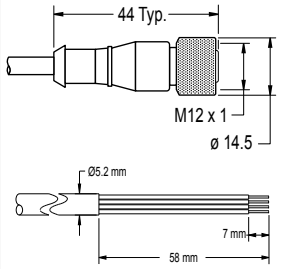
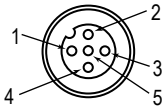
| Dimensions | # of Colors | Tower Height (H) | | | |
|---|---|---|---|---|---|
| | | Non-Audible | Standard Audible(1) | Sealed Audible | Omni-Directional Sealed Audible |
|  | 1 | 46.2 mm (1.8 in) | 77.1 mm (3.1 in) | 100.2 mm (4 in) | 114.2 mm (4.5 in) |
| | 2 | 72 mm (2.8 in) | 102.9 mm (4.1 in) | 126 mm (5 in) | 140 mm (5.5 in) |
| | 3 | 97.8 mm (3.8 in) | 128.7 mm (5.1 in) | 141.8 mm (6 in) | 165.8 mm (6.5 in) |
| | 4 | 123.6 mm (4.8 in) | 154.5 mm (6.1 in) | 177.6 mm (7 in) | 191.6 mm (7.5 in) |
| | 5 | 149.4 mm (5.8 in) | - | - | - |

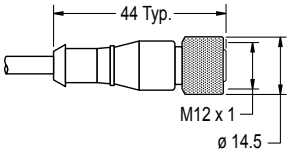
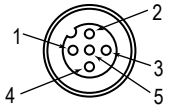
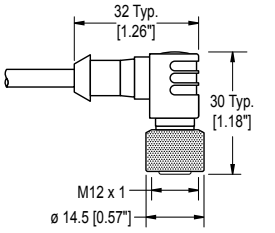
(1) Tower height (H) with top unscrewed approximately 3.5 mm (0.18 in) to allow sound to escape

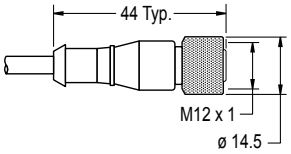
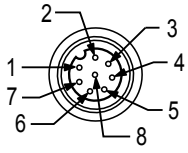
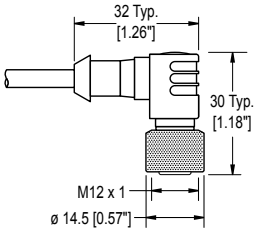

© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

# Accessories

## Cordsets

| 4-Pin Single-Ended M12 Female Cordsets | | | | | |
|---|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** | |
| **MQDC-403** | 1 m (3.28 ft) | Straight |  |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Not used<br>c UL us |
| **MQDC-406** | 2 m (6.56 ft) | | | | |
| **MQDC-410** | 3 m (9.8 ft) | | | | |
| **MQDC-415** | 5 m (16.4 ft) | | | | |
| **MQDC-430** | 9 m (29.5 ft) | | | | |
| **MQDC-450** | 15 m (49.2 ft) | | | | |
| **MQDC-460** | 18.3 m (60 ft) | | | | |
| **MQDC-470** | 21 m (68.9 ft) | | | | |
| **MQDC-4100** | 30 m (98.43 ft) | | | | |

| 5-Pin Single-Ended M12 Female Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** |
| **MQDC1-501.5** | 0.5 m (1.5 ft) | Straight |  |  |
| **MQDC1-503** | 0.9 m (2.9 ft) | | | |
| **MQDC1-506** | 2 m (6.5 ft) | | | |
| **MQDC1-515** | 5 m (16.4 ft) | | | |
| **MQDC1-530** | 9 m (29.5 ft) | | | |
| **MQDC1-560** | 18 m (59 ft) | | | |
| **MQDC1-5100** | 31 m (101.7 ft) | | | |
| **MQDC1-506RA** | 2 m (6.5 ft) | Right-Angle |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Gray<br>c UL us |
| **MQDC1-515RA** | 5 m (16.4 ft) | | | |
| **MQDC1-530RA** | 9 m (29.5 ft) | | | |
| **MQDC1-560RA** | 19 m (62.3 ft) | | | |

| 8-Pin Single-Ended M12 Female Open-Shielded Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** |
| **MQDC2S-806** | 2.04 m (6.7 ft) | Straight |  |  |
| **MQDC2S-815** | 5.04 m (16.54 ft) | | | |
| **MQDC2S-830** | 10.04 m (32.95 ft) | | | |
| **MQDC2S-850** | 16 m (52.49 ft) | | | |
| **MQDC2S-806RA** | 2 m (6.56 ft) | Right-Angle |  | 1 = White<br>2 = Brown<br>3 = Green<br>4 = Yellow<br>5 = Gray<br>6 = Pink<br>7 = Blue<br>8 = Red |
| **MQDC2S-815RA** | 5 m (16.4 ft) | | | |
| **MQDC2S-830RA** | 10 m (32.81 ft) | | | |
| **MQDC2S-850RA** | 16 m (52.49 ft) | | | |


© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

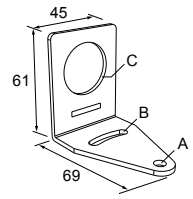
# Mounting Brackets

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

**SMB30A**

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

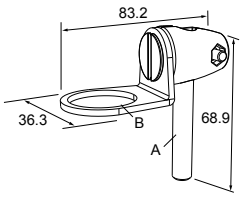
**Hole center spacing:** A to B=40
**Hole size:** A=ø 6.3, B= 27.1 × 6.3, C=ø 30.5




**SMB30FA**

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

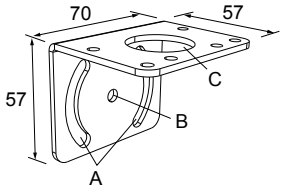
**Bolt thread:** SMB30FA, A= 3/8 - 16 × 2 in; SMB30FAM10, A= M10 - 1.5 × 50
**Hole size:** B= ø 30.1




**SMB30MM**

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

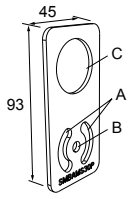
**Hole center spacing:** A = 51, A to B = 25.4
**Hole size:** A = 42.6 × 7, B = ø 6.4, C = ø 30.1




**SMBAMS30P**

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

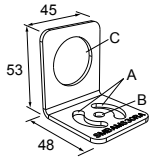
**Hole center spacing:** A=26.0, A to B=13.0
**Hole size:** A=26.8 × 7.0, B=ø 6.5, C=ø 31.0




**SMBAMS30RA**

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

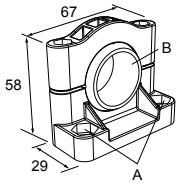
**Hole center spacing:** A=26.0, A to B=13.0
**Hole size:** A=26.8 × 7.0, B=ø 6.5, C=ø 31.0




**SMB30SC**

- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included

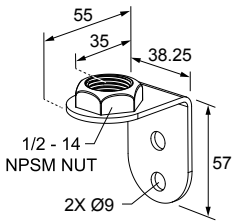
**Hole center spacing:** A=ø 50.8
**Hole size:** A=ø 7.0, B=ø 30.0




**LMBE12RA35**

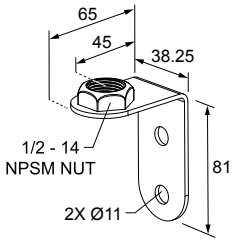
- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 35 mm

**Hole center spacing:** 20.0





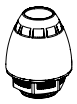
© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

| | |
|---|---|
| **LMBE12RA45**<br>• Direct mounting of stand-off pipe, with common bracket type<br>• Zinc-plated steel<br>• 1/2-14 NPSM nut<br>• Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 45 mm<br>**Hole center spacing:** 35.0 |  |

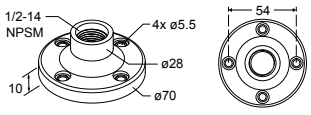
## LMB Sealed Right-Angle Bracket

| Model | Description | |
|---|---|---|
| **LMB30RA** - Black polycarbonate<br>**LMB30RAC** - Gray polycarbonate | • **Direct-Mount Models**<br>• Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets. |  |
| **LMBE12RA** - Black polycarbonate<br>**LMBE12RAC** - Gray polycarbonate | • **Pipe-Mount Models**<br>• Bracket kit with base, ½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets<br>• For use with stand-off pipe (listed and sold separately) |  |

## Elevated Mount System

| Model | | | Description | Components |
|---|---|---|---|---|
| **SA-M30TE12** - Black Acetal | | | • Streamlined black acetal or white UHMW stand-off pipe adapter/cover<br>• Connects between 30 mm light base and ½ in. NPSM/ DN15 pipe<br>• Mounting hardware included |  |
| **SA-M30TE12C** - White UHMW | | | | |
| **Polished 304 Stainless Steel** | **Black Anodized Aluminum** | **Clear Anodized Aluminum** | • Elevated-use stand-off pipe (½ in. NPSM/DN15)<br>• Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface<br>• ½ in. NPT thread at both ends: one end screws into the internal threads of the light's base, and one end screws into the mounting base adapter/cover<br>• Compatible with most industrial environments |  |
| **SOP-E12-150SS**<br>150 mm (6 in) long | **SOP-E12-150A**<br>150 mm (6 in) long | **SOP-E12-150AC**<br>150 mm (6 in) long | | |
| **SOP-E12-300SS**<br>300 mm (12 in) long | **SOP-E12-300A**<br>300 mm (12 in) long | **SOP-E12-300AC**<br>300 mm (12 in) long | | |
| **SOP-E12-900SS**<br>900 mm (36 in) long | **SOP-E12-900A**<br>900 mm (36 in) long | **SOP-E12-900AC**<br>900 mm (36 in) long | | |
| **SA-E12M30** - Black Acetal | | | • Streamlined black acetal or white UHMW mounting base adapter/cover<br>• Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole<br>• Mounting hardware included |  |
| **SA-E12M30C** - White UHMW | | | | |

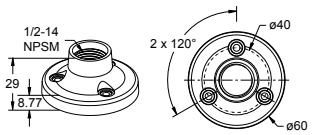
## Pipe Mounting Flange

| **Pipe Mounting Flange** | | | |
|---|---|---|---|
| **Model** | **Description** | **Construction** | |
| **SA-F12** | • Elevated-use stand-off pipes (½ in, NPSM/ DN15)<br>• M5 mounting hardware and nitrile gasket included | Die-cast zinc base with black paint |  |

Continued on page 7


© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com

Continued from page 6

| Pipe Mounting Flange | | | |
|---|---|---|---|
| **Model** | **Description** | **Construction** | |
| **SA-F12-3** | • Elevated-use stand-off pipes (½ in, NPSM/ DN15)<br>• M4 mounting hardware and nitrile blend gasket included | 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.

**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 DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to: www.bannerengineering.com.

For patent information, see www.bannerengineering.com/patents.


© Banner Engineering Corp. All rights reserved.
www.bannerengineering.com