

**Installation Instructions for Cat. 105 Series
Adverse Location Visual Signals**

Description

The 105 Series visual signals are heavy duty, reliable, UL, cUL (General Utility) and CSFM listed (misc. device/control unit accessory) beacons which, when assembled in accordance with installation instructions, constitute a UL listed Type 4X enclosure and are UL Listed for Marine Use. They are designed for use in industrial applications or in appli-

cations where a Type 4X enclosure is required. The units are available in steady-on halogen or LED, flashing halogen or LED, 3 Joule strobe or 8 Joule high intensity strobe. When assembled in accordance with these instructions, the 105 Series visual signals are UL Listed for use in Hazardous Locations with Operating Temperatures listed in Table 1.

For specification details, see Table 2.

Table 1. Hazardous Location Ratings

| Cat. No. | Class | Division | Group | Operating Temperature |
|-------------|-------|----------|------------|-----------------------|
| 105FINH*-G1 | I | 2 | A, B, C, D | T2D (215C, 419F) |
| 105SINH*-G1 | II | 2 | F, G | T4A (120C, 248F) |
| 105FINH*-G5 | III | | | T4A (120C, 248F) |
| 105SINH*-G5 | | | | |
| 105FINH*-N5 | I | 2 | A, B, C, D | T2 (300C, 572F) |
| 105SINH*-N5 | II | 2 | F, G | T4 (135C, 275F) |
| | III | | | T4 (135C, 275F) |
| 105HIST*-N5 | I | 2 | A, B, C, D | T2 (300C, 572F) |
| 105HIST*-R5 | II | 2 | F, G | T3B (165C, 329F) |
| | III | | | T3B (165C, 329F) |
| 105HIST*-EK | I | 2 | A, B, C, D | T2A (280C, 536F) |
| | II | 2 | F, G | T3B (165C, 329F) |
| | III | | | T3B (165C, 329F) |
| 105ST*-G1 | I | 2 | A, B, C, D | T3 (200C, 392F) |
| 105ST*-N5 | II | 2 | F, G | T4A (120C, 248F) |
| 105ST*-R5 | III | | | T4A (120C, 248F) |
| 105FLED*-N5 | I | 2 | A, B, C, D | T5 (100C, 212F) |
| 105SLED*-N5 | II | 2 | F, G | T5 (100C, 212F) |
| 105FLED*-G1 | III | | | T5 (100C, 212F) |
| 105SLED*-G1 | | | | |

Installation

 **WARNING**
To prevent electrical shock, do not connect power until instructed to do so.

Installation must be in accordance with local codes. The lens should be positioned up for outdoor applications.

1. Select a mounting configuration (Figure 6).

NOTE: When mounting using the Cat. No. 105BM mounting bracket, the Cat. No. 105BX outlet box attachment must also be used as shown in Figure 1.

2. Pull field wiring into the mounting attachment.

 **WARNING**
The 105BX junction box, 105BM mounting bracket and 105PM pipe mount attachments are non-conductive plastic fixtures and do not provide earth-ground continuity when attached to metallic wiring systems. Therefore, they are intended for use with the 105 series visual signals only when earth-grounding is not required.

 **WARNING**
The 105BX junction box, 105BM mounting bracket and 105PM pipe mount attachments can be used with metallic wiring systems only when installed at the end of a run.

3. Install the mounting attachment as follows:
 - a. **Cat. No. 105BX:** Screw the outlet box attachment to the mounting surface using two screws (not supplied), suitable for the surface. Attach the adhesive backed gasket to the top of the 105BX mounting box, being careful to line up the holes in the gasket with the mounting holes in the outlet box.
 - b. **Cat. No. 105BM:** Using the four supplied screws, secure the mounting bracket to Cat. No. 105BX outlet box attachment as shown in Figure 1. Attach the adhesive backed gasket to the top of the 105BM mounting bracket, being careful to line up the holes in the gasket with the mounting holes in the outlet box.
 - c. **Cat. No. 105PM:** Install 3/4" (19 mm) conduit. Screw the pipe mount attachment onto the 3/4" (19 mm) conduit. Attach the adhesive backed gasket to the top of the 105PM pipe mount attachment, being careful to line up the holes in

the gasket with the mounting holes in the outlet box.

NOTE: *It is not necessary to remove the lens from the Hi-Intensity Strobe Base to install the 105HIST series beacons.*

4. Mount 105SLED, 105FLED, 105SINH, 105FINH, and 105ST Series as follows. Unscrew the gasketed base from the lens assembly as shown in Figure 2 and remove the clear gasket from around the base.
5. Secure the base to the appropriate mounting attachment using four screws (supplied). Replace the clear gasket on the base with the flared, open end facing down.
6. Attach the unit's wire leads to the field wiring as shown in Figure 4.
7. Ensuring that the light source is in place, screw the lens back on the base.
8. **Mount the 105HIST Series as follows.** Secure the hi-intensity strobe base to the appropriate mounting attachment using four screws (supplied) as shown in Figure 3.
9. Apply power and verify operability.

Maintenance



WARNING

To prevent electrical shock, before starting work on units disconnect power and, for strobe modules wait 5 minutes for stored energy to dissipate.

The lens should be periodically cleaned using a mild detergent and water on a soft, clean, lint-free cloth.

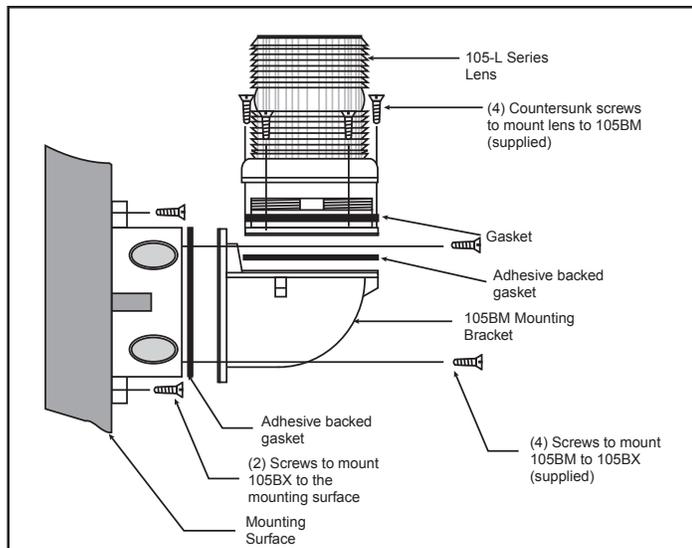


Figure 1. Mounting Cat. No. 105BM Mounting Bracket



CAUTION

Do not touch the strobe tube or halogen bulb with bare fingers. Grasp the light source either by the base or using a soft, clean cloth.

Light Source Replacement

1. Unscrew the lens from the base.
2. For Halogen Bulb Replacement:
 - a. While pressing down on the bulb, turn and then pull straight up and out of the socket.
 - b. Insert the new halogen bulb into the socket, press down and turn until the bulb is locked into place.
3. For Strobe Tube Replacement:
 - a. Grasp the strobe tube by its base and pull straight up out of the strobe tube socket (Figure 2).
 - b. Grasp the new strobe tube by the strobe tube base and press into the strobe tube socket.
4. Screw the lens onto the base.
5. Apply power and verify operability.

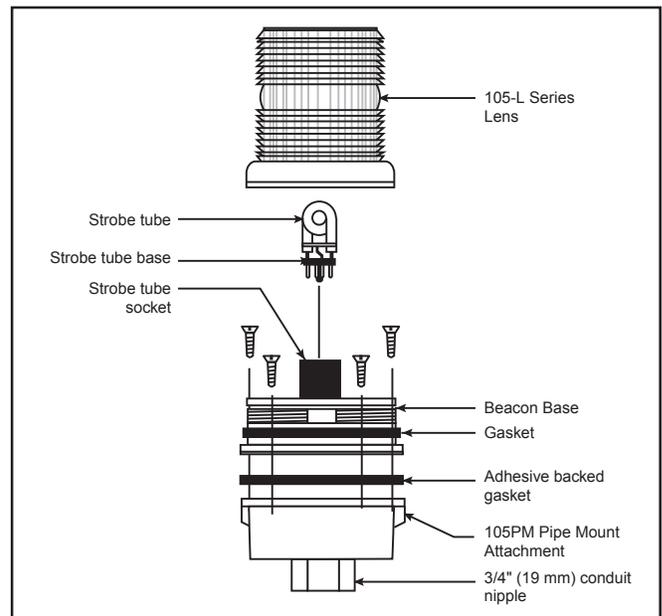


Figure 2. Securing the Beacon to the Mounting Attachment (Pipe Mount Attachment shown)

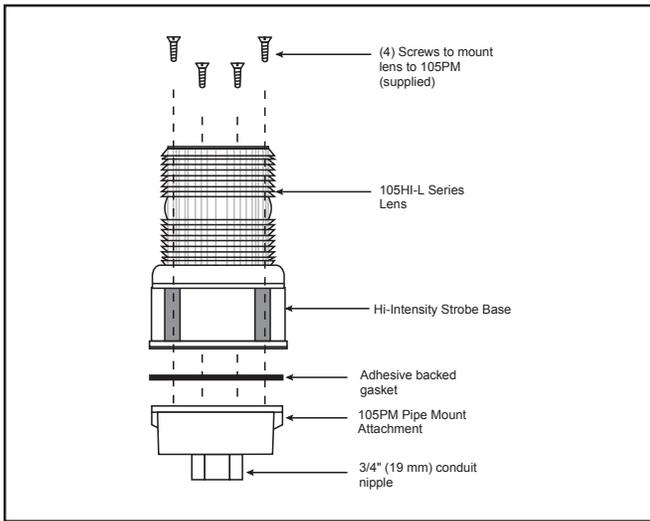


Figure 3. Securing the 105HIST Beacon to the Mounting Attachment (Pipe Mount Attachment shown)

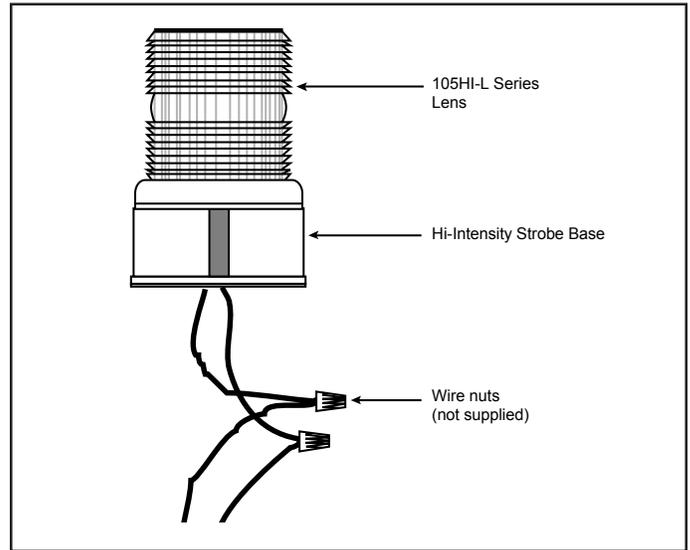


Figure 4. Wiring the 105 Series Beacons (Hi-Intensity Strobe shown)

Table 2. Specifications

| Cat. No. | Module Type | Lamp Ratings | Voltage | Current |
|--------------|----------------------------------|------------------------------------------------|----------------------------|-----------------------|
| 105SLED*-G1 | Steady-On LED | 100,000 hours ^{1,2} | 24V DC | 0.062A |
| 105SLED*-N5 | Steady-On LED | 100,000 hours ^{1,2} | 120V 60 Hz | 0.022A |
| 105FLED*-G1 | Flashing LED | 100,000 hours ^{1,2} | 24V DC | 0.062A |
| 105FLED*-N5 | Flashing LED | 100,000 hours ^{1,2} | 120V 60 Hz | 0.022A |
| 105SINH**-G1 | Steady-On Halogen | 20W, 226 Lumens, 20,000 hours ^{1,2} | 24V DC | 0.8A |
| 105SINH**-G5 | Steady-On Halogen | 20W, 226 Lumens, 20,000 hours ^{1,2} | 24V 60 Hz | 0.8A |
| 105SINH**-N5 | Steady-On Halogen | 25W, 175 Lumens, 20,000 hours ^{1,2} | 120V 60 Hz | 0.2A |
| 105FINH**-G1 | Flashing Halogen | 20W, 226 Lumens, 20,000 hours ^{1,2} | 24V DC | 0.8A |
| 105FINH**-G5 | Flashing Halogen | 20W, 226 Lumens, 20,000 hours ^{1,2} | 24V 60 Hz | 0.8A |
| 105FINH**-N5 | Flashing Halogen | 25W, 175 Lumens, 20,000 hours ^{1,2} | 120V 60 Hz | 0.2A |
| 105ST**-G1 | 3 Joule Strobe | 300,000 Peak Candela, 3,000 hours ³ | 24V DC | 0.3A |
| 105ST**-N5 | 3 Joule Strobe | 300,000 Peak Candela, 3,000 hours ³ | 120V 60 Hz | 0.1A |
| 105ST**-R5 | 3 Joule Strobe | 300,000 Peak Candela, 3,000 hours ³ | 240V 60 Hz | 0.02A |
| 105HIST**-EK | High Intensity 8 Joule Strobe | 800,000 Peak Candela, 3,000 hours ³ | 12V DC 24V DC 48V DC | 1.2A 0.8A 0.38A |
| 105HIST**-N5 | High Intensity 8 Joule Strobe | 800,000 Peak Candela, 3,000 hours ³ | 120V 60 Hz | 0.1A |
| 105HIST**-R5 | High Intensity 8 Joule Strobe | 800,000 Peak Candela, 3,000 hours ³ | 240V 60 Hz | 0.05A |

105PM Pipe Mount Attachment

105BX Outlet Box Attachment

105BM Mounting Bracket
(use with 105BX)

*Lens and light source (LED) color: A - amber, B - blue, G - green, R - red.

**Lens color: A - amber, B - blue, C - clear, G - green, M - magenta, R - red.

¹At nominal operating voltage.

²Projected lamp life based on manufacturer's calculated lamp life @ 65 fpm and 50% duty cycle.

³Strobe tube life @ operating power to 75% efficiency.

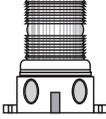
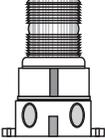
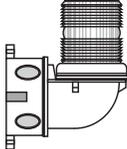
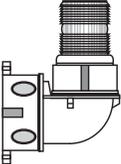
| | 105SLED, 105FLED, 105SINH, 105FINH, 105ST Series | 105HIST Series |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Mounted on a Cat. No. 105PM Pipe Mount Attachment |  |  |
| Mounted on a Cat. No. 105BX Outlet Box Attachment |  |  |
| Mounted on a Cat. No. 105BM Mounting Bracket with the Cat. No. 105BX Outlet Box Attachment |  |  |

Figure 6. Mounting Configurations