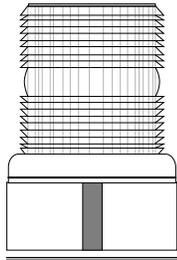


# 105DHIST Series Adverse Location Visual Signal Installation Sheet



## Description

The 105DHISTC-FJ (clear lens) visual signal is a heavy duty, reliable, 8 joule high intensity strobe that is both UL 1971 and CSFM Listed for special application 20 to 30 VDC hearing impaired indoor use in compatible fire alarm systems. See Figure 6 for light output patterns and Table 2 for operating current information.

The 105DHIST\*-FJ models (with colored lenses) are special application 20 to 30 VDC UL and cUL (general utility) and CSFM Listed (miscellaneous devices/control unit accessories). See Table 2 for operating current information.

These signals, when assembled in accordance with installation instructions, constitute a UL Listed Type 3R or 4X enclosure. They are designed for use in industrial applications or in applications where a Type 3R or 4X enclosure is required. For general utility (non-fire alarm) use, all units are UL and cUL Listed for marine and outdoor visual signaling applications. When assembled in accordance with these instructions, 105DHIST Series visual signals are UL Listed for use in hazardous locations with operating temperatures listed in Table 1.

**Note:** This equipment is suitable for use in Class I, Division 2, Groups A, B, C, and D, Class II, Division 2, Groups F and G, and Class III, Division 1 and 2 hazardous or nonhazardous locations only.

## Installation

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

## WARNINGS

- Explosion hazard. Do not remove or replace lamps or plug-in modules unless power has been disconnected or the area is known to be free of ignitable concentrations of flammable gases or vapors.
- Explosion hazard. Do not disconnect while the circuit is live or unless the area is known to be free of ignitable concentrations.
- Explosion hazard. Substitution of any component may impair suitability for Class I, Division 2.
- Electrocutation hazard. To prevent electrical shock, do not connect power until instructed to do so.

## Cautions

- The 105BX junction box, 105BM mounting bracket, and 105PM pipe mount attachments are nonconductive plastic fixtures and do not provide earth-ground continuity when attached to metallic wiring systems. Therefore, they are intended for use with the 105DHIST Series visual signals *only* when earth-grounding is not required.
- The 105BX junction box, 105BX mounting bracket, and 105PM pipe mount attachments can be used with metallic wiring systems *only* when installed at the end of a run.

## To install the strobe:

1. Select a mounting configuration (Figure 1).
 

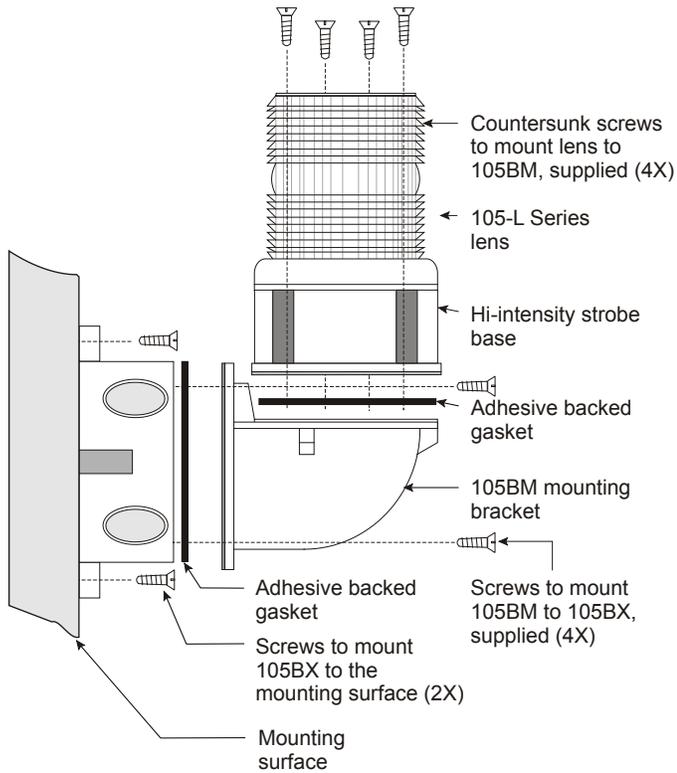
**Note:** When mounting using the 105BM mounting bracket, the 105BX outlet box attachment must also be used as shown in Figure 2.
2. Pull field wiring into the mounting attachment.
3. Install the mounting attachment as follows:
  - a. **105BX:** Screw the outlet box attachment to the mounting surface (Figure 2) 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. **105BM:** Using the four supplied screws, secure the mounting bracket to the 105BX outlet box attachment as shown in Figure 2. 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. **105PM:** Install 3/4 in. conduit. Screw the pipe mount attachment onto the 3/4 in. conduit. Attach the adhesive backed gasket to the top of the 105PM pipe mount attachment (Figure 3), being careful to line up the holes in the gasket with the mounting holes in the outlet box.
4. Attach the signal's wire leads to the field wiring as shown in Figure 5.
 

**Note:** It is not necessary to remove the lens from the high intensity strobe base to install the 105DHIST Series strobes.
5. Secure the hi-intensity strobe base to the appropriate mounting attachment using the four supplied screws as shown in Figure 3.
6. Apply power and verify operability.

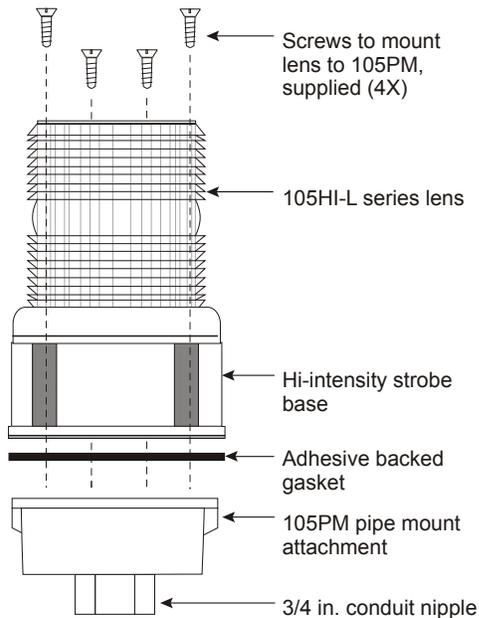
**Figure 1: Mounting configurations**

Mounted on a 105PM pipe mount attachment	
Mounted on a 105BX outlet box attachment	
Mounted on a 105BM mounting bracket with the 105BX outlet box attachment	

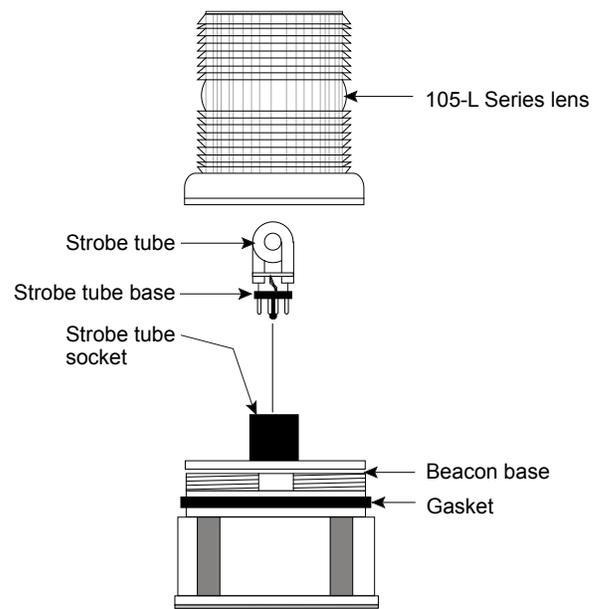
**Figure 2: Mounting 105BM mounting bracket**



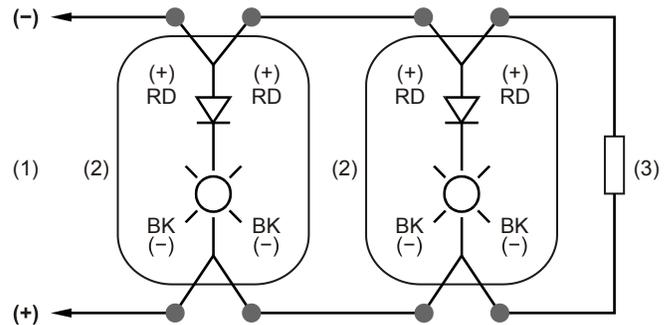
**Figure 3: Securing the strobe to the 105PM pipe mount attachment**



**Figure 4: Strobe tube replacement**



**Figure 5: Wiring diagram**



**Legend**

- (1) From power source or previous signaling device
- (2) 105DHIST Series strobe
- (3) EOLR
- Wire nut

**Notes**

- Polarity is shown in the supervisory state (signal inactive). The polarity reverses to activate the signal.
- Electrical supervision requires the wire run to be broken at each device.
- This device uses a constant input voltage. Do not connect to a "coded" or pulsating voltage.
- For non-fire alarm stand-alone use, tie the two red leads together and tie the two black leads together.

## Maintenance

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

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

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

### To replace the strobe tube:

1. Unscrew the lens from the base.
2. Grasp the strobe tube by its base and pull straight up out of the strobe tube socket (Figure 4).
3. Grasp the new strobe tube by the base and press into the strobe tube socket.
4. Ensure that the clear gasket is on the base with the flared, open end facing down. Screw the lens onto the base.
5. Apply power and verify operability.

## Specifications

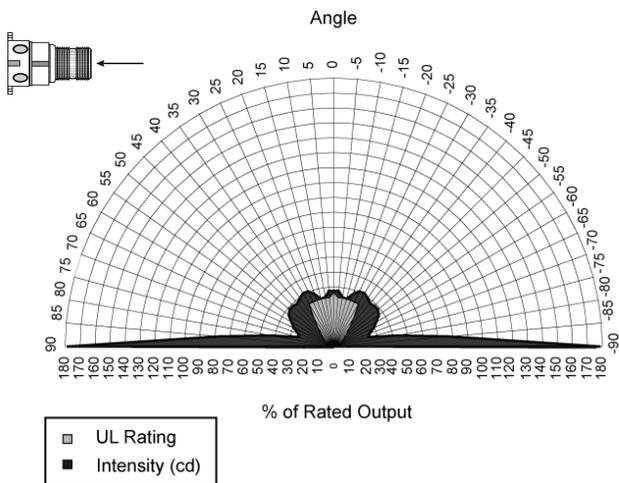
Voltage	20 to 30 VDC [1]
Current	See Table 2 [2]
Flash rate	65 flashes per minute (approximate)
Lamp energy	8 joules
Lamp ratings	300,000 peak cd
Lamp life	3,000 hours [3]
Dimensions	Refer to Table 3

[1] **Caution:** To prevent damage to the strobe's internal circuit and to ensure that it continues to function properly, do not operate the strobe outside of the special application voltage range of 20 to 30 VDC.

[2] Use the operating current to establish the wire gauge and standby power requirements. Consult the control unit manufacturer to determine surge and peak current effects and maximum number of strobes on the system.

[3] Strobe tube life at operating power to 75% of initial light output.

**Figure 6: Wall mount, dome horizontal, vertical and horizontal viewing plane**



### Notes

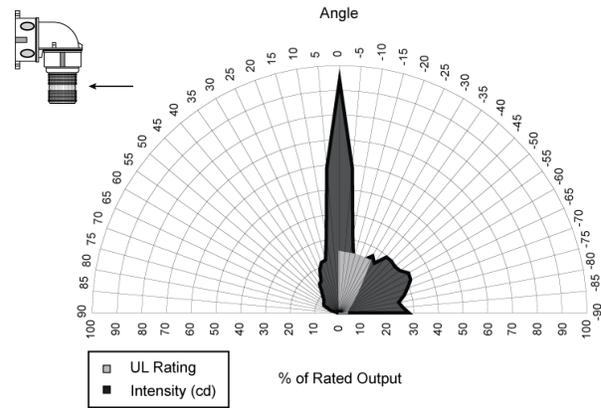
Values are for the clear lens only

0° axis looking at end of dome

UL 1971 Hearing Impaired: 26 cd wall rating

UL 1638 General Utility: 26 cd at 0° axis

**Figure 7: Wall mount, dome down, vertical viewing plane**



### Notes

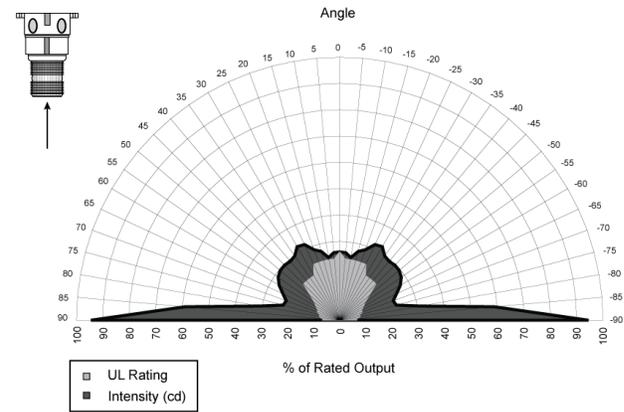
Values are for the clear lens only

0° axis looking at side of dome

UL 1971 Hearing Impaired: 24 cd wall

UL 1638 General Utility: 94 cd at 0° axis

**Figure 8: Ceiling mount viewing plane**



### Notes

Values are for the clear lens only

0° axis looking at end of dome

UL 1971 Hearing Impaired: 26 cd wall rating

UL 1638 General Utility: 26 cd at 0° axis

**Table 1: Hazardous location ratings**

Model	Class	Division	Group	Operating temperature
105DHIST*-FJ	I	2	A, B, C, D	T2C (230°C, 446°F)
	II	2	F, G	T4 (135°C, 275°F)
	III	1, 2		T4 (135°C, 275°F)

\* Letter in this position indicates color of the lens: A = Amber, B = Blue, C = Clear, G = Green, R = Red, or W = White

**Table 2: Voltage specifications**

Operating current [1]		Initial surge inrush current		Repetitive surge current	
Voltage [2]	RMS current	Current (A)	Time (mS)	Current (A)	Time (mS)
20 VDC	1.08	2.28	1.10	1.64	450
24 VDC	0.95	2.60	1.13	1.52	400
28 VDC	0.85	2.80	1.24	1.48	381
30 VDC	0.83	2.92	1.7	1.44	360

[1] Use the operating current to establish the wire gauge and standby power requirements. Consult the control unit manufacturer to determine surge and peak current effects and maximum number of strobes on the system.

[2] **Caution:** To prevent damage to the internal circuit, and to ensure that it continues to function properly, *do not* operate the unit outside of the Special Application voltage range of 20 to 30 VDC.

**Table 3: Dimensions**

105DHIST-FJ strobe module	
105PM pipe mount attachment	
105BX outlet box attachment	
105BM mounting bracket (use with 105BX)	

**Table 4: Replacement parts**

Catalog number	Description
92-ST	Strobe tube
105-LC	Lens (clear only)

**Regulatory information**

North American standards	ANSI/ISA 12.12.01 CAN/ULC-S526 CSA C22.2 No. 157 CSA C22.2 No. 205 CSA C22.2 No. 213 UL 1638 UL 1971 CSFM Listed for special application 20 to 30 VDC
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**Contact information**

For contact information, see [www.edwardssignaling.com](http://www.edwardssignaling.com).

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