![Edwards Signaling™ logo]

116 Class Fire Alarm Strobe Lights for Use in Hazardous Locations Installation Sheet

Description

The 116 Class Fire Alarm Strobe Lights, available in either a gray housing (116DEGEX-FJ) or a red housing (116DEGEX-FJ-R) are in-rush current limited strobe lights. When pendant, wall or ceiling mounted, and with dome guard removed, they meet or exceed the requirements of UL 1971 Signaling Appliance for the Hearing Impaired.

The strobe is intended for indoor use in UL 1971 (signal appliance for the hearing impaired) listed compatible fire alarm systems. The strobe flashes a 360-degree beam of light approximately 65 times per minute with a UL 1971 125 cd ceiling and 60 cd wall light output per Figure 7 and Figure 8. With the guard installed, the strobe flashes a beam with an output of 86 cd ceiling and 51 cd wall. The strobe is also UL 1638 (visual signal appliance, private mode) listed with dome guard installed for both indoor and outdoor use, and other applications requiring electrical supervision of the signaling circuit field wiring. In addition, the strobe is rated for outdoor use in Canada. The 116 Class strobes are cUL listed to Canandian Standard ULC-S526-07 (Visual Signal Device for Fire Alarm Systems), suitable for indoor and outdoor applications. The strobe features an enhanced synchronization circuit to comply with the latest requirements of UL 1971 and CAN/ULC-S526-07. Synchronized operation requires a separately installed synchronization control module. See Table 1 on page 5 for a list of compatible synchronization modules.

When assembled with an available mounting subassembly (116EX(R)-P, 116EX(R)-C, or 116EX(R)-C with 116EX(R)-B) and in accordance with these instructions, the 116 Class visual strobe signal is UL Listed as a Signaling Appliance for the hearing impaired for use in Class I, Division 1, Groups C

and D, Class I, Division 2, Groups A, B, C, and D, Class II, Division 1, Groups E, F, and G, Class II, Division 2, Groups F and G, and Class III, Division 1 and 2 hazardous locations with Operating Temperature Codes per Table 3 on page 5. Refer to "Specifications" on page 5 for more information.

This strobe is UL and cUL Listed as a Type 3R and 4X enclosure.

Installation

Install this unit in accordance with the applicable requirements in the latest edition of the National Fire Alarm Code (NFPA 72), National Electrical Code (NFPA 70), and Canadian Electrical Code and CAN/ULC-S524-01/Standard for the Installation of Fire Alarm Systems. Wiring shall be in accordance with the applicable requirements in the National Electrical Code (NFPA 70) and CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Section 32.

Caution: Do not change factory applied finishes.

1. Mount using one of the following applicable methods.

WARNING: To reduce the risks of ignition of hazardous atmospheres and shock, do not apply power to the unit until installation has been completed and unit is tightly assembled and secured.

   a. **Pendant Mount Models** (Figure 1 on page 2): Install the pendant mount module, Cat. No. 116EX(R)-P, to the 116 main housing. Tighten setscrew. Install an explosion-proof hanger box (not supplied). Secure 3/4" NPT threaded conduit (not supplied) to the box. Install the unit on the conduit. Ensure the conduit engages at least five full threads and then tighten the setscrew to secure the pendant mount module to the conduit. Connect the field earth ground wire to the ground screw or earth ground via conduit system. Wire in accordance with Figure 5 on page 3. See Table 3 on page 5 for required supply wire temperature ratings.

   b. **Ceiling Mount Models** (Figure 2 on page 2): Mount the ceiling mount module, Cat. No. 116EX-C, using hardware (not supplied) that is suitable for the mounting surface. Connect field earth ground wire to the ground screw or earth ground via conduit system. Wire the unit in accordance with

Figure 5 on page 3. See Table 3 on page 5 for required supply wire temperature ratings. Install main housing to the ceiling mount module. Tighten the setscrew to secure the 116 main housing to the ceiling mount module.

c. **Bracket Mount Models** (Figure 3 below): Install the ceiling mount module, Cat. No. 116EX-C, using hardware (not supplied) that is suitable for the mounting surface. Install the wall mount module, Cat. No. 116EX-B, to the 116 main housing. Tighten the setscrew to secure wall mounting module to the main housing. Run the unit's wiring through the elbow to the wall box. Connect field earth ground wire to ground screw or earth ground via conduit system. Wire the unit in accordance with Figure 5 on page 3.   See Table 3 on page 5 for required supply wire temperature ratings. Install the main housing and 116EX-B wall mount module to the ceiling mount module. Tighten the setscrew to secure the 116EX-B wall mount module to the ceiling mount module.

WARNING: To reduce the risk of ignition of hazardous atmospheres and shock, keep assembly tightly closed when circuits are energized.

2. Apply power to the unit and ensure proper function.

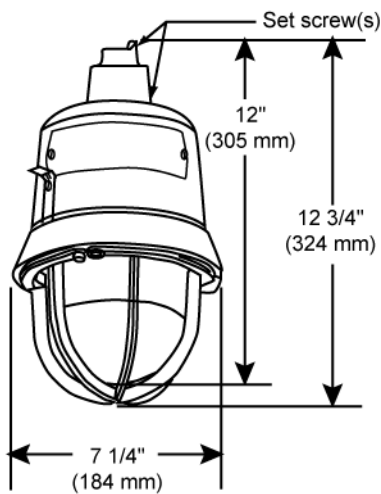**Figure 1: Detail of pendant mounting**
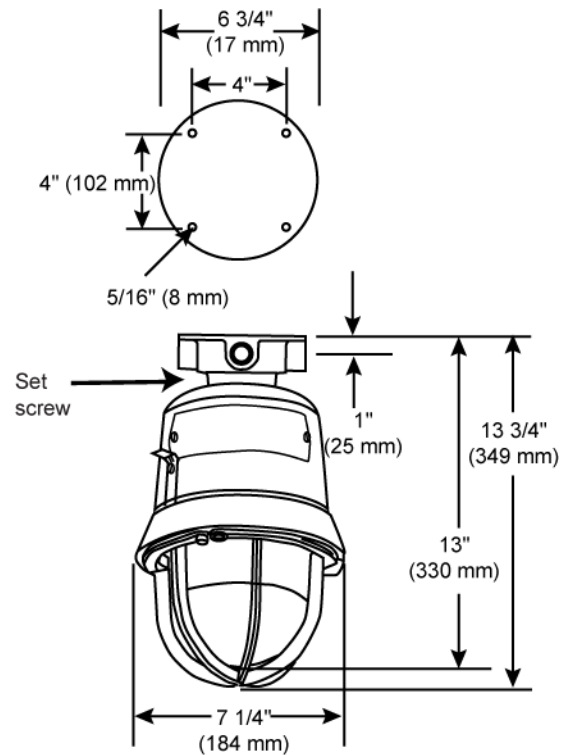

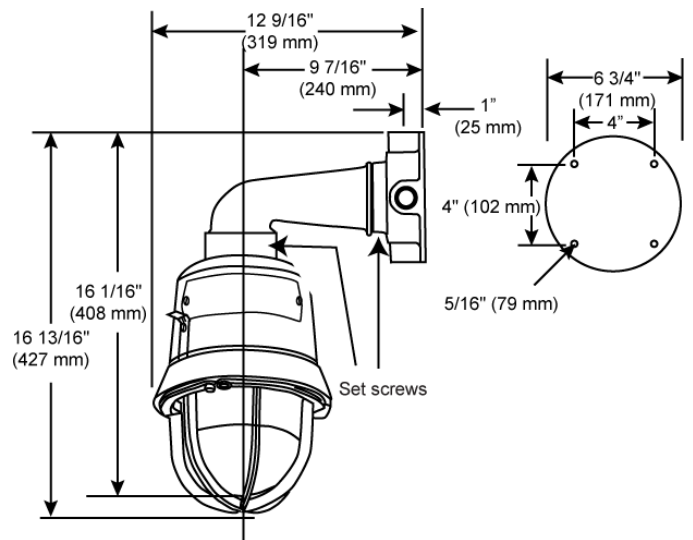**Figure 2: Detail of ceiling mounting**
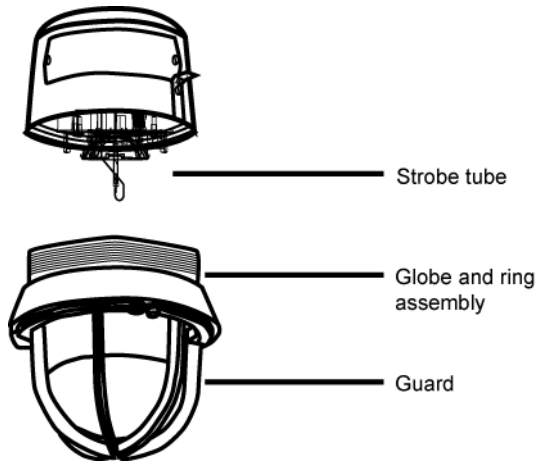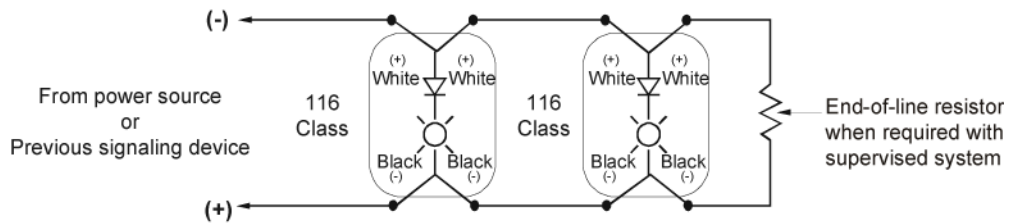

Figure 3: Detail of wall bracket mounting

Figure 4: Disassembly of the 116 Class fire alarm strobe

- Strobe tube
- Globe and ring assembly
- Guard

WARNING: To reduce the risk of ignition of hazardous atmospheres and shock, keep assembly tightly closed when circuits are energized.

WARNING: To reduce the risk of ignition of hazardous atmospheres and shock, disconnect from the supply and circuit and allow five (5) minutes for stored energy to dissipate before disassembling the unit.

Figure 5: Wiring

Legend
- Ⓢ Strobe
- ● Wire nut

Notes
- DC polarity of circuit shown in supervisory state (signal inactive). Reverse circuit polarity to activate signal.
- Electrical supervision requires wire run to be broken at each device.
- Device for constant input voltage. Do not connect to "coded" or pulsating voltage.
- For **non-fire alarm use, i.e., without field wire supervision**, the installer can tie the two white leads together and tie the two black leads together.
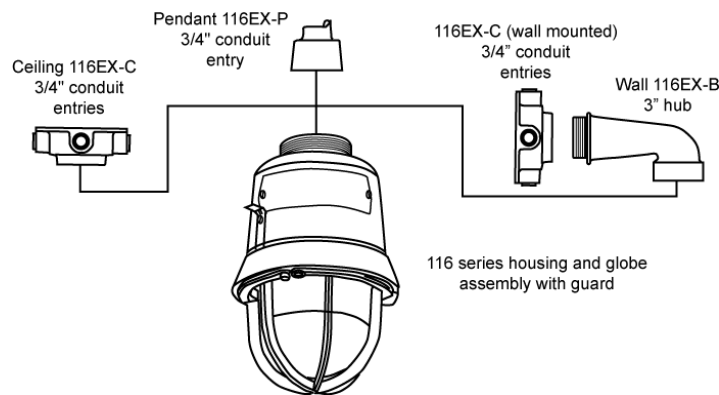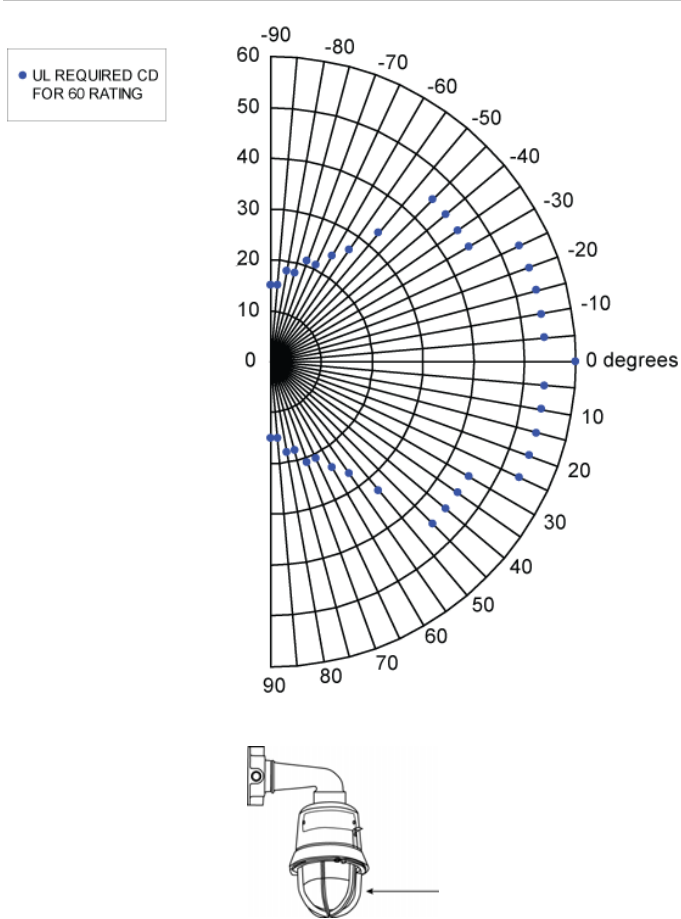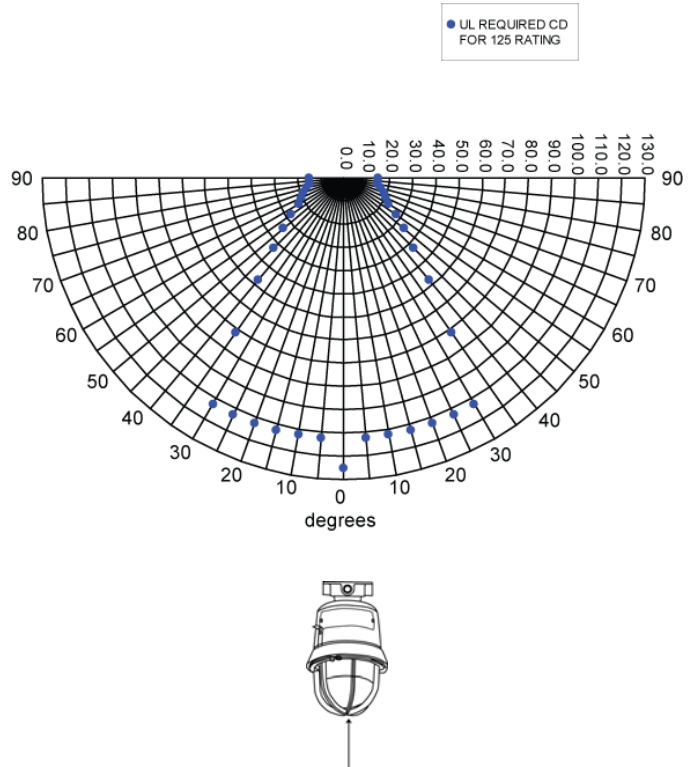
Figure 6: Mounting options

Figure 7: Effective candela light output for wall bracket mount, vertical plane (zero degree angle at side of globe)

Notes

- Optional dome guard shown, candela output readings taken without optional dome guard installed.

- Refer to "Specifications" on page 5 for candela ratings

Figure 8: Effective candela light output for ceiling mount, X & Y planes (zero degree angle at bottom of globe)

Notes

- Optional dome guard shown, candela output readings taken without optional doe guard installed.

- Refer to "Specifications" on page 5 for candela ratings

Specifications

Voltage	16 - 33 VDC / FWR
Max RMS operating current*	0.505 A at 24 VDC Regulated** 0.683 A at 24 VDC FWR
Candela rating (without guard)	
Wall	60 cd
Ceiling	125 cd
Candela rating (with guard)	
Wall	51 cd
Ceiling	86 cd

Caution: To prevent damage to the signal circuit and to otherwise assure continued proper functioning, DO NOT operate the unit outside of the regulated 24 VDC/FWR voltage range of 16 – 33 VDC/V FWR.

*The Max RMS operating current is defined as the current rating over the entire voltage range.

**The designation "Regulated 24" refers to the voltage range of 16 – 33 volts

Table 1: Compatible synchronization modules

Model names	Model numbers
Auto-sync output module	SIGA-CC1S
	SIGA-CC1S-LG
	SIGA-MCC1S
	SIGA-MCC1S-LG

Model names	Model numbers
Genesis signal master – remote mount	ADTG1M-RM
	EG1M-RM
	G1M-RM
	G1M-RM-LG
	MG1M-RM
	XLSG1M-RM
	ZG1M-RM

Table 2: 116 Class catalog numbers

Description	Catalog number	Housing color
Housing less mounting module	116DEGEX-FJ	Gray
	116DEGEX-FJ-R	Red
Ceiling mount module – 3/4" NPT	116EX-C	Gray
	116EXR-C	Red
Pendant mount module – 3/4" NPT	116EX-P	Gray
	116EXR-P	Red
Wall mount module (requires use of ceiling mount module)	116EX-B	Gray
	116EXR-B	Red

Table 3: Ratings

Ambient temp.	Supply wire temp. marking	Class I, Div. 2 Groups A, B	Class I, Div. 1 & 2 Groups C, D	Class II & III, Div. 1 Groups E, F, G	Class II & III, Div. 2 Groups F, G
40°C	75°C	T2B (260°C)	T6 (85°C)	T4A (120°C)	T4A (120°C)
55°C	90°C	T2B (260°C)	T6 (85°C)	T4 (135°C)	T4 (135°C)
65°C	105°C	T2B (260°C)	T6 (85°C)	T3C (160°C)	T3C (160°C)

Regulatory information

Manufacturer	Edwards, A Division of UTC Fire & Security Americas Corporation, Inc. 8985 Town Center Parkway, Bradenton, FL 34202, USA
Ratings	UL 1638 visual signaling – private mode emergency and general utility signaling
	UL 1971
	UL and cUL listed as a Type 3R and Type 4X enclosure

Contact information

For contact information, see www.edwardssignaling.com.