

# Edwards® 2440S & 2441S Series Strobe Signals

## Features

- Low current draw synchronous strobe
- Supervised wiring
- Terminals for easy wiring
- Red or white flame resistant housing
- Strobe available in 15, 30, 60, 15/75, and 110 candela models
- Control modules not required

## Description

The Edwards 2440S & 2441S Series synchronous strobes are visual alarm signals designed for use in fire alarm applications.

The strobes employ a unique micro-processor design that assures all units operate at the same time and at a rate of one flash per second thereby reducing the risk of causing disorientation of a small portion of the population having photosensitivity.

Screw terminals are provided for easy installation. The strobes require a continuous (non-pulsed) DC source.

## Agency Approvals

- Strobe: UL 1971 Listed for the Hearing Impaired
- Strobe: UL 1638 Listed Private Mode (Indoor and not for the hearing impaired)
- Meets NFPA and ADA requirements
- Engineered thermoplastic housing UL flame rated 94V-0



Cat. No. 2440S



Cat. No. 2441S

## Specifications

- See Specification Information Table on page 12-24.

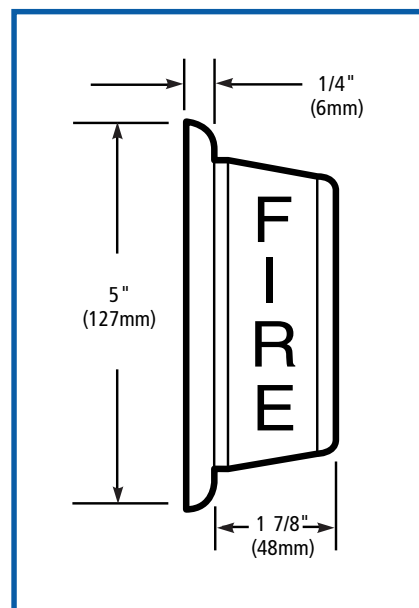
## Installation

See Strobe Application Data, page 12-38, for the following: sizing wall and ceiling mounted strobes to room size, mounting strobes in corridors, and mounting strobes in sleeping rooms.

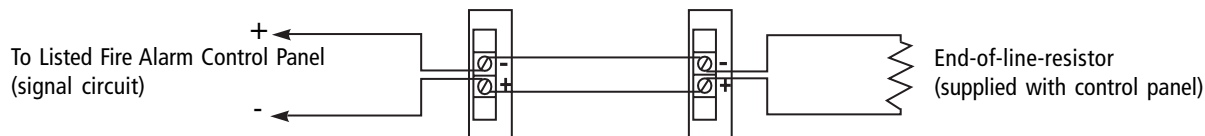
See System Design Criteria on page 12-51.

## Applications

The 2440S & 2441S series strobe is a visual signaling appliance for installations that operate in conjunction with an installed fire alarm panel and detection devices.



Polarity of signal circuit shown in supervisory state. On alarm, polarity reverses. For wiring installation details, see the applicable control panel installation manual.



**CAUTION:** This unit is designed to be used on signal circuits that output a constant voltage of 20-24V DC. Do not connect this unit to a coded or pulsating voltage. Electrical supervision requires wire run to be broken at each terminal. Do not loop signaling circuit field wires around terminals.

## Specification Information

Catalog Number	2440S-15-(†) 2441S-15-(†)	2440S-30-(†) 2441S-30-(†)	2440S-60-(†) 2441S-60-(†)	2440S-15/75-(†) 2441S-15/75-(†)	2440S-110-(†) 2441S-110-(†)
<b>UL 1638 Strobe Flash Output</b>	Not UL 1638 Rated	30 cd	60 cd	75 cd	120 cd
<b>UL 1971 Strobe Flash Output</b>	15 cd (Wall Mount Only)	30 cd Wall 15 cd Ceiling	60 cd Wall 30 cd Ceiling	15 cd Wall 15 cd Ceiling	110 cd Wall 60 cd Ceiling
<b>Operating Voltage</b>	20 to 24V DC Continuous (Non-pulsed)				
<b>Avg. Operating Current (1,4)</b>	70 mA @ 24V DC 79 mA @ 20V DC	105 mA @ 24V DC 125 mA @ 20V DC	160 mA @ 24V DC 190 mA @ 20V DC	105 mA @ 24V DC 125 mA @ 20V DC	219 mA @ 24V DC 272 mA @ 20V DC
<b>Peak Operating Current (1,3)</b>	125 mA @ 20V DC	185 mA @ 20V DC	240 mA @ 20V DC	185 mA @ 20V DC	340 mA @ 20V DC
<b>Avg. Operating Current (2)</b>	60 mA @ 24V DC 70 mA @ 20V DC	90 mA @ 24V DC 102 mA @ 20V DC	130 mA @ 24V DC 155 mA @ 20V DC	90 mA @ 24V DC 102 mA @ 20V DC	190 mA @ 24V DC 235 mA @ 20V DC
<b>Peak Operating Current (2,3)</b>	375 mA @ 20V DC	530 mA @ 20V DC	700 mA @ 20V DC	530 mA @ 20V DC	910 mA @ 20V DC
<b>Peak Inrush Current (4)</b>	7.6 A @ 24V DC	7.6 A @ 24V DC	7.6 A @ 24V DC	7.6 A @ 24V DC	7.8 A @ 24V DC
<b>Strobe Flash Rate</b>	Synchronized at 1 flash per second (no external control module required)				
<b>Strobe Lens</b>	Clear Lexan				
<b>Wire Connection</b>	Terminals, Polarized Input, #12 AWG				
<b>Lens Markings</b>	Red "FIRE" Vertical Both Sides (Wall Mount)				
<b>Faceplate Material</b>	Textured Color-Impregnated Noryl (Exceeds 94V-0 UL Flammability Rating)				
<b>Mounting</b>	Flush: 1-Gang (2" Deep Min.) Standard Electrical Box Surface: 1-Gang Wiremold Box				
<b>Operating Environment</b>	85% Relative Humidity @ 86°F (30C); 32° to 120°F (0° to 49°C) Variable Ambient Temp.				
<b>Agency Listing</b>	UL 1971, UL 1638 and UL 464 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)				

† The 2440S & 2441S strobes are available with either a red faceplate or a white faceplate; for a red faceplate, put an "R" in this position and for a white faceplate, put a "W" in this position.

**Note 1:** Connected to filtered DC source.

**Note 2:** Connected to unfiltered DC source (full wave rectified)

**Note 3:** Use the peak current rating to establish the maximum number of strobes, wire gauge and standby power requirements. Consult the panel manufacturer to determine the maximum number of strobes for each signaling circuit.

**Note 4:** Peak inrush current at 24V DC for less than 50 microseconds.

# Edwards® Strobe Application Data



## Description

The National Fire Protection Association (NFPA) has established guidelines for the installation of visual signaling appliances for rooms, corridors, and sleeping areas. These guidelines, referenced in NFPA 72, Chapter 6, take into consideration the effective intensity of the strobe light, the size of the space, and whether the appliance is installed on the wall or ceiling. Edwards synchronous, fire alarm strobes are listed to UL Standard 1971 and conform to the ADA (Americans with Disabilities Act) equivalent facilitation when installed using these guidelines. When employing these guidelines consult the Authority Having Jurisdiction.

## Space Allocation for Rooms

Table 1 provides the candela rating required for strobes when installed on walls in rooms of varying size. When ceiling mounted, the number of strobes may be reduced while continuing to provide equivalent facilitation. Table 2 lists room, ceiling height, and appropriate light intensity for the given space.

## Space Allocation for Corridors

Strobes mounted in corridors not greater than 20 feet (6.1m) wide shall be located no more than 15 feet (4.6m) from the end of the corridor with a separation no greater than 100 feet (30.5m) between appliances. They shall be wall mounted in accordance with Table 3.

## Space Allocation for Sleeping Rooms

Strobes mounted on the wall with the top of the strobe greater than 24 inches (61cm) from the ceiling shall be rated 110 cd. Strobes closer to the ceiling than 24 inches (61cm) shall be rated 177 cd.

**Table 1**

Max. Room Size	Minimum Required Light Output, Candela (CD) Effective Intensity		
	One Light Per Room (CD)	Two Per Room (On Opposite Walls) (CD)	Four Per Room (One per Wall) (CD)
20' x 20'	15	—	—
30' x 30'	30	15	—
40' x 40'	60	30	15
50' x 50'	95	60	30
60' x 60'	135	95	30
70' x 70'	185	110	60
80' x 80'	—	140	60

**Note:** The bottom of the wall mounted appliance should be not less than 80 inches (203cm) or more than 96 inches (244cm) from the floor.

**Table 2**

Max. Room Size	Minimum Required Light Output, Candela (CD) Effective Intensity	
	Maximum Ceiling Height (ft.)	One Light (CD)
20' x 20'	10	15
30' x 30'	10	30
40' x 40'	10	60
50' x 50'	10	95
20' x 20'	20	30
30' x 30'	20	45
40' x 40'	20	80
50' x 50'	20	115
20' x 20'	30	55
30' x 30'	30	75

**Note:** Where ceiling heights exceed 30 ft. (91.4m), visible signaling appliances should be suspended at or below 30 ft. (91.4m) or wall mounted.

**Note:** The above table is based on locating the visible signaling appliance at the center of the room. Where it is not located at the center of the room, the effective intensity (cd) should be determined by doubling the distance from the appliance to the farthest wall to obtain the max. room size.

**Table 3**

Corridor Length (ft.)	Min. Number of 15 cd Visible Appliances Required
0-30	1
31-130	2
131-230	3
231-330	4
331-430	5
431-530	6