

# Bell-Strobe Plate

## 403 Series



**403 Series c/w 439 - 6 inch Bell  
(bell ordered separately)**



### Overview

Edwards 403 Series Bell-Strobe Plates are specially designed for use with compatible life safety communication and control equipment to alert the hearing impaired of a life safety event. Strobes are available with 15 cd, 15/75 cd, 30 cd, and 110 cd effective flash intensity. They are fully compatible with Genesis signals.

As part of the Enhanced Integrity line of products, 403 series strobes exceed UL synchronization requirements (within 10 milliseconds other over a two-hour period) when used with a separately-installed MG1M Signal Master or GSA-CC1S Synchronization Module.

The flash from 403 series strobes can be noticed from almost any position in the room, corridor, or large open space. Light dispersion is controlled with a specially shaped reflector that directs a minimum of 12 per cent of rated light output above and below the strobe, and a minimum of 25 per cent of rated light straight out both sides.

403 Series strobes are designed for 16 to 33 Vdc operation and must be connected to signal circuits that output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision and polarized connections are made to 7" (175 mm) wire lead.

The rugged steel plate with smooth bevelled edges is finished in a durable, high quality, baked red epoxy polyester powder-coat.

### Standard Features

- Converts Edwards 439 model bells**  
 Ideal for renovation work; easily adapts to existing or new Edwards bells for conversion into Bell/Strobes. Mounts to North American one-gang, two-gang, octagon, and 4-inch square boxes.
- UL 1971-listed synchronizing strobe**  
 403 Series strobes synchronize to the latest UL 1971 requirements when used with an external control source.
- Genesis-compatible**  
 All Genesis and Integrity strobes on the same circuit meet UL 1971 synchronization requirements when used with an external control module.
- Approved for public and private mode applications**  
 UL 1971-listed as signaling devices for the hearing impaired and UL 1638-listed as protective visual signaling appliances.
- Rugged steel plate**  
 Strong CRS plate with durable baked red epoxy polyester powder-coat finish.
- Field changeable field markings**  
 Lens language or standard "FIRE" marking is easily changed with optional LKW series lens kits.

# Application

**NOTE:** The installation of visible and audible signals are subject to national and local standards, codes, and ordinances. Consult your Authority Having Jurisdiction for device installation requirements, application standards, and minimum performance specifications.

## Bells

Suggested sound pressure levels in each signaling zone for alarm or alert signals are at least 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 1500mm above the floor. The average ambient sound level is the RMS, A-weighted sound pressure measured over a 24-hour period.

## Strobes

Edwards strobes are UL 1971-listed for use indoors as wall-mounted public-mode notification appliances for the hearing impaired. Prevailing codes require strobes to be used where ambient noise conditions exceed specified levels, where occupants use hearing protection, and in areas of public accommodation. Consult with your Authority Having Jurisdiction for details.

As part of the Enhanced Integrity line of products, 403 Series strobes exceed UL synchronization requirements (within 10 milliseconds other over a two-hour period) when used with a synchronization source. Synchronization is important in order to avoid epileptic sensitivity.

Integrity strobes are fully compatible with Edwards Genesis signals.

**NOTE:** The flash intensity of some visible signals may not be adequate to alert or waken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. Edwards recommends that strobes in sleeping rooms be rated at at least 110 cd.

**WARNING:** These devices will not operate without electrical power. As fires frequently cause power interruptions, further safeguards such as backup power supplies may be required.

# Typical Wiring

## SAME SIGNAL CIRCUIT

The bell and strobe can be connected to the same signal circuit (as shown) if the circuit is configured for continuous signal operation.

CAUTION: Electrical supervision requires wire run to be broken at each device.

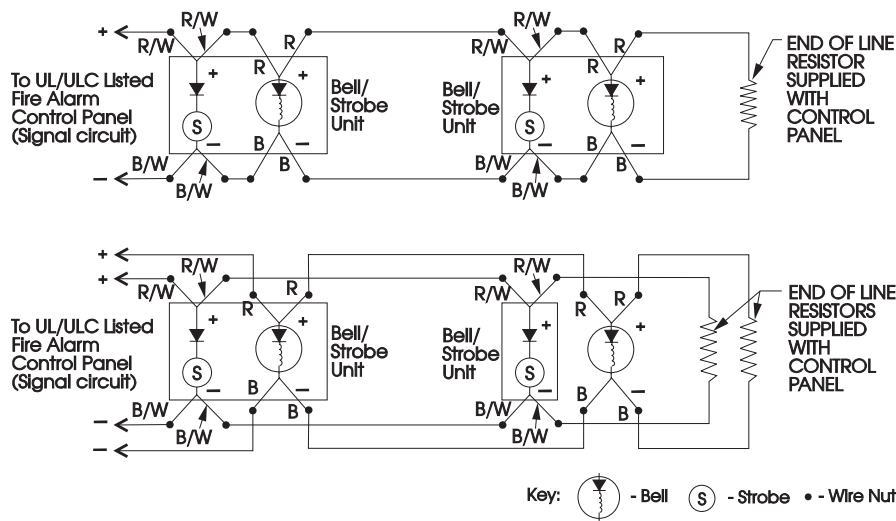
Do not loop signal circuit field wires around the Bell/Strobe units leads.

## SEPARATE SIGNAL CIRCUITS

The bell and strobe can be connected to different signal circuits (as shown). The strobe is designed to be used on circuits that output a constant voltage. Do not connect strobe to a coded or pulsating voltage.

CAUTION: Electrical supervision requires wire run to be broken at each device.

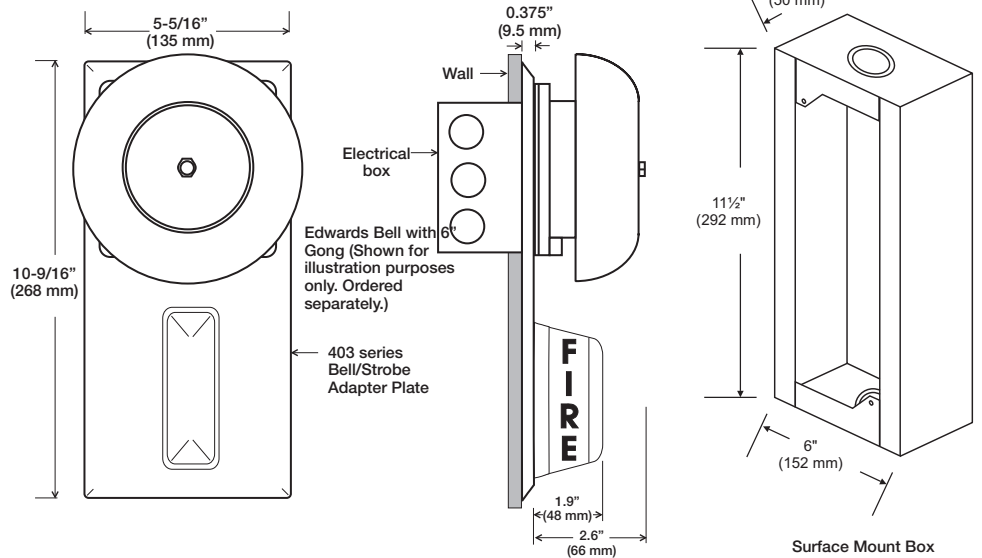
Do not loop signal circuit field wires around the Bell/Strobe units leads.



## Installation and Mounting

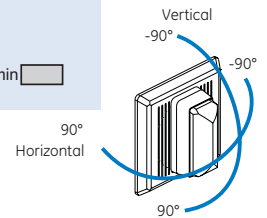
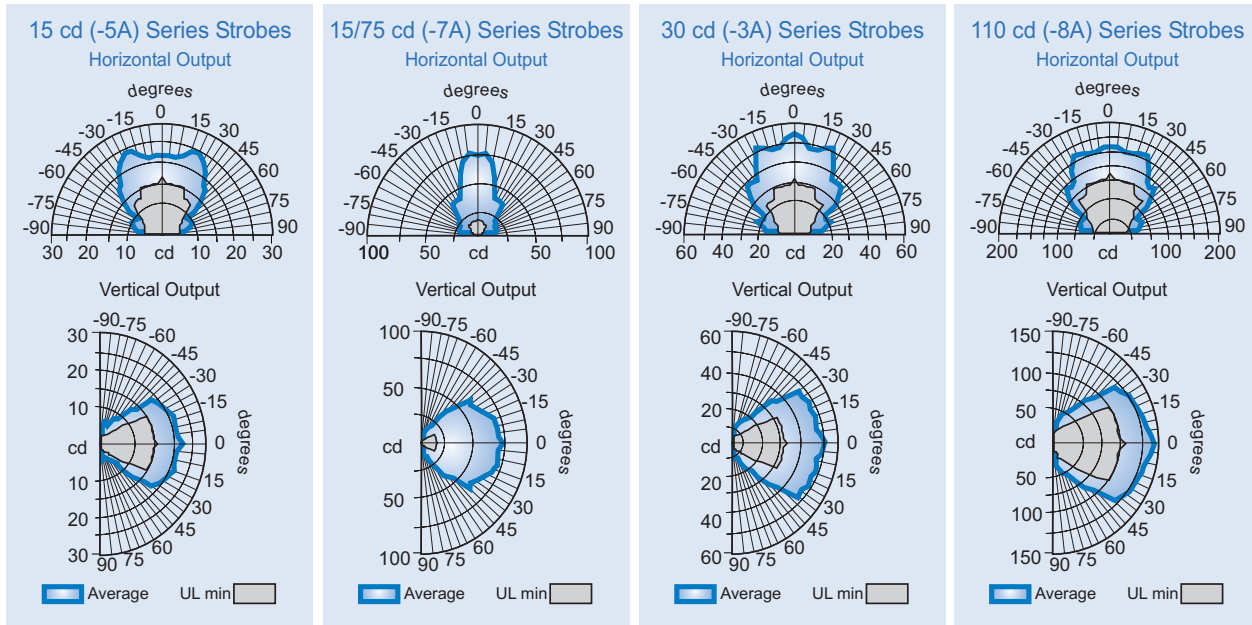
The 403 series bell/strobe plates install to a variety of standard, flush mounted, North-American electrical boxes. This includes one-gang, two-gang, 3-1/2 inch & 4 inch octagon, and 4 inch square. The plate must be installed along with Vigilant's model 439 series 6 inch (150 mm), 8 inch (200 mm), and 10 inch (250 mm) bells (order separately). The strobe must be connected to a signal circuit which outputs a constant (not pulsed) voltage; the bell can be connected to pulsed or continuous voltage circuits.

Edwards recommends that these fire alarm bell/strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.



## Light Distribution Patterns

### UL 1971 WALL MOUNTED STROBE LIGHT OUTPUT



## Operating Current (RMS)

UL Rating	15 cd	15/75 cd	30 cd	110 cd
16 Vdc	109	150	130	329
16 Vfwr	150	210	189	420

Typical Current	15 cd	15/75 cd	30 cd	110 cd
24 Vdc	69	90	89	180
24 Vfwr	108	128	134	260

Vdc: Volts direct current, regulated and filtered  
Vfwr: Volts full wave rectified

### Current Draw Notes and Comments

1. Current values are shown in mA.
2. UL Nameplate Rating can vary from Typical Current due to measurement methods and instruments used.
3. Edwards recommends using the Typical Current for system design including NAC and Power Supply loading and voltage drop calculations.
4. Use the 16 Vdc RMS current ratings for filtered power supply and battery AH calculations. Use the 16 Vfwr RMS current ratings for unfiltered power supply calculations.
5. Fuses, circuit breakers and other overcurrent protection devices are typically rated for current in RMS values. Most of these devices operate based upon the heating affect of the current flowing through the device. The RMS current determines the heating affect and therefore, the trip and hold threshold for those devices.

## Specifications

Catalog Number	403-5A-R	403-7A-R	403-3A-R	403-8A-R
UL 1638/ULC S526 Rated Strobe Output	15 cd	15/75 cd	30 cd	110 cd
UL 1971 Rated Strobe Output - candela (cd)	15 cd (wall mount only)	15 wall 15 ceiling	30 wall 15 ceiling	110 wall 60 ceiling
Strobe Flash Rate	Synchronized at one flash per second. External control module necessary to meet UL 1971 synchronization requirements of 10 milliseconds over a two-hour period.			
Synchronization Sources	MG1M-RM, GSA-CC1S, GSA-MCC1S, MIRBPS6A, MIRBPS10A, APS6A, APS10A			
Strobe Operating Volts	16 to 33 Vdc (Continuous)			
Operating Environment	INDOOR: 32-120° F (0-49° C) ambient temperature. 85% relative humidity @ 30° C			
Lens Markings	Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW series for optional markings			
Wire Connections	Strobe 7 in (175 mm) color-coded polarized leads - 2 INs/2 OUTs, Bell (see 439 series cat sheet)			
Flash Tube Enclosure	Clear LEXAN			
Strobe Plate, Finish	CRS Steel - 5-5/16 in x 10-9/16 in (135 mm x 268 mm), red baked epoxy polyester powder-coat finish			
Mounting	Fits over FLUSH mounted North-American boxes - One-gang & two-gang, 3-1/2 inch & 4 inch octagon, 4 inch square			
Agency Listings	UL 1971, UL 1638, ULC S526, CSFM, MEA, FM (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)			

## Ordering Information

Cat. Number	Description	Ship Wt. lb (kg)
403-5A-R	Bell-Strobe Plate - 15 cd, Red	
403-7AR	Bell-Strobe Plate - 15/75 cd, Red	
403-3A-R	Bell-Strobe Plate - 30 cd, Red	2.0 (0.9)
403-8A-R	Bell-Strobe Plate - 110 cd, Red	
403-SB	Surface box for 403, Red; 6" W x 11½" H x 2" D (152 x 292 x 50mm)	

### Synchronization Sources

MMG1M-RM	Genesis Signal Master Remote Mount (1-gang)	0.2 (0.1)
GSA-CC1S	Synchronization Output Module (Standard Mount) - UL/ULC Listed	0.5 (0.23)
GSA-MCC1S	Synchronization Output Module (UIO Mount) - UL Listed	0.18 (0.08)
MIRBPS6A, APS6A	6.5 Amp Booster Power Supply	13 (5.9)
MIRBPS10A, APS10A	10 Amp Booster Power Supply	13 (5.9)

### Lens Marking Kits (see note 1)

LKW-1	"FIRE", Wall Orientation (supplied)	
LKW-1R	"FIRE", Wall Orientation, RED	
LKW-2	"FEU", Wall Orientation	
LKW-3	"FIRE/FEU", Wall Orientation	
LKW-4	"SMOKE", Wall Orientation	
LKW-5	"HALON", Wall Orientation	0.1 (.05)
LKW-6	"CO2", Wall Orientation	
LKW-7	"EMERGENCY", Wall Orientation	
LKW-8	"ALARM", Wall Orientation	
LKW-9	"FUEGO", Wall Orientation	

\* Add Suffix "W" to catalog no. for WHITE. (e.g. INT-7ATW)

Note 1 - Change "W" to "C" for CEILING mount. (e.g. LKC-1)



Contact us...

Email: [edwards.fire@fs.utc.com](mailto:edwards.fire@fs.utc.com)

Web: [www.vigilant-fire.com](http://www.vigilant-fire.com)

Vigilant is an **EDWARDS** brand.

1016 Corporate Park Drive  
Mebane, NC 27302

© 2013 UTC Fire & Security Americas Corporation, Inc. All rights reserved.  
Specifications subject to change without notice. Edwards is part of UTC Climate, Controls & Security, a unit of United Technologies Corporation.

---