

E90 High-candela, Ceiling-mount, Low-profile Speaker Strobes

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- ▶ 24 VDC input, filtered or unfiltered
- ▶ Field-selectable candela settings (115 cd or 177 cd)
- ▶ ADA, NFPA, ANSI compliant
- ▶ Compatible with SM and DSM Synchronization Modules
- ▶ Low average current draw with zero inrush current

The E90 High-Candela Speaker Strobes provide high audio output with clear audibility, and two field-selectable light intensity settings (115 cd or 177 cd). They are designed to meet the critical needs of the life safety industry for effective emergency voice communications, tone signaling and visible signaling to alert the hearing impaired. These notification appliances provide a way to alert hearing impaired persons of an alarm condition, and are well-suited for areas of public gathering such as stores, schools, hospitals, nursing homes and offices.

A speaker mounting plate with a built-in level adjustment allows for a faster and easier installation. The two-screw grill cover creates an attractive appearance.

The high-efficiency speakers are designed for maximum output at a minimum wattage across a frequency range of 400 Hz to 4 kHz.

When used with the SM (single) or DSM (dual) Synchronization Modules, the strobe produces a synchronized flash for compliance with ADA guidelines concerning photosensitive epilepsy. All strobe input is

compatible with standard reverse polarity type supervision of circuit wiring by a fire alarm control panel (FACP).

Certifications and approvals

Cooper Wheelock, Inc. holds these Listings and Approvals:

Region	Certification	
USA	UL	UUKC: Signaling Appliances and Equipment for the Hearing Impaired (UL1971), UUMW: Speakers and Amplifiers for Fire Protective Signaling Systems (UL1480, UL1711, and UL2043)
	CSFM	see our website

Installation/configuration notes

Compatible Products

The following products are compatible with the E90 Speaker Strobes:

Category	Product ID	Product Description
Control Panels	D7022 ¹	Conventional FACP
	D7024 ²	Conventional or Addressable FACPs
	D8024 ¹	Analog FACP
	D9124 ¹	Addressable FACP
	D10024A ¹	Analog FACP
	FPD-D7024 ²	Conventional or Addressable FACPs
	FPA-1000	Analog Addressable Fire Panels
Modules	SM-12/24-R	Synchronization module (red)
	DSM-12/24-R	Dual synchronization module (red)

These speakers are compatible with Wheelock SAFEPATH4 Facility Communication Systems and Bosch Voice Evacuation Systems.

¹ For synchronization, use the SM or DSM modules with these control panels. The synchronization module must be set for 24 V operation. When used, the D7022 must be set for 24 VDC operation.

² When used with a D7039 Multiplex Expansion Module, the D7024 or FPD-7024 becomes an addressable fire alarm control panel (FACP).

Mounting

The low profile design of these notification appliances creates more wiring space in standard electrical back boxes. The speaker mounting plate incorporates a built-in level adjustment feature allowing for a faster and easier installation.

These speaker strobes ceiling mount on the indicated back boxes for the indicated applications:

	Conduit Applications	Surface Mounted	Flush Mounted
Four-inch square*			•
SBB Back Box	•	•	

* Requires an SER extension ring.

Wiring



Notice

Do not use the strobe unit in coded or pulsed signaling circuits.

The input terminals accept wires with diameters between 18 AWG and 12 AWG (ISO 0.75 mm² and 4 mm²).

Parts included

Quant.	Component
1	Speaker Strobe
1	Mounting Plate

1 Hardware pack

1 Literature pack

Technical specifications

Electrical

Strobe Current (RMS maximum)

VDC: 115 cd = 300 mA; 177 cd = 420 mA

VFWR: 115 cd = 455 mA; 177 cd = 645 mA

Voltage (input)

Nominal: 24 VDC

Range: 16 VDC or FWR to 33 VDC or FWR

Environmental

Relative Humidity: Up to 85%, non-condensing

Temperature (Operating): +32°F to +120°F (0° to +49°C)

Mechanical

Candela Selections: 115 cd or 177 cd

Dimensions (diameter x D): 7.25 in. x 2.5 in. (18.4 cm x 6.4 cm)

Material: Molded plastic enclosure incorporating a Xenon flashtube and Lexan lens.

Speaker Volume at 10 ft (3 m)

0.125 (1/8) W: 77.5 dBA

0.25 (1/4) W: 80.4 dBA

0.5 (1/2) W: 83.2 dBA

1 W: 85.7 dBA

2 W: 87.8 dBA

Trademarks

All hardware and software product names used in this document are likely to be registered trademarks and must be treated accordingly.

Ordering information

E90-24MCCH-FN Low-Profile Speaker Strobe (nickel)

Nickel finish, 24 VDC ceiling-mount device with high audio output with clear audibility, dual voltage capability (25 VRMS or 70 VRMS), field-selectable taps from 1/8 W to 2 W, and strobe intensities of 115 cd or 177 cd.

Order number **E90-24MCCH-FN**

E90-24MCCH-FR Low-Profile Speaker Strobe (red)

Red, 24 VDC ceiling-mount device with high audio output with clear audibility, dual voltage capability (25 VRMS or 70 VRMS), field-selectable taps from 1/8 W to 2 W, and strobe intensities of 115 cd or 177 cd.

Order number **E90-24MCCH-FR**

E90-24MCCH-FW Low-Profile Speaker Strobe (white)

White, 24 VDC ceiling-mount device with high audio output with clear audibility, dual voltage capability (25 VRMS or 70 VRMS), field-selectable taps from 1/8 W to 2 W, and strobe intensities of 115 cd or 177 cd.

Order number **E90-24MCCH-FW**

Accessories

SBB-R Surface-mount Back Box (red)

14 cm (5.5 in.) x 14.2 cm (5.6 in.) x 9.1 cm (3.6 in.)

Order number **SBB-R**

SBB-W Surface-mount Back Box (white)

14 cm (5.5 in.) x 14.2 cm (5.6 in.) x 9.1 cm (3.6 in.)

Order number **SBB-W**

SER-R Square Semi-flush Extension Ring (red)

12.7 cm (5 in.) square by 4 cm (1.5625 in.) deep

Order number **SER-R**

SER-W Square Semi-flush Extension Ring (white)

12.7 cm (5 in.) square by 4 cm (1.5625 in.) deep

Order number **SER-W**

SSB-4 Ceiling Support Bridge

60.3 cm (23.75 in.) long by 16.5 cm (6.5 in.) wide

Order number **SSB-4**

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