E50 Series

Speaker and Speaker Strobes

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Audio/Visual Devices

Description

The Cooper Wheelock Series E50 Speakers and Speaker Strobes feature high efficiency sound output, with dual voltage (25/70 VRMS) capability and field selectable taps from 1/8 to 2 watts. They are designed to provide a sleek, aesthetic appearance for emergency voice/alarm communications systems. All Series E50 models mount to standard 4" x 2-1/8" electrical boxes (with no extension ring required) and incorporate a speaker mounting plate for faster installation. The grille cover snaps on so no mounting screws are visible. Attractive surface boxes are also available for surface installations.

The Series E50 Speaker Strobe models use Cooper Wheelock low current draw Series RSS strobes for wall mounted applications. Strobe options include patented MCW multi-candela strobes with field selectable candela settings of 15/30/75/110 cd or high intensity MCWH strobes with field selectable 135/185 candela. Models with 1575 candela (75 cd on axis) are also offered.

Series E50 Speakers and Speaker Strobes provide high audio output with clear audibility and 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.

The strobe portion of all Series E Speaker Strobes may be synchronized when used in conjunction with the Cooper Wheelock SM, DSM Sync Modules or the Cooper Wheelock's PS-24-8MC Power Supply with Patented Sync Protocol. Cooper Wheelock synchronized strobes offer an easy way to comply with ADA and NFPA regulations concerning photosensitive epilepsy.

Series E50 Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing-Impaired) and Standard 1480 (Speaker Appliances). All inputs employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring and are compatible with FACP line supervision.

Color options for the Series E50 Speakers and Speaker Strobes are red or off-white.

Features

Approvals include: UL Standard 1971, UL Standard 1480, New York City (MEA), California State Fire Marshal (CSFM), Factory Mutual (FM) and Chicago (BFP). See approvals by model in Specifications and Ordering Information

ADA/NFPA/ANSI compliant

Complies with OSHA 29 Part 1910.165

Wall mount speaker strobe models with field selectable candela settings of 15/30/75/110cd or 135/185cd (Multi-Candela models), or 1575cd (Single Candela model)

Field selectable taps for 25 or 70 VRMS operation from 1/8 watt up to 2 watts

High efficiency design for maximum output at minimum wattage across a frequency range of 400 to 4000 HZ

24 VDC strobes produce 1 flash per second with wide UL "Regulated Voltage" of 16 to 33 volts using filtered DC or unfiltered VRMS input voltage

Synchronize with Cooper Wheelock SM, DSM or Cooper Wheelock PS-12/24-8CP and PS-12/24-8MP Power Supply with built-in sync protocol



Series E50 Speaker



Series E50 Speaker Strobe

Mount to 4" square x 2-1/8" deep backbox with no extension ring required

Snap on grille cover with no visible mounting screws

Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires

WARNING: PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT.
VISIT WWW.COOPERWHEELOCK.COM OR CONTACT COOPER WHEELOCK FOR THE CURRENT INSTALLATION INSTRUCTIONS.
FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

General Notes

Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range". Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.

All candela ratings represent minimum effective Strobe intensity based on UL Standard 1971.

Series NS Strobe products are listed under UL Standard 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).

Series NH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).

"Regulated Voltage Range" is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology "Listed Voltage Range".

Table 1: Average RMS Current

E50 Speaker Strobes	E50 Strobe Current - Wall Mount						
	241575W	24MCW				24MCWH	
	1575cd	15cd	30cd	75cd	110cd	135cd	185cd
24VDC	.060	.041	.063	.109	.140	.195	.270
UL max.*	.090	.060	.092	.165	.220	.300	.420

***NOTE:** RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For unfiltered FWR ratings, see installation instructions.*

Table 2: E50 UL Reverberant dBA @ 10 Feet**

Watts	1/8	1/4	1/2	1	2
E50 Speaker	77	79.5	82.5	85	88
E50 Speaker Strobe	77	79.5	82.5	85	88

***NOTE:** dBA ratings are based on UL testing under UL Standard 1480*

Architectural/Engineering Specifications

The speaker appliances shall be Cooper Wheelock Series E50 Speakers and the speaker strobe appliances shall be Cooper Wheelock Series E50 Speaker Strobes or approved equals. The speakers shall be UL Listed under Standard 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL Standard 1971 for Signaling Devices for the Hearing-Impaired. In addition, the strobes shall be certified to meet the requirements of FCC Part 15, Class B.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 2 watts. All models shall have listed sound output of up to 89 dBA at 10 feet and a listed frequency response of 400 to 4000 Hz. The speaker shall incorporate a sealed back construction. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes. The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall be of low current design. Where Multi-Candela Speaker Strobes are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 at 15/30/75/110cd or 135/185cd for wall mounting. The selector switch for selecting the candela shall be tamper resistant. The 1575 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required.

When synchronization is required, the strobe portion of the appliance shall be compatible with the Cooper Wheelock's SM, DSM sync modules or Cooper Wheelock PS-24-8MC Power Supply with built-in Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

The speaker and speaker strobe appliances shall be designed for indoor flush mounting to 4" x 2-1/8" electrical boxes without need for an extension ring or surface mounting to Cooper Wheelock's E50SB or E50SSB surface boxes. The speaker and speaker strobe shall incorporate a speaker mounting plate with a snap-on grille cover. The finish of the Series E50 speakers and speakers strobes shall be white or red.

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. *Consult factory for latest listing status.*

- **UL Listed:** S2652 (all); S5391 (E50-241575W-FR, E50-241575W-FW, E50-24MCW-FR, E50-24MCW-FW)
- **MEA:** 151-92-E
- **CSFM:** 7125-0785-165; 7320-0785:166
- **FM Approved**
- **Bureau of Fire Protection - Chicago**

Ordering Information

Model	Wall Mount	Ceiling Mount	Strobe Candela	Grill Color	Flush Mount Backbox	Surface Mount Backbox	Mounting Options	Agency Approvals				
								UL	MEA	CSFM	FM	BFP
E50-R	X	X	-	Red	4" x 4" x 2-1/8"	E50SB-R	E,O,P,Q,R,U,Y,AA	X	X	X	X	*
E50-W	X	X	-	White	4" x 4" x 2-1/8"	E50SB-W	E,O,P,Q,R,U,Y,AA	X	X	X	X	*
E50-241575W-FR	X	-	15 (75 on Axis)	Red	4" x 4" x 2-1/8"	E50SSB-R	E,Q,U,BB	X	X	X	X	*
E50-241575W-FW	X	-	15 (75 on Axis)	White	4" x 4" x 2-1/8"	E50-SSB-W	E,Q,U,BB	X	X	X	X	*
E50-24MCW-FR	X	-	15/30/75/110	Red	4" x 4" x 2-1/8"	E50SSB-R	E,Q,U,BB	X	X	X	X	*
E50-24MCW-FW	X	-	15/30/75/110	White	4" x 4" x 2-1/8"	E50-SSB-W	E,Q,U,BB	X	X	X	X	*
E50-24MCWH-FR	X	-	135/185	Red	4" x 4" x 2-1/8"	E50SSB-R	E,Q,U,BB	X	X	X	X	*
E50-24MCWH-FW	X	-	135/185	White	4" x 4" x 2-1/8"	E50-SSB-W	E,Q,U,BB	X	X	X	X	*

***NOTE:** PENDING.*

***NOTE:** Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Cooper Wheelock Inc. standard terms and conditions.*

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ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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