

Exceder LED High Fidelity Speaker Strobes & Speakers



Description

Eaton has designed its Wheelock Exceder™ LED Speaker Strobes and Speakers for high fidelity sound output for indoor ceiling-mount applications. With the widest frequency response range (300 to 8000 Hz) in the industry, the Series LSPKC and LSPSTC feature leading intelligibility with crisp, clear voice messages and tone signaling, ideal for emergency communications, mass notification, voice evacuation and fire alarm.

The Wheelock Exceder LED strobe models are the first notification appliances in the industry that utilize Light Emitting Diode (LED) as the light source—a breakthrough optical design, resulting in best-in-class efficiency that enables material and system cost savings, allowing for a greater number of appliances on the notification appliance circuit and fewer power supplies. Speaker strobe models feature a wide range of candela settings (15, 30, 75, 95 cd) on a single appliance. All switches to change settings can be set without the use of a tool and are located behind the appliance to prevent tampering.

Providing a sleek aesthetic appearance in a small, compact ceiling design, the Exceder LED High Fidelity Speakers and Speaker Strobes feature dual voltage (25/70 VRMS) capability and field selectable taps from 1/8 to 2 watts. The low profile design incorporates a speaker mounting plate for faster and easier installation. Each model has a built-in level adjustment feature and a snap-on grille cover. All inputs employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Exceder LED speaker strobes may be synchronized when used in conjunction with the Wheelock DSM Sync Modules, Wheelock Power Supplies, SAFEPATH family of products or other manufacturers panels incorporating the Wheelock Patented Sync Protocol. Wheelock synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

The Exceder LED High Fidelity speaker strobes and speakers notification appliances are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing-Impaired) and Standard 1480 (Speaker Appliances), and ULC listed under CAN/ULC-S526 (Visual-audible Signal Appliances, Fire Alarm) and under CAN/ULC-S541 (Speakers, Fire Alarm). The appliances are Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances.



Powering Business Worldwide

Features

- High Fidelity Sound Output
 - High intelligibility at minimum wattage across a frequency range of 300 to 8000 Hz
- Energy Efficient
 - Patented LED technology provides industry’s lowest current draw
 - Fewer power supplies required, smaller wire gauge, reduced wire runs
- Low-Profile Design
 - Smallest footprint with sleek, modern aesthetics
- Special Lettering Available
- 4 Field Selectable Settings in 1 Device
 - Select 15, 30, 75, 95 cd
- Field Selectable Taps
 - 1/8 watt up to 2 watts
 - 25 or 70 VRMS operation
- Easy-to-Install
 - Finger slide switches–No tools needed for setting changes
 - Built-in level adjustment feature and snap-on grille cover
 - IN/OUT screw terminals using #12 to #18 AWG wires
 - Mounting Options include Exceder LSPKBB-C backboxes and 4” square, 2 1/8” deep backboxes
- Strobe Synchronization Components
 - Meet synchronizing standards with Wheelock’s DSM Sync Modules, Power Supplies or SAFEPATH products
- Compliance
 - UL 1971, UL 1480, ULC-S526, ULC-S541
 - Low frequency requirements of UL 464 (520 Hz) to meet NFPA’s 520 Hz tone requirements for sleeping areas
 - California State Fire Marshal (CSFM)
 - Factory Mutual (FM)
 - ADA/NFPA/ANSI/OSHA
 - FCC Part 15, ICES
 - RoHS

Note: All CAUTIONS and WARNINGS are identified by the symbol ▲. All warnings are printed in bold capital letters.

▲ WARNING

PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. VISIT WWW.EATON.COM/MASSNOTIFICATION OR CONTACT EATON 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.

Drawings

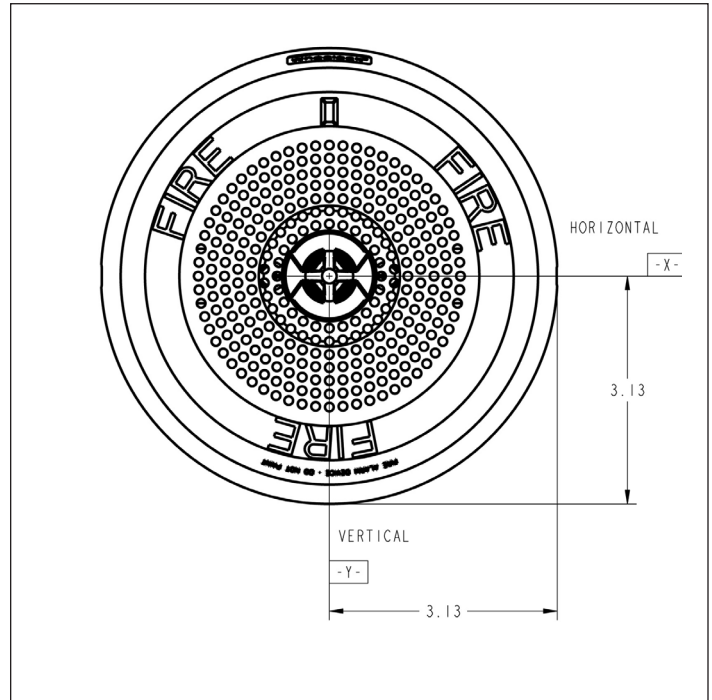


Figure 1. Ceiling Speaker Strobe - Front View

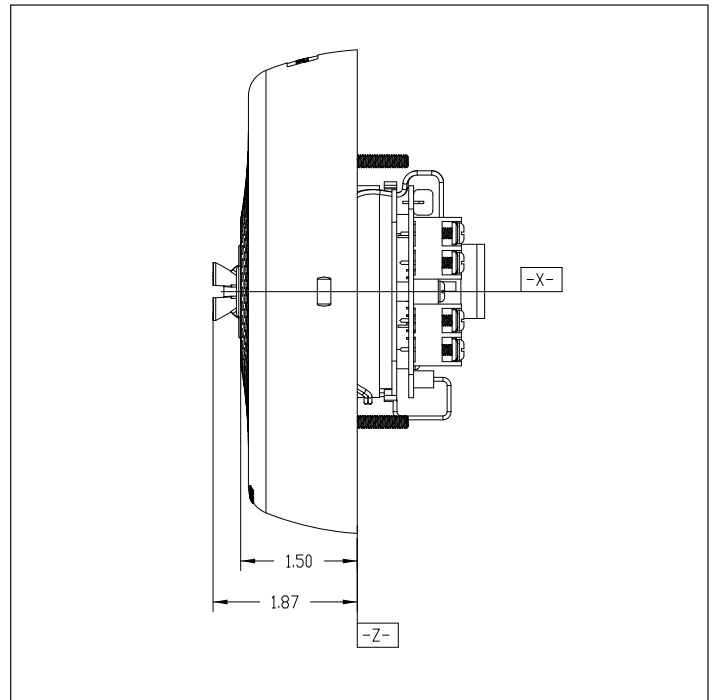


Figure 2. Ceiling Speaker Strobe - Side View

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 1971.

Table 1. Maximum RMS Current

Exceder LED High Fidelity Series Speaker Strobes	Regulated Voltage Range VDC	UL/ULC Max Current ^a 24VDC			
		15	30	75	95
LSPSTxC	16.0-33.0	0.040	0.058	0.155	0.258

Table 2. UL/ULC Listed Models and Ratings

Model	UL Reverberant dBA at 10 Feet					Anechoic dBA per CAN/ULC-S541-07				
	1/8 watts	1/4 watts	1/2 watts	1 watts	2 watts	1/8 watts	1/4 watts	1/2 watts	1 watts	2 watts
LSPKC Speaker	75	79	82	85	87	75	79	82	85	87
LSPSTC Speaker Strobe	75	79	82	85	87	75	79	82	85	87

Table 3. Specification & Ordering Information

Model	Strobe Candela	Red	White	Lettering	Sync w/ DSM or Wheelock Power Supplies
Speaker Strobes					
LSPSTRC	15/30/75/95	X		FIRE	X
LSPSTWC	15/30/75/95		X	FIRE	X
LSPSTWC-AL	15/30/75/95		X	ALERT	X
LSPSTRC-AL	15/30/75/95	X		ALERT	X
Speaker					
LSPKRC		X		FIRE	
LSPKWC			X	FIRE	
LSPKRC-AL		X		ALERT	
LSPKWC-AL			X	ALERT	
LSPKRC-N		X		No Lettering	
LSPKWC-N			X	No Lettering	
Backboxes					
LSPKBB-CR		X			
LSPKBB-CW			X		

Table 4. Specifications

Physical	
Material	Red or white textured UV stabilized, colored impregnated engineered plastic. Exceeds 94V-0 UL flammability rating
Weight	Speaker Strobe: 1.54 lbs (700g); Speaker Backbox: .44 lb (200g)
Lens	Light Emitting Diode (LED) in a rugged Lexan lens
Dimensions	LSPKC: 6.26 Diameter x 1.5" D; LSPSTC: 6.26 Diameter x 1.5" D
Operating Temperature	Indoor: 33.8°F to 120.2°F (0°C to 49°C) and maximum humidity of 93%
Mounting & Wire Connections	
Mounting (indoor only)	Speakers and Speaker Strobes are for ceiling-mount applications only. Exceder LSPKBB-C backboxes and to 4" square, 2 1/8" deep backboxes
Wire Connections	#12 through #18 AWG
Power & General	
Operating voltage	25/70 VRMS
Strobe Output Rating	UL 1971, ULC S526: Selectable 15, 30, 75, 95 candela output
Strobe Flash Rate	Strobes are designed to flash at 1 flash per second
Synchronization Models	Strobes can be synchronized with Wheelock's DSM Sync Modules, Power Supplies or SAFEPATH products, using Wheelock patented sync protocol
Frequency Range	300 Hz to 8000 Hz

^a RMS current ratings are per UL maximum 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 audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

Architects and Engineers Specifications

The LED high fidelity speaker appliances shall be Wheelock® Exceder™ Series LSPKC Speaker and LSPSTC Speaker Strobe for ceiling-mount applications with a low-profile design or approved equals. The speakers shall be UL Listed under UL 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL 1971 for Emergency Devices for the Hearing-Impaired. The Series shall be Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances. In addition, the speaker strobes shall meet the requirements of FCC Part 15 and ICES. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 16 to 33 VDC.

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 87 dB at 10 feet and a listed frequency response of 300 to 8000 Hz. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes. The Series LSPST Speaker Strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Light Emitting Diode (LED) as the light source with a rugged Lexan® lens. The Series shall be of low current design. Where Multi-Candela appliances are specified, the strobe intensity shall have 4 field selectable settings at 15, 30, 75, 95 candela for ceiling mount applications. The selector switch for selecting the candela shall be tamper resistant. Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The Series LSPKC and LSPSTC shall be designed for indoor surface or flush mounting. Mounting options shall include LSPKBB-C backboxes and to 4" square, 2 1/8" deep backboxes. The speaker and speaker strobe shall incorporate a speaker mounting plate with a snap-on grille cover and shall mount to standard electrical hardware requiring no additional trimplate or adapter. Continuity checking of the entire NAC circuit prior to attaching any notification appliances shall be allowed. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). All notification appliances shall be backwards compatible.

The Series LSPKC and LSPSTC ceiling models shall have a low profile measuring 6.26" Diameter with 1.5" D. Finish shall be red or white. Special lettering, including "ALERT," shall be available.

When synchronization is required, the appliance shall be compatible with Wheelock®'s DSM Sync Modules, PS Power Supplies, SAFEPATH products or other manufacturer's panels with built-in Wheelock® Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain (1) flash per second over its Regulated Voltage Range.

The speaker shall be listed to the low frequency requirements of UL 464 (520 Hz) to meet NFPA's 520 Hz tone requirements for sleeping areas.

UL 1971, UL 1480, ULC-S526, ULC-S541, CSFM, FM, FCC, ICES, RoHS

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



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