

INSTALLATION INSTRUCTIONS
2-WIRE FIELD SELECTABLE HORN, STROBE
AND HORN/STROBE APPLIANCES
(WALL AND CEILING MOUNT)

IMPORTANT – All audible and visual signaling appliances must be installed in accordance with all applicable national and local fire alarm codes and any other required regulatory agencies.

Series Z horn, strobe, and horn/strobe appliances are designed for easy installation. The ZH horn/strobes, ZH Horn and ZR strobes are for 24V operation. The appliance comes in two main parts. The universal mounting back plate allows the appliance to be mounted to a single-gang, double-gang, four square backbox, 4" octagon

backbox, or a 3 1/2" octagon backbox. Two wire appliance wiring is then connected to the mounting back plate. This allows a continuity check of the entire NAC circuit before any appliances are attached. It also allows the appliances to be installed after all finish work has been completed. The installer can snap or install the appliances when all other work is complete.

Refer to P/N 315-096363 for the maximum number of appliances on a single notification appliance circuit.

SPECIFICATIONS:

Model *	Voltage Range (Special Application) Per UL 1971 (VDC/VRMS)	Strobe (cd)	Horn	Current Draw See Table	Mounting
ZR-MC	16-33	15/30/75/110	-	3	Wall
ZR-HMC	16-33	135/185	-	3	Wall
ZR-MC-C	16-33	15/30/75/95	-	3	Ceiling
ZR-HMC-C	16-33	115/177	-	3	Ceiling
ZH-MC	16-33	15/30/75/110	X	4	Wall
ZH-HMC	16-33	135/185	X	4	Wall
ZH-MC-C	16-33	15/30/75/95	X	4	Ceiling
ZH-HMC-C	16-33	115/177	X	4	Ceiling
ZH	16-33	-	X	5	Wall or Ceiling

* All models available in red and white.

Strobe and Horn Strobe Appliances

Siemens' Series Horn Appliances provide a selectable Continuous or Code 3 Horn tone when connected directly to an unsynchronized NAC (Notification Appliance Circuit). They can also provide a synchronized code 3 or march time horn tone when connected to a notification appliance circuit running the Siemens sync protocol. The Horn Appliances can be field set for High (HI) or Low (LO) dBA sound output. The Horn Appliances are UL Listed under Standard 464 for Audible Signal Appliances. They are listed for **indoor use only**. These models are designed for use with either filtered DC (VDC) or unfiltered Full-Wave-Rectified (VRMS) input voltage. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by a FACP. The ZR Strobe, ZH Horn/Strobe, and ZH Horn are for 24V operation only.

NOTE: The Code 3 temporal pattern (1/2 second on, 1/2 second off, 1/2 second on, 1/2 second off, 1/2 second on, 1-1/2 off and repeat) is specified by ANSI and NFPA 72 for standard emergency evacuation signaling. **The Code 3 Horn should be used only for fire evacuation signaling and not for any other purpose.**

Table 2: ZH and ZH-MC Horn Reverberant dBA per UL464

		ZH-MC and ZH at 24V		
		16.0V	24V	33.0V
Continuous Horn	High	83	87	90
	Low	77	81	83
Code 3 Horn or *March Time	High	79	82	86
	Low	72	76	79

*Available in sync mode only.

CURRENT DRAW:

Table 3: ZR Strobe Current Draw (Amps) at 16-33 Volts

	Strobe Setting (cd)													
	MC				HMC				MC-C				HMC-C	
	15	30	75	110	135	185	15	30	75	95	115	177		
DC	0.064	0.098	0.175	0.233	0.318	0.445	0.069	0.111	0.200	0.264	0.318	0.445		
FWR	0.108	0.164	0.268	0.368	0.482	0.684	0.117	0.180	0.297	0.398	0.482	0.684		

Table 4: ZH Horn/Strobe Current Draw (Amps) at 16-33 Volts

		Strobe Setting (cd)											
		MC				HMC		MC-C				HMC-C	
		15	30	75	110	135	185	15	30	75	95	115	177
DC	Horn Setting High*	0.078	0.113	0.195	0.259	0.371	0.506	0.087	0.131	0.222	0.292	0.371	0.506
	Low*	0.070	0.107	0.188	0.246	0.324	0.455	0.075	0.121	0.213	0.277	0.324	0.455
FWR	High*	0.141	0.200	0.302	0.406	0.521	0.722	0.149	0.216	0.331	0.436	0.521	0.722
	Low*	0.123	0.179	0.290	0.391	0.497	0.699	0.131	0.195	0.319	0.421	0.497	0.699

* Current Draw is the same for the Continuous Horn, Code 3 Horn and March Time Settings.

Table 5: ZH Horn Current Draw (Amps)

		Horn Setting	16-33 Volts
DC	High*		0.044
	Low*		0.018
FWR	High*		0.075
	Low*		0.045

* Current Draw is the same for the Continuous Horn, Code 3, and March Time Settings.

NOTE: Candela and Horn Setting will determine the current draw of the product.

When calculating the total currents use Tables 3-5 to determine the highest value of RMS current for an individual appliance, then multiply these values by the total number of appliances. Be sure to add the currents for any other appliances, including audible signaling appliances powered by the same source, and to include any required safety factors.

NOTE: These notification appliances are UL Listed as "Special Application". They are intended to be used only with Siemens notification appliance circuits.

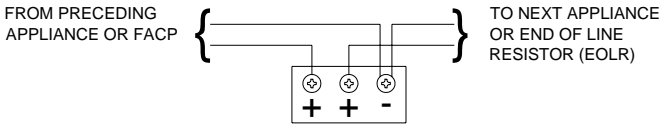
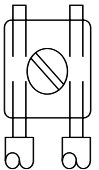
NOTE: THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE RANGE LIMITS OF 16.0-33.0 VOLTS FOR 24V MODELS USING FILTERED DC OR UNFILTERED FULL-WAVE-RECTIFIED VOLTAGE. DO NOT APPLY VOLTAGE OUTSIDE OF THIS RANGE.

NOTE: REFER TO THE INSTALLATION INSTRUCTIONS FOR THE APPROPRIATE NAC TO FIND THE MAXIMUM ALLOWED VOLTAGE DROP. USE THIS VALUE ALONG WITH THE CURRENT DRAW FOR THE APPLIANCE TO DETERMINE THE ALLOWABLE WIRE RESISTANCE. THE MAXIMUM WIRE RESISTANCE BETWEEN STROBES SHALL NOT EXCEED 35 OHMS.

NOTE: Strobes are not designed to be used on coded systems in which the applied voltage is cycled on and off.

NOTE: MAKE SURE THAT THE TOTAL RMS CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S PRIMARY AND SECONDARY POWER SOURCES DO NOT EXCEED THE POWER SOURCES' RATED CAPACITY OR THE CURRENT RATINGS OF ANY FUSES ON THE CIRCUITS TO WHICH THESE APPLIANCES ARE WIRED. OVERLOADING POWER SOURCES OR EXCEEDING FUSE RATINGS COULD RESULT IN LOSS OF POWER AND FAILURE TO ALERT OCCUPANTS DURING AN EMERGENCY, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

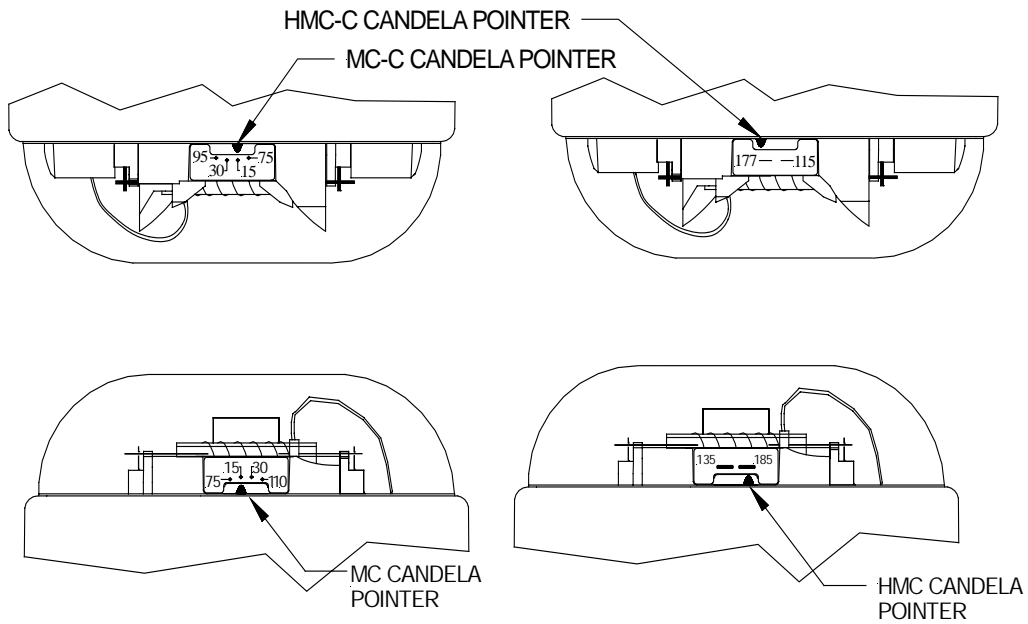
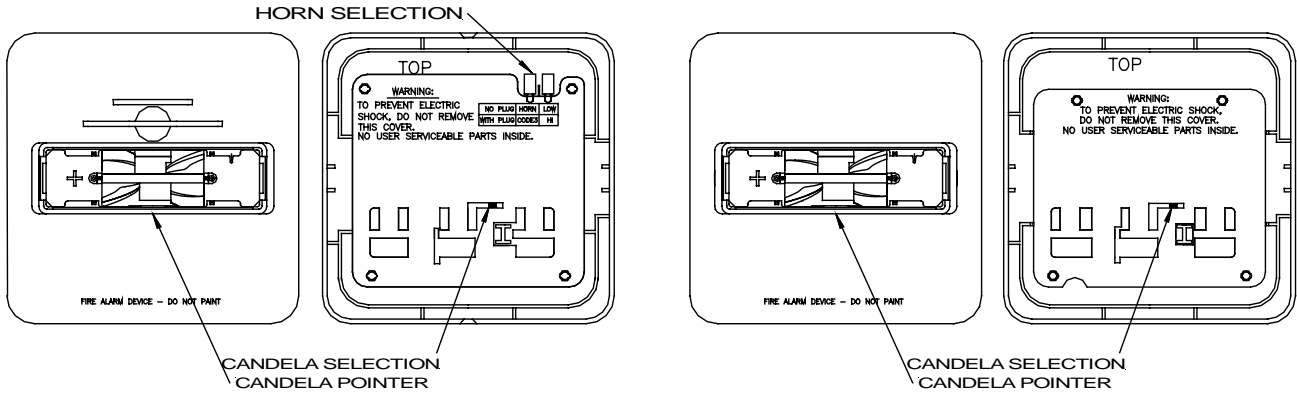
WIRING AND MOUNTING BASE:

 <p style="text-align: center;">Figure 1:</p>	 <ul style="list-style-type: none"> All strobe appliances have in-out wiring terminals that accepts two #12 to #18 American Wire Gauge (AWG) wires at each screw terminal. Strip leads 3/8 inches and connect to screw terminals. Break all in-out wire runs on supervised circuits to ensure integrity of circuit supervision as shown in Figure 2. The polarity shown in the wiring diagrams is for the operation of the appliances. The polarity is reversed by the FACP during supervision. <p style="text-align: center;">Figure 2:</p>
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WIRING AND MOUNTING SETTINGS:

Note: The ZH is factory set for the most common application of High dB and Code 3.

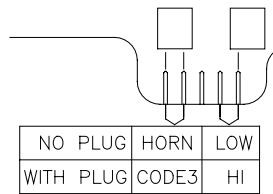
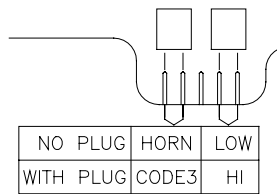
Jumper Plug and Candela Selectors



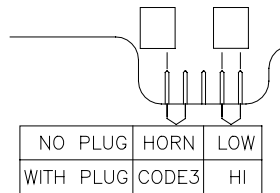
Note: Candela Factory Settings are shown in above illustration.

Jumper plug settings for High dB and Code 3 (or March Time).

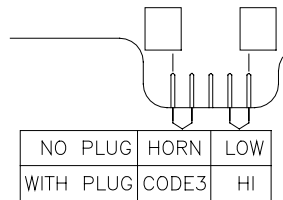
Jumper plug settings for Low dB and Code 3 (or March Time).



Jumper plug settings for High dB and Continuous Horn.



Jumper plug settings for Low dB and Continuous Horn.



NOTE: Use needle nose pliers to pull and properly set the jumper plugs. No jumper plugs are needed for Continuous Horn and low dB settings. However, it is recommended that the jumper plug be retained in the unit for future use (if needed) as shown.

CAUTION: Check that the installed product will have sufficient clearance and wiring room prior to installing backboxes and conduit, especially if sheathed multiconductor cable or 3/4" conduit fittings are used.

CAUTION: DO NOT OVER TIGHTEN MOUNTING SCREWS. EXCESSIVE TORQUE CAN DISTORT THE BASE AND MAY AFFECT OPERATION.

Mounting Options:

<p>Figure 3: Installation</p>	<p>Figure 4: Removal (See step 8 below)</p>
<ol style="list-style-type: none"> 1. Install mounting plate as shown in figure 1 to a single-gang, double-gang, 4" square, 4" octagon, or a 3 1/2" octagon backbox with the provided pan head screws. To remove dust cover, place thumb and index finger on <u>top edges</u> of cover and pull off cover. 2. Connect field wiring per figures 2 and 3. 3. Address wires back into backbox. 4. Place dust cover over mounting plate to protect the terminals while performing wiring continuity check. 5. Remove dust cover before snapping or installing the appliance onto the mounting plate per fig 3. 	<ol style="list-style-type: none"> 6. Important: Device only has one mounting orientation. Match the top of the base to the top of the device. 7. If it is desired to further secure the device to the base, then two optional screws are provided. To install these screws punch out the screw holes located at the top and bottom of the device. 8. To remove the appliance, push a small flat-bladed screwdriver into the side opening. The screwdriver must clear the snap release opening by 1/4" to disengage the snap. Do not pry off housing with the screw driver. Apply pressure with screw driver, inserted in either side opening, as shown in Fig 4 to release the housing.

NOTE: NFPA 72/ANSI 117.1 conform to ADAAG Equivalent Facilitation Guidelines in using fewer, higher intensity strobes within the same protected area.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) Reorient or relocate the receiving antenna, 2) Increase the separation between the equipment and receiver, 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, and 4) Consult the dealer or an experienced radio/TV technician for help.