

SIEMENS

INSTALLATION INSTRUCTIONS LOW PROFILE WEATHERPROOF SPEAKER STROBE APPLIANCE

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 SET-WP Low Profile Speaker Strobe appliance is UL Listed for indoor/outdoor use under Standard 1638 and Standard 1971 for Visual Signal Appliances, Fire Protective Service and UL Standard 1480 for Speaker Appliances. For outdoor applications the SET-WP must be mounted to a Weatherproof Backbox (MT-SUR-BOX). They are designed for multiple power requirements with high dBA output at each power tap. This model offers a choice of field selectable taps, 1/8W to 8W for either 25.0VRMS or 70.0VRMS audio systems. The low profile design incorporates a high efficiency speaker for maximum output at minimum power across a frequency range of 400Hz to 4000Hz, and features a sealed back construction for extra protection and improved audibility. The Low Profile Speaker Strobes can provide a non-

synchronized strobe appliance when connected directly to a fire alarm control panel (FACP), or provide a synchronized strobe appliance when connected to a notification appliance circuit running the Siemens sync protocol.

The strobes use a xenon flashtube with solid state circuitry enclosed in a polycarbonate lens to provide maximum visibility and reliability for effective visible signaling.

NFPA 72/ANSI 117.1 conform to ADA's Equivalent Facilitation Guidelines in using fewer, higher intensity strobes within the same protected area.

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

⚠ CAUTION: NOT RECOMMENDED FOR USE AT REFRIGERATOR / FREEZER DOOR ENTRANCES OR OTHER AREAS WITH PERSISTENT CONDENSATION.

SPECIFICATIONS:

Model*	Voltage (VRMS)	Speaker							Strobe		
		Reverberant dBA at 10 Feet (Rated Watts)							Operating Voltage (Special Application) Per UL1638 and UL1971 (VDC/VRMS)	Rated Strobe Candela (cd)	
		1/8	1/4	1/2	1	2	4	8		(UL1971)	-40°C (UL1638)
SET-S17-CW-WP SET-CS17-CW-WP	25/70	77	80	83	86	88	91	93	16.0-33.0	15/180 **	115
SET-S17-WP SET-CS17-WP	25/70	77	80	83	86	88	91	93	16.0-33.0	30/180 **	115
SET-177-C-WP SET-C177-C-WP	25/70	77	80	83	86	88	91	93	16.0-33.0	177	75
SET-185-WP SET-C185-WP	25/70	77	80	83	86	88	91	93	16.0-33.0	185	90

* Available in red and white.
** 180cd on Axis only.

NOTES:

1. Strobes will produce 1 flash per second over the Input Voltage range.
2. All models are listed for indoor and outdoor use. UL 1971 is tested from a temperature range of 32°F to 120°F (0°C to 49°C). UL 1638 is tested from a temperature range of -40°F to +150°F (-40°C to +66°C) with a maximum humidity of 95% RH. The effect of shipping and storage temperatures shall not adversely affect the performance of the appliances when it is stored in the original cartons and is not subjected to misuse or abuse.
3. The maximum supervision voltage is 33 volts DC.
4. Frequency range of speakers is 400-4000Hz. dBA is rated per UL Standard 1480 for Speaker Appliances.

⚠ CAUTION: Always operate audio amplifiers and speakers within their specified ratings. Excessive input may distort sound quality and may damage audio equipment. Do not exceed 100% of speaker input voltage per UL 1480. Improper input voltage can damage speaker. If distortion is heard, check for clipping of the audio appliance with an oscilloscope and reduce the amplifier input level or gain level to eliminate any clipping.

Maximum RMS Current				
UL Voltage	30/180cd	177cd	185cd	
DC	0.146	0.445	0.445	
FWR	0.235	0.684	0.684	

When calculating the total currents use Table 2 to determine the highest value of RMS current for an individual strobe, then multiply these values by the total number of strobes. 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.

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These strobes were tested to the voltage limits of 18 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.

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

WARNING: 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 INFORMATION:

CAUTION: The following figure shows the maximum number of field wires (conductors) that can enter the backbox used with each mounting option. If these limits are exceeded, there may be insufficient space in the backbox to accommodate the field wires and stresses from the wires could damage the product.

WARNING: THIS UNIT MUST BE MOUNTED ON A FLAT SURFACE, SO THAT THE SURFACE COVERS THE ENTIRE BACK SURFACE OF THE BACKBOX. WHEN USED IN AN OUTDOOR APPLICATION OR A NEMA 3R APPLICATION KNOCKOUTS IN THE REAR OF THE BACKBOX MUST REMAIN INTACT.

CAUTION: Two screws must be used to mount backbox securely using both tabs included with the backbox.

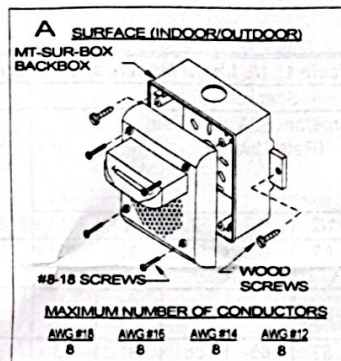


Figure 1:

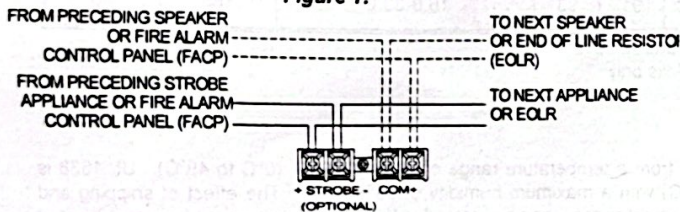
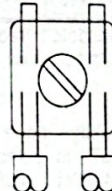


Figure 2:



- This model has in-out wiring terminals that accept 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 assure integrity of circuit supervision as shown in Figure 2. The polarity shown in the wiring diagrams is for operation of the appliances.

Important Wiring Note

For Speaker/Strobes with Strobe being used for Sync Operation
Do not connect speaker part to a source of Siemens Sync Protocol.

Strobe part must be connected to a source of Siemens Sync Protocol. The sync strobe lights must be connected to a compatible signal circuit with appropriate voltage, with a source of Siemens Sync Protocol wired electrically before the sync strobes. See the Installation Instructions provided with the source of Siemens Sync Protocol for additional wiring information for the strobe section.

Important Wiring Note

- Individual wires (especially heavy gauge wire) should be bent at 90 deg before attaching to screw.
- Wiring should then carefully be pushed back into back box to minimize stress on the terminal blocks.

GROUNDING: Connect ground wire to backbox. Install signaling appliance to backbox using mounting screws provided.

WARNING: CHECK ELECTRICAL RATINGS SPECIFIED IN TABLES 1 AND 2 (AS APPROPRIATE) TO ENSURE PROPER ELECTRICAL INPUT. BE SURE THAT SPEAKER WIRING IS CONNECTED TO SPEAKER TERMINALS ONLY AND STROBE WIRING IS CONNECTED TO STROBE TERMINALS ONLY. CHECK TO INSURE THAT WIRING AT FACP IS CORRECT. IMPROPER ELECTRICAL INPUT CAN DAMAGE THE PRODUCT OR CAUSE IT TO MALFUNCTION, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Figure 3: Jumper plug is used to select tap settings which = dBA loudness.

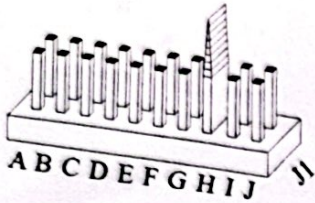


Figure 4: Tap Settings (Factory setting is 70V @ 1/2W (Tap F))

A	B	C	D	E	F	G	H	I	J
○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○

1. Each doubling of rated Watts increases sound output by 3 dBA. Field selectable input terminals are provided on each unit. The following wattage selections are available: 1/8W, 1/4W, 1/2W, 1W, 2W, 4W, & 8W.
2. Each letter corresponds to a plug position of the header located on the printed circuit board. Select voltage and wattage as shown in Table 4.
3. A 10 μF blocking capacitor for DC supervision of audio lines by the FACP is factory wired in series with the speaker input.

NOTE: Use needle nose pliers to pull and properly insert the jumper plug to the desired tap setting.

WARNING: THE SPEAKER STROBE APPLIANCE MUST BE FIELD SET TO THE DESIRED dBA SOUND OUTPUT LEVEL BEFORE IT IS INSTALLED. THIS IS DONE BY PROPERLY INSERTING JUMPER PLUGS IN ACCORDANCE WITH THESE INSTRUCTIONS. INCORRECT SETTINGS WILL RESULT IN IMPROPER PERFORMANCE, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Position	25V	70V
A	8	---
B	4	---
C	2	---
D	1	8
E	1/2	4
F	1/4	2
G	1/8	1
H	---	1/2
I	---	1/4
J	---	1/8

MOUNTING PROCEDURES:

1. The knock-out opening on the backbox is sized for a 1/2" conduit and matching connector. Be sure that a proper watertight conduit fitting is used to connect the backbox for outdoor/severe environment applications. Conduit entrances to the backbox should be selected to provide sufficient wiring clearance for the installed product. Do not pass additional wires (used for other than the signaling appliance) through the backbox. Such additional wires could result in insufficient wiring space for the signaling appliance.
2. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the appliance.
3. Use care and proper techniques to position the field wires in the backbox so that they use minimum space and produce minimum stress on the product. This is especially important for stiff, heavy gauge wires and wires with thick insulation or sheathing.
4. Connect field wires to the terminal block (polarity must be observed).
5. Bend the field wires up 90° at the connection to the terminal block, then carefully push the field wires into the backbox by hand.
6. Carefully press the unit to the backbox, verifying that it is in contact with the gasket all the way around. It should not be resting on the lip of the backbox.
7. Screw the speaker strobe to the MT-SUR-BOX using the #8-18 screws supplied.

WARNING: A SMALL POSSIBILITY EXISTS THAT THE USE OF MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW, UNDER CERTAIN CIRCUMSTANCES, MIGHT INDUCE A PHOTO-SENSITIVE RESPONSE IN PERSONS WITH EPILEPSY. STROBE REFLECTIONS IN A GLASS OR MIRRORED SURFACE MIGHT ALSO INDUCE SUCH A RESPONSE. TO MINIMIZE THIS POSSIBLE HAZARD, SIEMENS STRONGLY RECOMMENDS THAT THE STROBES INSTALLED SHOULD NOT PRESENT A COMPOSITE FLASH RATE IN THE FIELD OF VIEW WHICH EXCEEDS FIVE (5) Hz AT THE OPERATING VOLTAGE OF THE STROBES. SIEMENS ALSO STRONGLY RECOMMENDS THAT THE INTENSITY AND COMPOSITE FLASH RATE OF INSTALLED STROBES COMPLY WITH LEVELS ESTABLISHED BY APPLICABLE LAWS, STANDARDS, REGULATIONS, CODES AND GUIDELINES.

The 185cd and 177cd setting is listed for use in sleeping or non-sleeping areas when installed in accordance with appropriate NFPA Standards and the AHJ.

If this appliance is required to produce a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NFPA 72, the appliance must be used with a fire alarm control unit that can generate the temporal pattern signal.

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.