Commercial Products Group
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DOCUMENT	REV	CN
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Model ASHH

PowerTone® Amplified Speaker For Hazardous Locations

SAFETY MESSAGE

People's lives depend on your safe installation, test, operation, and maintenance of our products. Read, understand, and follow all safety messages and instructions. Refer to "Safety Messages for Equipment Used in Fire-Protective Signaling Systems" and any other documentation shipped with equipment before performing any system related duty.

GENERAL

This PowerTone Model ASHH is a continuous duty, polarized, indoor/outdoor rated, high output, amplified speaker for use with fire alarm systems. It is suitable for use in areas with high ambient noise levels that require a loud distinctive signal. A Model UTC tone card (purchased separately) with different tone settings may be used (see table 2). In addition, one of two available Model PTCK plug-in connector cards can be used. The Model PTCK plug-in connector cards will allow use of externally generated tone or voice signals (see table 2) from a remote audio amplifier.

The PowerTone Model ASHH is suitable for use in NEC Class I, Groups A, B, C & D, Division 2; Class II, Groups F & G, Division 2; and Class III hazardous locations. The speaker projector is adjustable and may be repositioned to obtain desired sound distribution.

INSTALLATION

Unpacking

After unpacking the amplified speaker, examine it carefully for possible damage that may have occurred in transit. If equipment has been damaged, immediately file a claim with carrier stating extent of damage. Carefully check all shipping labels and tags for special instructions before removing or destroying them.

Mounting Arrangements

CAUTION

To maintain the hazardous location rating of the Model ASHH, do not use the 7/8" knockout (concealed conduit mounting).

The amplified speaker can be mounted on any relatively flat surface. Conduit connections can be made to two 1/2" threaded openings at the bottom of the housing or to 7/8" knockout in rear of housing. A 1/2" conduit plug is supplied for field installation if one of the 1/2" threaded openings is not utilized. After the mounting location and mounting method have been selected, proceed with the applicable instructions below (see figure 1).

WARNING

Property damage, serious injury, or death could occur if an accumulation of water, snow, dust, etc. resides in the speaker projector, severely reducing or preventing operation of this device. Mount the unit so speaker projector is pointed horizontally or slightly downward.

Flat Surface Mounting

1. Remove and retain the two screws that secure cover to housing. Remove the cover.

WARNING

Property damage, serious injury, or death could occur if any objects are in front of speaker, severely reducing optimum sound distribution. For maximum effectiveness, ensure that the front of the speaker is clear of obstructions.

Specification	Rating
UL Listed	File S6476 (Guide UEAY, UUMW) File E190743 (Guide UGKZ)
CSFM Listed	7135-1517:123
NYC MEA Approved	MEA 11-92-E Vol V
Operating voltage	Regulated 24VDC
Supervisory voltage	24VDC max
Operating current (includes tone card or connector card)	0.225A (5.4W) .06A standby
Weight (approx)	5 lb (2.25kg)
Size	11-7/8" (302mm) high, 8-1/8" (206mm) wide, 8" (203mm) deep.
Construction	Aluminum enclosure painted with red enamel. Amplifier housing sealed with neoprene rubber gasket.
Environmental rating	Outdoor wet
Temperature range	-40° to +151° F (-40° to +66° C)
Relative Humidity	95% Non-condensing
Hazardous Locations	Class I, Groups A, B, C, D, Division 2 Class II, Groups F, G, Division 2 Class III

Table 1: Specifications

2. Select the mounting location and place rear of housing against mounting surface.
3. Using the mounting holes (four (4) in external mounting bracket) as a template, scribe drill position marks on the mounting surface. See figure 1 for mounting hole locations and dimensions.

WARNING

Before drilling holes in any surface, ensure that both sides of surface are clear of items that could be damaged.

4. Secure the unit to a wooden mounting surface with #10 x 1" wood screws. If mounting on a metal surface, drill 13/64" diameter holes and secure the unit with #10 screws, lockwashers and nuts.
5. Route power and supervision leads through conduit to the audible signal. Install a 1/2" electrical connector at the bottom of the audible signal. Route wires through conduit and electrical connector into the audible signal housing. Install supplied 1/2" conduit plug if only one 1/2" conduit entrance is used.

WARNING

Property damage, serious injury or death could occur if the projector is mishandled during installation or over time. DO NOT rotate the projector more than 180 degrees or internal speaker wiring may be damaged.

Tone Card Sound (Model UTC)			Audible Frequency (Hz)	Repetition rate (cycles/min)	Audibility	
Selection	**Name**	**Description**			**dB(A) Sound Power**	**UL dB(A) Sound Pressure**
TM1	Wail	Conventional siren	550-1250	11	118.1	97.5
TM2	Yelp	Rapid siren	550-1250	3.3 Hz	118.0	97.4
TM3	Hi-Lo	Alternating high and low	560 and 760	50	116.9	96.3
TM4	Bell	Bell, struck repeatedly	800	50	115.8	95.2
TM5	Yeow	Descending high to low, repeated	1300 and 550	36	118.0	97.4
TM6	Horn	Steady horn	470	Continuous	112.2	91.6
TM7	Beep	Slow intermittent horn	470	50	110.8	90.2
TM8	Stutter	Rapid intermittent horn	470	5	110.3	89.7
TM9	Slow Whoop	Slow ascending, low to high – repeated	420 and 1160	15	116.1	95.5
TM11	Temporal Slow Whoop	NFPA coded slow whoop (fire alarm use only)	420 and 1160	15	113.9	93.3
Connector card model		**Rated voltage**				
PTCK25		25 VRMS			112.4	97.8
PTCK70		70 VRMS			112.2	97.6

Table 2: Tone and connector card ratings for Model ASHH

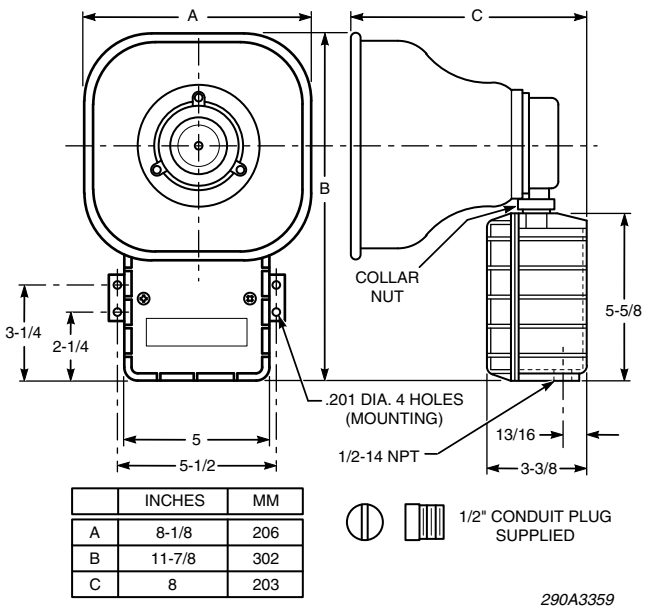
5. Reposition speaker projector if necessary to obtain desired sound coverage. Loosen collar nut (see figure 1) and move projector to desired position.
6. Before reinstalling the housing cover, read section Electrical Connections below and make the necessary electrical connections.

Electrical Connection

National Electrical Code as well as local codes must be adhered to in the installation of these models. All electrical wiring must be routed through approved conduit and fittings as specified.

WARNING

Property damage, serious injury, or death could occur if independent conductors are terminated together. NFPA 72 requires that the wires be terminated independently to provide electrical supervision of the connection.



	INCHES	MM
A	8-1/8	206
B	11-7/8	302
C	8	203

Figure 1: Model ASHH Dimensions

Property damage, serious injury, or death could occur if the housing is not closed properly.

Tone Card Installation

1. See figure 2. Connect the device's red (+) leads to the power source positive (+) lead. Connect the device's black (-) leads to the power source negative (-) lead.
2. Plug the desired tone card into the socket as shown in figure 3.
3. To ensure a proper seal, be sure that the neoprene rubber cover gasket is properly seated in the housing groove and reinstall the housing cover.

PTCK Connector Kit Installation

WARNING

Property damage, serious injury, or death could occur if independent conductors are terminated together; both wires of the same polarity must be used as two separate connections. NFPA 72 requires that the wires be terminated independently to provide electrical supervision of the connection, for both the 24 Vdc speaker power and 25 VRMS or 70 VRMS audio lines.

1. See figure 2. Connect the device's red (+) leads to the power source positive (+) lead. Connect the device's black (-) leads to the power source negative (-) lead.
2. Plug the desired PTCK connector card (purchased separately) into the socket as shown in figure 3.
3. Connect the white leads from the connector card to the audio input and outputs.
4. To ensure a proper seal, be sure that the neoprene rubber cover gasket is properly seated in the housing groove and reinstall the housing cover.

NOTE

Check with authority having jurisdiction for proper application of EOL resistor and power supervision relay required (see figure 4).

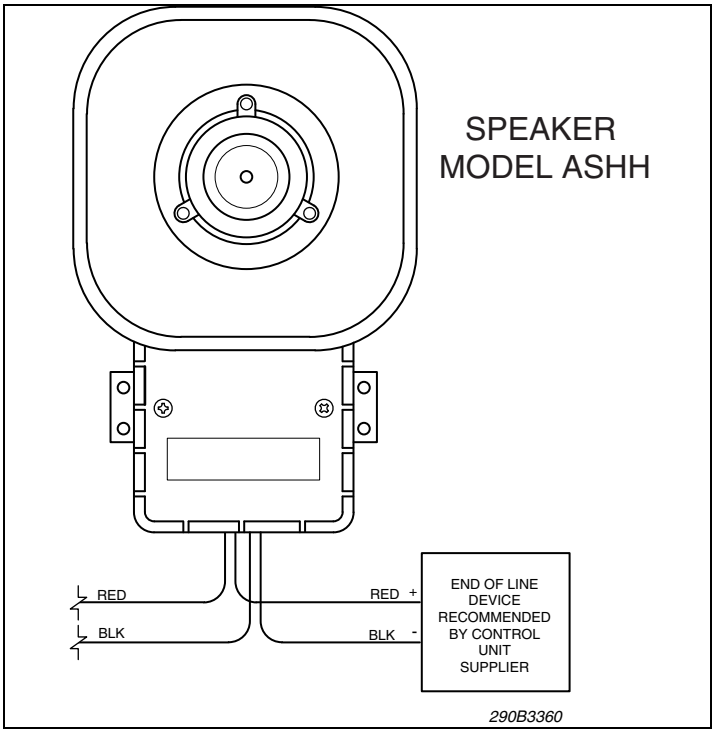


Figure 2: Typical Tone Card Installation Wiring

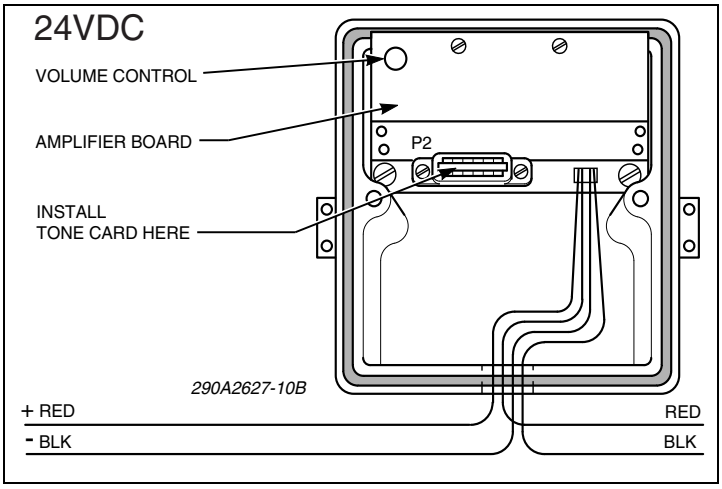


Figure 3: Tone/Connector Card Installation

OPERATION/TESTING

WARNING

Under certain conditions these devices are capable of producing sounds loud enough to cause hearing damage. Adequate hearing protection should be worn if standing within close proximity to device while testing. Recommendations in the OSHA Sound Level Standard (29 CFR 1910) should not be exceeded.

Property damage, serious injury, or death could occur if the housing is not closed properly. To reduce possibility of explosion, housing cover must be kept tight (all eight bolts fully tightened) while circuits are energized.

After installation is complete, be sure to test the system to verify that each amplified speaker operates satisfactorily.

After completion of initial system test, establish a program for periodic testing of this device. Refer to NFPA 72, local Fire Codes and the

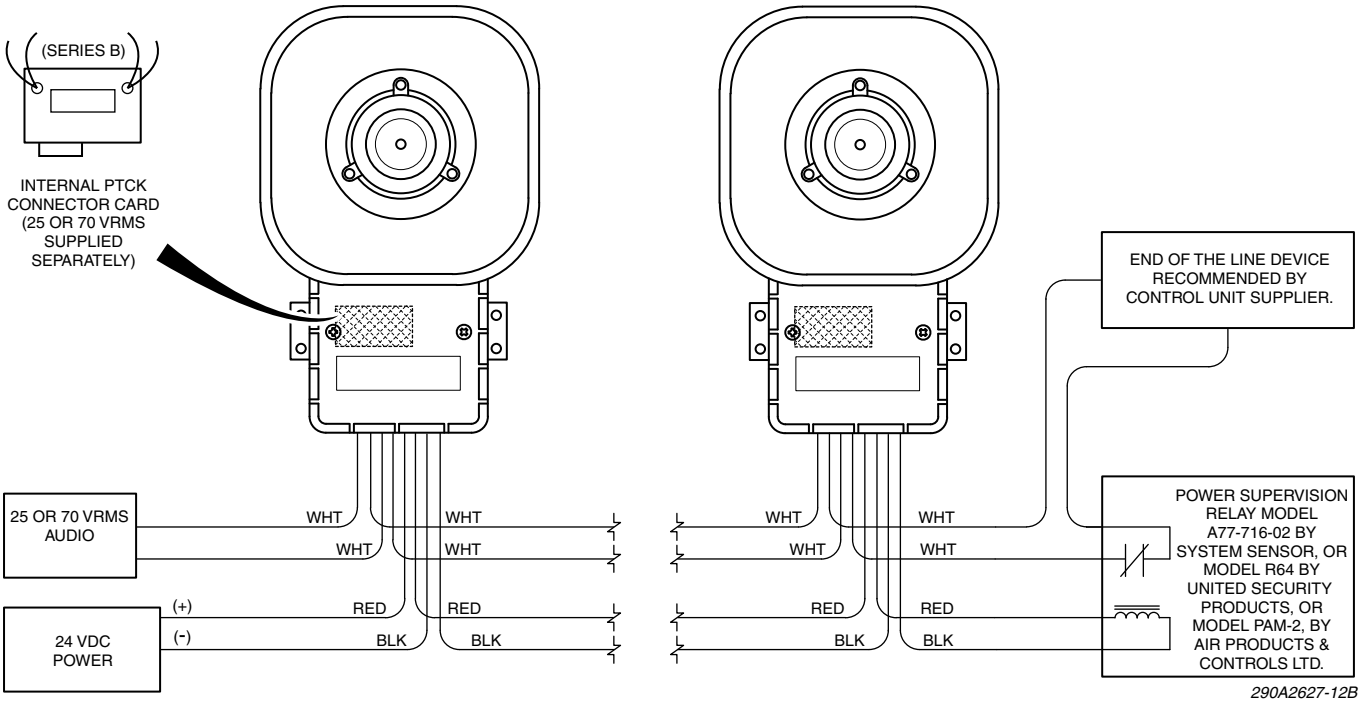


Figure 4: Typical connector card (PTCK) installation wiring

authority having jurisdiction for this information.

Provide a copy of these instructions for the Safety Engineer, system operator(s) and maintenance personnel.

MAINTENANCE

Periodically check this device to verify that there are no foreign substances in, or in front of, the speaker which will reduce its effectiveness.

Testing should be periodically performed. Refer to NFPA 72, local Fire Codes and the authority having jurisdiction for information.

In the event a repair is required, be sure to refer to the Safety Message to Maintenance Personnel before proceeding.

SERVICE

The factory will service your equipment or provide technical assistance with any problem that cannot be handled locally with satisfaction or promptness.

If any unit is returned to factory for repair, it can be accepted only if we are notified by mail or phone in advance of its arrival. Such notice should clearly indicate service requested and give all pertinent information regarding nature of problem and, if possible, its cause.

To get help with problems or questions not covered in these instructions, contact the Technical Service Department.