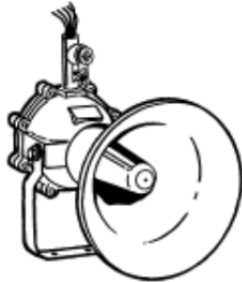


5522MD-AW and 5523MD-AW Duotronic Signals for Use in Hazardous Locations Installation Sheet



Description and operation

Edwards Duotronic signals, catalog numbers 5522MD-AW and 5523MD-AW, are high decibel, diode-polarized signaling appliances intended for indoor use in both fire alarm systems and systems requiring electrical supervision of signaling circuit field wiring. The 5522MD-AW are horns and the 5523MD-AW are sirens. In fire alarm service applications they meet the 75 dBA minimum at 10 feet.

The 5522MD-AW and 5523MD-AW are UL listed for use in Class I, Groups B, C and D locations, for both Divisions 1 and 2. The flange bolts of all series of the signals are sealed in accordance with UL requirements to prevent disassembly and tampering.

Installation

1. Choose Mounting Locations. The horn or siren can be mounted to any solid surface. Ensure that mounting location provides adequate clearance to enable adjustment of the signal to the desired position after mounting. The signal position can be adjusted within an approximate 180-degree range vertically or horizontally depending on mounting of bracket.
2. Install Unit. Mount unit in selected location using its mounting bracket and three bolts (not supplied). See Figure 1 for size and location of mounting holes.
3. Signal Direction Adjustment. To adjust signal direction, loosen the two bolts shown in Figure 1. Rotate the signal to the desired position and then tighten the bolts.
4. Determine Signaling Circuit Wire Size. The signaling circuit

The wiring must be of adequate size to prevent excessive voltage drop that would affect signal performance. To determine the minimum wire size required:

- a. Calculate the value R_{max} as follows:

$$R_{max} = 7 / \text{Number of Signals}$$

- b. Determine the total length of the signaling circuit wiring

WARNING: Do not apply power to the unit until installation is completed and housing cover and outlet box cover are secured.

- c. Select a wire size having a resistance value that is less than the value R_{max} for the length of signaling circuit wiring required. Approximate resistance values for 1,000 feet of several commonly used wire sizes are as follows (AWG/ohms) 12/2.0, 14/3.2, 16/5.0, 18/8.0.
5. Install Wires. See Figure 2. Remove cover from the conduit outlet box (not supplied). Note that the outlet box must be suitable for use in the hazardous location. Feed the two power supply wires through the 1/2" NPT conduit (not supplied) into the outlet box. Also, feed the signal's two power connection wires either directly into the outlet box or, if desired, through a 1/2" flexible type coupling (not supplied) and then into box. Secure outlet box to signal's 1/2" sealed nipple either directly or by flexible coupling, and secure conduit to outlet box.
6. Connect Wires. See Figure 2. Make power supply wiring connections and make wiring connections to next signal or end-of-line device in outlet box. Observe polarity of signal wires.
Note: When making wiring connections to next signal or end-of-line device, ensure that circuit wiring is cut to form separate incoming and outgoing wires at junctions with signal leads for proper supervision of connections.
Secure cover on outlet box.
7. Check Signal Operation. Apply power to the system control panel. Initiate an alarm to activate the signal and verify that it sounds. Then reset the panel and verify that the signal silences.

Maintenance and test

Examine the unit semi-annually for external accumulation of dirt. Clean if necessary. Test the signal monthly or at the intervals required by applicable regulations and codes.

Figure 1: Signal dimensions and mounting details

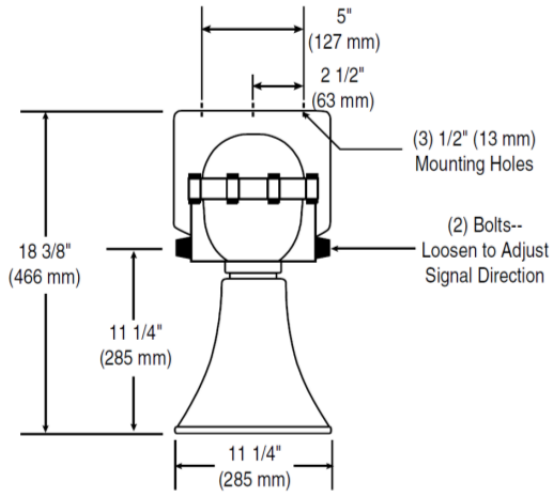
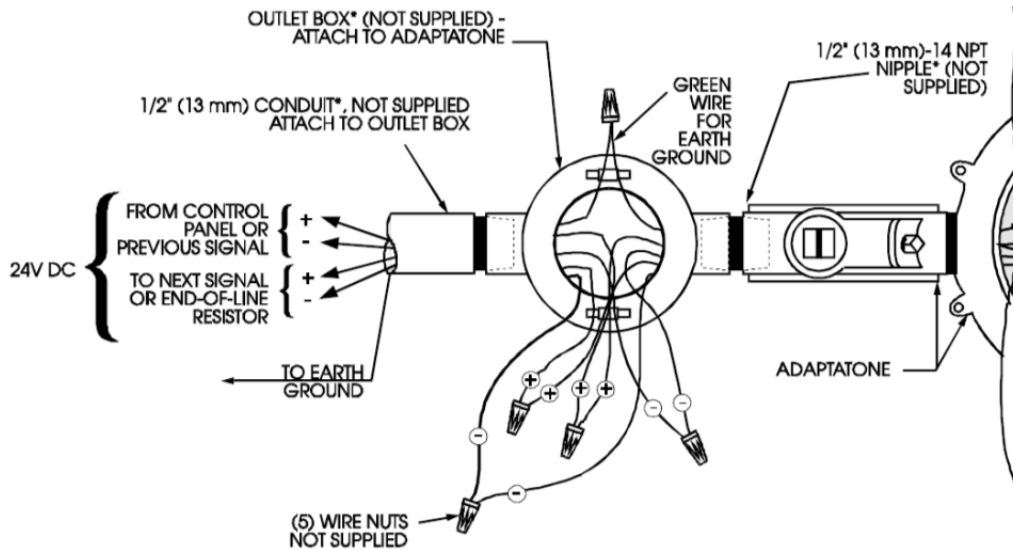


Figure 2: Wiring installation and connections



Specifications

Electrical specifications

Input power

Catalog no.	Voltage	Current (A)
5522MD-AW	24V DC	0.950
5523MD-AW	24V DC	0.950

Mechanical specifications

Weight 17.5 Pounds (7.9 kg)

Contact information

For contact information, see www.edwardssignaling.com