



FEDERAL SIGNAL

Safety and Security Systems / Industrial

Advancing security and well-being.

MODEL E1
INSTALLATION AND SERVICE INSTRUCTIONS
FOR FEDERAL MODEL E1 INTERCOMS

INSTALLATION AND SERVICE INSTRUCTIONS FOR MODEL E1 INTERCOMS



SAFETY MESSAGE TO INSTALLERS, USERS AND MAINTENANCE PERSONNEL

It is important to follow all instructions shipped with this product. This device is to be installed by trained personnel who is thoroughly familiar with the country electric codes and will follow these guidelines as well as local codes.

The selection of mounting location for the device, its controls and the routing of the wiring is to be accomplished under the direction of the facilities engineer and the safety engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing or operating this equipment.
- Disconnect intercom from the power supply before any installation or maintenance is performed.
- Power is only to be provided from the Central Control. This intercom is not for stand-alone use.
- This equipment is suitable for use in Class I, Division 1, Groups C and D; Class II, Division 1, Groups E, F, and G; and Class III, or non-hazardous locations only.
- After installation, test the unit to ensure that it is operating properly.
- After testing is complete, provide a copy of this instruction sheet to all operating personnel.

- Establish a procedure to routinely check the intercom installation for integrity and proper operation.
- The product nameplate, which may contain cautionary or other information of importance to maintenance personnel, should not be obscured in any way.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

I. INSTALLATION

A. Unpacking

After unpacking the unit, examine it for damage that may have occurred in transit. If the equipment has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier stating the extent of the damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them.

B. General Description

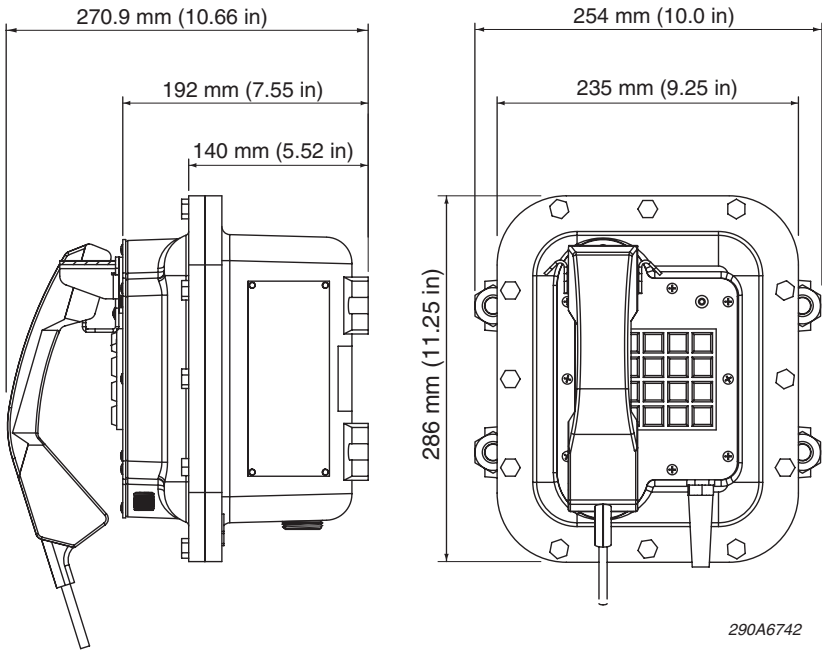
The equipment comprises a stainless steel enclosure containing a printed circuit board assembly providing the communications and safety functions. A relay output module is provided as a standard feature. The relay operates when the intercom is in ring mode. A single N.O. contact is provided, rated at 240 volts a.c. / 3 amps.

This station must be powered from an Echo Central Control. The data/power is supplied from the Central Control line cards. Please refer to the instructions provided with the Central Control for full operational details of the Echo system.

C. Mounting and Wiring

The E1 ECHO intercoms are designed for mounting on a flat horizontal or vertical surface. See Figure 1 on page 3 for the mounting dimensions.

Figure 1 Mounting dimensions



1. Surface Mounting and Wiring Instruction

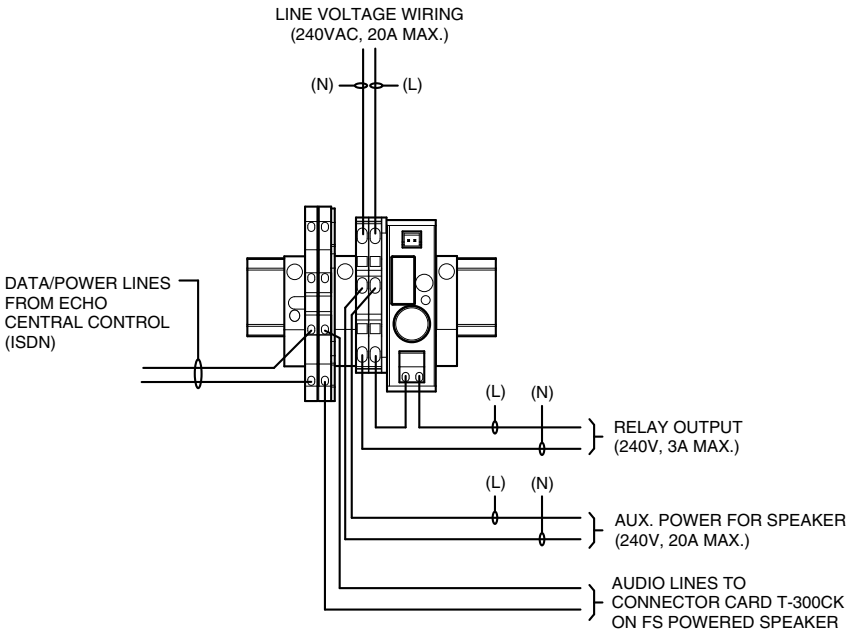
- a. The unit is to be mounted using four 3/8" (M10) bolts (not supplied) into the base enclosure.
- b. Remove the enclosure cover by loosening the twelve M8 stainless steel cover screws.
- c. The cover is fixed to the enclosure with a bonding wire. Bonding wire will keep the cover attached and provide strain-relief for the internal wiring during installation.
- d. The unit is provided with three conduit/cable entrances for field wiring. Entries may be used for connection of data/power from the Central Control, external loudspeaker connections, or relay output connection. Note: The internal grounding terminal shall be used as the grounding equipment means and that the external terminal is only a supplemental bonding connection where local authorities permit or require such a connection.

e. A series of DIN rail mount terminal blocks are provided for field wiring. See Figure 2 for the wiring diagram. These terminals are rated as follows:

- (1). Relay Output: 18-12 AWG (0.75 – 4 mm²), tightening torque 3.4 in-lb (0.4 N•m), 240VAC, 3.0A max.
- (2). Aux. Power: 18-12 AWG (0.75 – 4mm²), 240VAC, 20A max.
- (3). Audio/ISDN: 26-12 AWG (0.25 – 4mm²), Cu conductors only

f. Upon completion of field wiring, re-fit the cover. Secure the M8 screws to ensure weather/dust tightness and hazardous location ratings.

Figure 2 Wiring diagram



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II. MAINTENANCE



SAFETY MESSAGE TO MAINTENANCE PERSONNEL

Listed below are some important safety instructions and precautions you should follow:

- Read and understand all instructions before operating this unit.
- Any maintenance to the unit must be performed by properly trained personnel.
- Any maintenance to the unit must be done with the power turned off.
- Never alter the unit in any manner. Safety may be endangered if additional openings or other alterations are made to units.
- The nameplate, which contains cautionary or other information of importance to maintenance personnel, should not be obscured.
- After performing any maintenance, test the unit to ensure that it is operating properly.

A. Replacement Parts

Contact the factory for spare parts availability and part numbers. Typical spare parts are listed below. Due to certification, certain component parts are not available for field replacement. Units with this type of damage must be either replaced entirely or returned to Federal Signal for service.

Part No.	Description
K122367	Keypad
K137149-01	Headset
K137154	Stubby Microphone
K137154-01	Gooseneck Microphone, 150mm
K137154-02	Gooseneck Microphone, 330mm
K137154-03	Gooseneck Microphone, 480mm
K2005152	PCBA, Relay
K2001908	PCBA, Microprocessor
K8601293	Handset Assembly, Coiled Cord

III. SERVICE

The Federal Signal factory will service your equipment or provide technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization. This R.M.A. can be obtained from a customer service representative at Federal Signal.

At this time a brief explanation of the service requested, or the nature of the malfunction, should be provided.

Address all communications and shipments to:

FEDERAL SIGNAL CORPORATION
 Industrial Systems
 Service Department
 2645 Federal Signal Drive
 University Park, IL 60484-3167