



INSTALLATION INSTRUCTIONS FOR MODEL 400 SERIES LIGHTS

SAFETY MESSAGE TO INSTALLERS

It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electrical Code and will follow the NEC Guidelines as well as local codes.

The selection of the 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.
- Do not connect this light to the system when power is on.
- After installation, test the light system 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 light system for proper activation and operation.

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

I. GENERAL.

A Model 350 Vibratone Horn can be installed in the lower housing of a Model 400 Series Light. It is usually more convenient to install the audible device in the light before attaching the light to the mounting surface. Therefore, it is recommended that the audible device be installed (if applicable) before proceeding.

II. 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. Ensure that the parts listed in the KIT CONTENTS LIST are included in the packing carton.

III. KIT CONTENTS LIST.

| <u>Qty.</u> | <u>Description</u> |
|-------------|----------------------------------|
| 2 | Hex. Head Mach.Screws, 1/4-20 |
| 2 | Allen Head Set Screws, Cone Pt. |
| 2 | 6-32 x 3/16" Hex Screws, Taptite |
| 2 | Nut, KEPS, 1/4-20 |
| 1 | Cover Plate, Mounting Adapter |
| 1 | Cover, Self-Adhesive |
| 1 | Plate, Mounting Adapter |
| 1 | Bracket, Wall/Ceiling Mounting |
| 1 | Grommet |

IV. INSTALLATION.

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 system.
- Any maintenance to the light system must be done with the power turned off.
- Any maintenance to the light system must be performed by a trained electrician in accordance with NEC Guidelines and local codes.
- Never alter the unit in any manner. Safety in hazardous locations may be endangered if additional openings or other alterations are made in units specifically designed for use in these locations.
- The nameplate, which may contain cautionary or other information of importance to maintenance personnel, should not be obscured if exterior of housings used in hazardous locations are painted.

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

Model 400 Series Lights can be mounted using any one of three methods; flat surface mounted on a wall or other vertical surface, on a 4" x 4" electrical box, or flat surface mounted on a ceiling.

A. Flat Surface (External Conduit) Mount.

1. See figure 1. Drill a 7/8" hole in the wall/ceiling mounting bracket, as indicated in the figure. Use caution to avoid damaging the bracket.
2. Install a user-supplied 1/2" conduit fitting into the hole that was drilled in step 1.
3. Insert the nylon grommet in the large center hole in the side of the light assembly main frame casting, as shown in figure 2.
4. See figure 2. Attach the wall/ceiling mounting bracket to the main frame casting, using two 1/4"-20 x 1/2" hex head machine screws (supplied), making sure that all wiring from the interior of the light passes through the large center hole in the end of the bracket. Route the wiring through the conduit fitting that was installed in step 2.
5. Start the 10-32 x 3/4" cone point set screws in the threaded holes in the upper and lower edges of the wall/ceiling mounting bracket.
6. Attach the cover plate to the adapter plate, using the two 6-32 x 3/16" self-tapping screws supplied.
7. Attach the adapter plate to the mounting surface, using the appropriate user-supplied hardware, as indicated in figure 3.
8. Place the light/mounting bracket assembly over the adapter plate and tighten the two cone point set screws, ensuring that the screws engage the two dimples in the adapter plate.

CAUTION

DO NOT make electrical splices within the wall/ceiling mounting bracket.

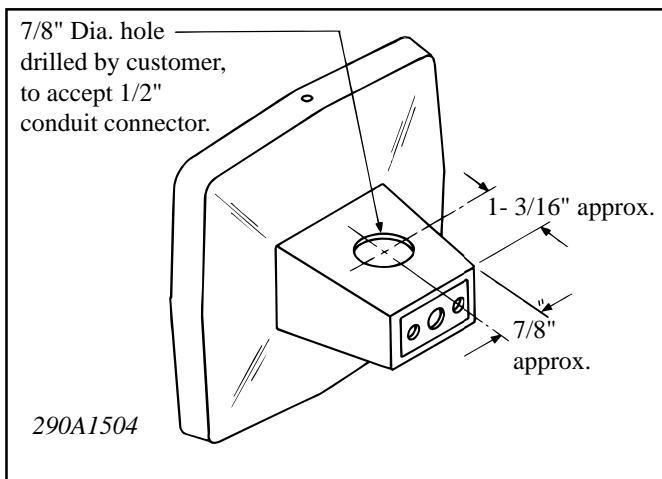


Figure 1.

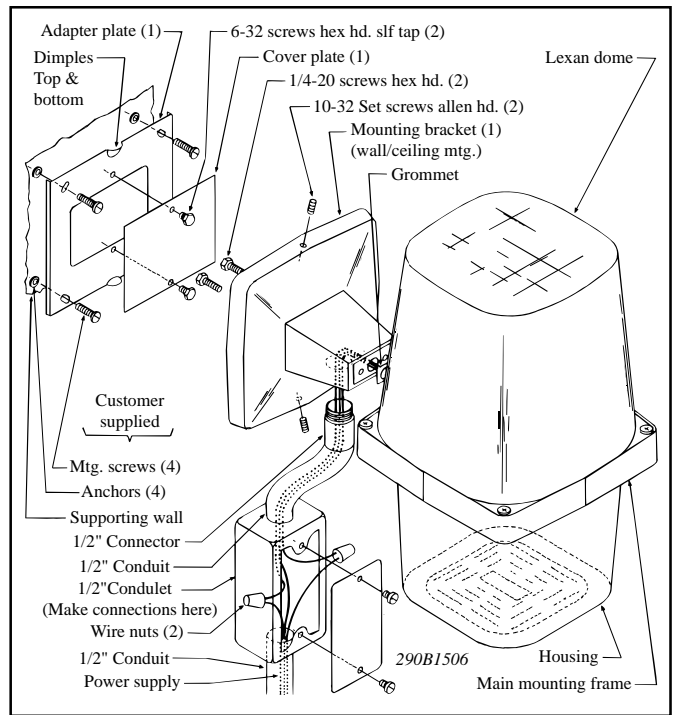


Figure 2.

WARNING

DO NOT connect wires when power is applied.

9. Using the wires extending through the conduit fitting as a guide, determine the length of the conduit necessary for the installation, as indicated in figure 3.
10. Install conduit and a condulet box (both user-supplied), as indicated. Splice the light leads to the power leads in the condulet box. Connect the green light lead (ground) to the condulet box by the most convenient means. Insulate all splices.

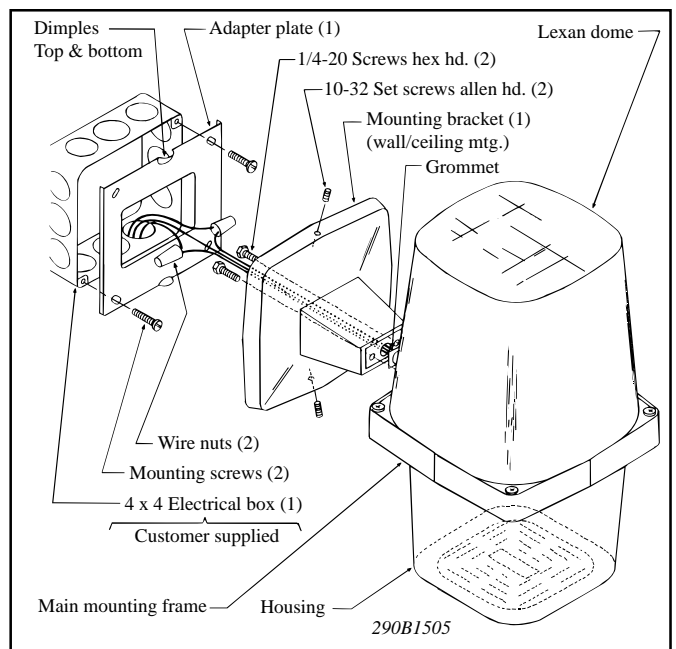


Figure 3.

B. Electrical Box Mount.

1. Install a 4" x 4" electrical box conduit and wiring, as necessary (all user-supplied).
2. Insert the nylon grommet in the large center hole in the side of the light assembly main frame casting, as shown in figure 2.
3. See figure 3. Attach the wall/ceiling mounting bracket to the main frame casting, using the two 1/4"-20 x 1/2" hex head screws (supplied). Make sure that all wiring from the interior of the light passes through the large center hole in the end of the bracket.
4. Install the adapter plate (supplied) on the 4" x 4" electrical box, using the appropriate user-supplied hardware.
5. Start the two 10-32 x 3/4" cone point set screws in the threaded holes in the upper and lower edges of the wall/ceiling mounting bracket.
6. Connect the green wire (ground) to the 4" x 4" electrical box.

CAUTION

DO NOT make electrical splices within the mounting bracket.

WARNING

DO NOT connect wires when power is applied.

7. Splice the light wires and audible device wires (if applicable) to the electrical supply wires in the electrical box.
8. Place the assembled light and mounting bracket over the adapter plate and tighten the two cone point set screws. Make sure that the screws engage the two dimples in the adapter plate.

C. Ceiling Mount.

Model 400 Series Light can be mounted flat on a ceiling or on a 4" x 4" electrical box. Both of these mounting methods are variations on those methods already described. However, the wall/ceiling mounting bracket must be attached to the lower housing of the light. If an audible device was installed, the mounting bracket should be attached to the lower housing of the light. If the bracket is already attached, disregard the procedure in this paragraph and proceed directly to paragraph IV.A. or IV.B. of this sheet, as appropriate. However, if it is necessary to attach the bracket to the light, proceed as follows (see figure 4):

1. Remove the four slotted housing fastening nuts and lift the lower housing from the light assembly.
2. Remove the grille cover plate from the bottom of the housing by removing the four 6-32 KEPS nuts and washers at the bottom of the housing.
3. Install the nylon grommet in the center hole in the bottom of the lower housing.
4. Route the light supply wires through the grommet that was installed in step 3.
5. Attach the wall/ceiling mounting bracket to the lower housing using two 1/4"-20 x 1/2" hex head machine screws and KEPS nuts (supplied).
6. Apply the self-adhesive cover over the holes on the side of the main frame casting.
7. Reassemble the light following steps 1 and 2 in reverse order.
8. Install the light on the ceiling following the procedure in paragraph IV.A. or IV.B. of this sheet, as appropriate.

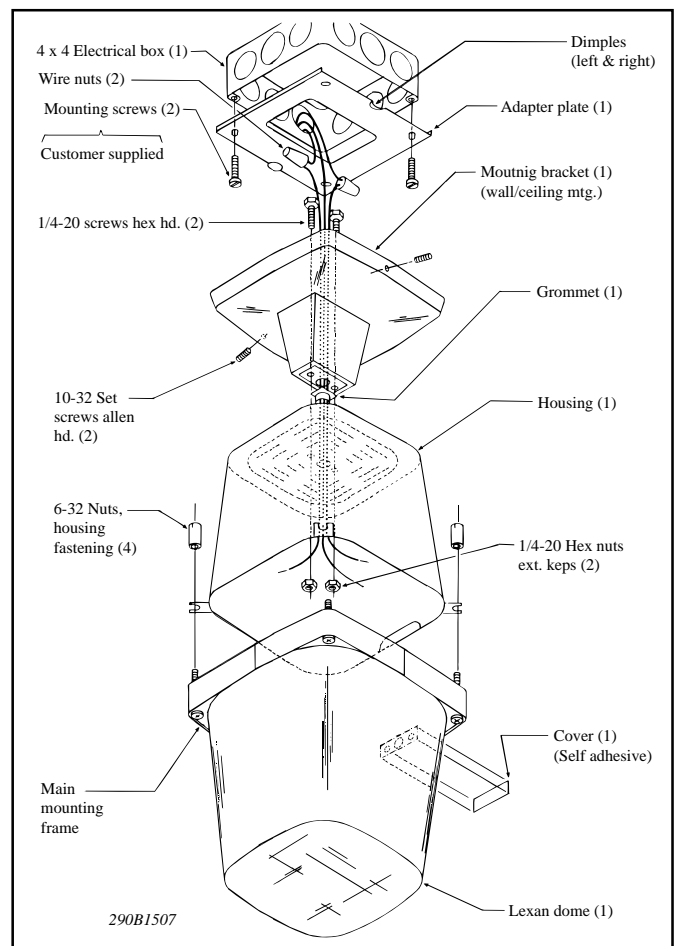


Figure 4.

V. SERVICE.

The Federal 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 the local Distributor or Manufacturer's Representative.

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:

Service Department
Electrical Products Division
Federal Signal Corporation
2645 Federal Signal Drive
University Park, IL 60466-3195

VI. REPLACEMENT PARTS LIST.

| <u>Description</u> | <u>Part Number</u> |
|----------------------|--------------------|
| Dome, Lexan, Red | K8547C001A-01 |
| Dome, Lexan, Blue | K8547C001A-03 |
| Dome, Lexan, Amber | K8547C001A-04 |
| Dome, Lexan, Clear | K8547C001A-05 |
| Lens, Fresnel, Glass | K8248C004A-04 |
| Strobe Tube | K8422A420B |
| Lamp | K8107181A |
| Interior Lens, 400ST | K8248C004E-04 |
| PC Assembly, 400ST | K200D825C |