

HALOGEN 120
Undercabinet Luminaire

INSTRUCTION SHEET

HALOGEN 120 LINE VOLTAGE UNDERCABINET LUMINAIRE

ALKCO where quality comes to light™
11500 Melrose Avenue, P.O. Box 1389
Franklin Park, IL 60131-8389



A Subsidiary of JJI Lighting Groups, Inc.

CAUTION! – READ THIS FIRST IMPORTANT SAFETY INSTRUCTIONS

- Carefully read the instructions pertaining to your fixture. **IF YOU HAVE ANY QUESTIONS REGARDING THE PROPER INSTALLATION OR LOCAL CODES, CONSULT A QUALIFIED ELECTRICIAN.**
- This fixture is intended for undercabinet or undershelf mounting.
- Maximum number of luminaires to be interconnected cannot exceed 28 lamps. Maximum distance between interconnected luminaires is 3 feet.
- Injury to persons and damage to the fixture and/or mounting surface may result if the fixture is pulled from the surface. To reduce the likelihood of such injury or damage, mount only on a surface that is mechanically sound.
- Both cordset and hard-wired fixtures are intended for connection to a grounded, three-wire source of supply.
- To avoid shock hazard, do not work with live electrical wires.
- Install the fixture in only dry, indoor applications.
- Do not install outdoors or in applications other than the intended use.
- Install and wire the fixture in locations in accordance with all national, state and local codes.

Luminaire Ratings

LH9 - 120V, 0.21A LH22 - 120V, 0.63A
LH15 - 120V, 0.42A LH46 - 120V, 1.25A

CUSTOMER SERVICE

If you require additional information regarding this or other light fixture components, we invite you to call us at ALKCO. Our business hours are:

Monday - Friday (except holidays)
8:00 a.m. to 4:30 p.m. Central time
Phone: (847) 451-0700
Fax: (847) 451-7512

**WARNING: LIGHTED LAMP IS HOT!
TO REDUCE RISK OF FIRE,
ELECTRICAL SHOCK OR
INJURY TO PERSONS:**



1. **TURN OFF/UNPLUG AND ALLOW TO COOL BEFORE REPLACING LAMP.**
2. **LAMP GETS HOT QUICKLY! TOUCH ONLY SWITCH/PLUG WHEN TURNING ON.**
3. **DO NOT TOUCH HOT LENS OR ENCLOSURE.**
4. **DO NOT LOOK DIRECTLY AT LIGHTED LAMP.**
5. **KEEP MATERIALS THAT MAY BURN AWAY FROM LAMP.**
6. **USE ONLY WITH A 115VAC, 25 WATT T4,G8 BI-PIN HALOGEN LAMP OR SMALLER.**

WARNING: RISK OF FIRE. MINIMUM OF 90°C SUPPLY CONDUCTORS. CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR.



GENERAL

Alkco HALOGEN 120 fixtures are designed for modular plug-together connection. The first fixture may be rear-supplied hard-wired with the provided hardware, or remote wired through the use of the optional power feed accessories (Figure 2). Additional fixtures simply plug into the first with the interconnection plug (Figure 1) for flush-end mounting. Optional straight and coiled interconnect cords electrically continue a run of luminaires around corners or across gaps.

DIMMING CONSIDERATIONS

Dimming of the lamps may be achieved with any quality incandescent dimmer unit. The dimmer power rating must equal or exceed the total wattage of the fixture string it supplies. Determine this by multiplying the number of individual lamps (not fixtures) on the string by the wattage of the lamps in use. **For example:** To dim 3 inter-connected fixtures, each having two 25W lamps (6 lamps total), multiply $6 \times 25W = 150W$. For this case you would use a 150 to 200W dimmer unit.

HARDWARE INCLUDED

The hardware for mounting a hard-wired fixture is supplied with your unit. It is shipped in two separate bags and is illustrated in Figure 1.

One hardware bag contains:

- 1 FMC/Romex connector body
- 1 FMC/Romex connector clamp
- 1 11/16" AF hex nut (for Romex)
- 2 #6-32 x 3/8" machine screws (for Romex)
- 2 #8-32 x 3/4" machine screws (FMC)

FIXTURE INSTALLATION

1.0 INITIAL FIXTURE MOUNTING PROCEDURE

The Alkco fixtures are designed to be individually mounted or row mounted by plugging into each other. The connection to AC power can be hard-wired or plugged in with an optional remote AC power feed (Figure 2). Conduct the following procedure to mount a single fixture or the first one in a string of multiple fixtures.

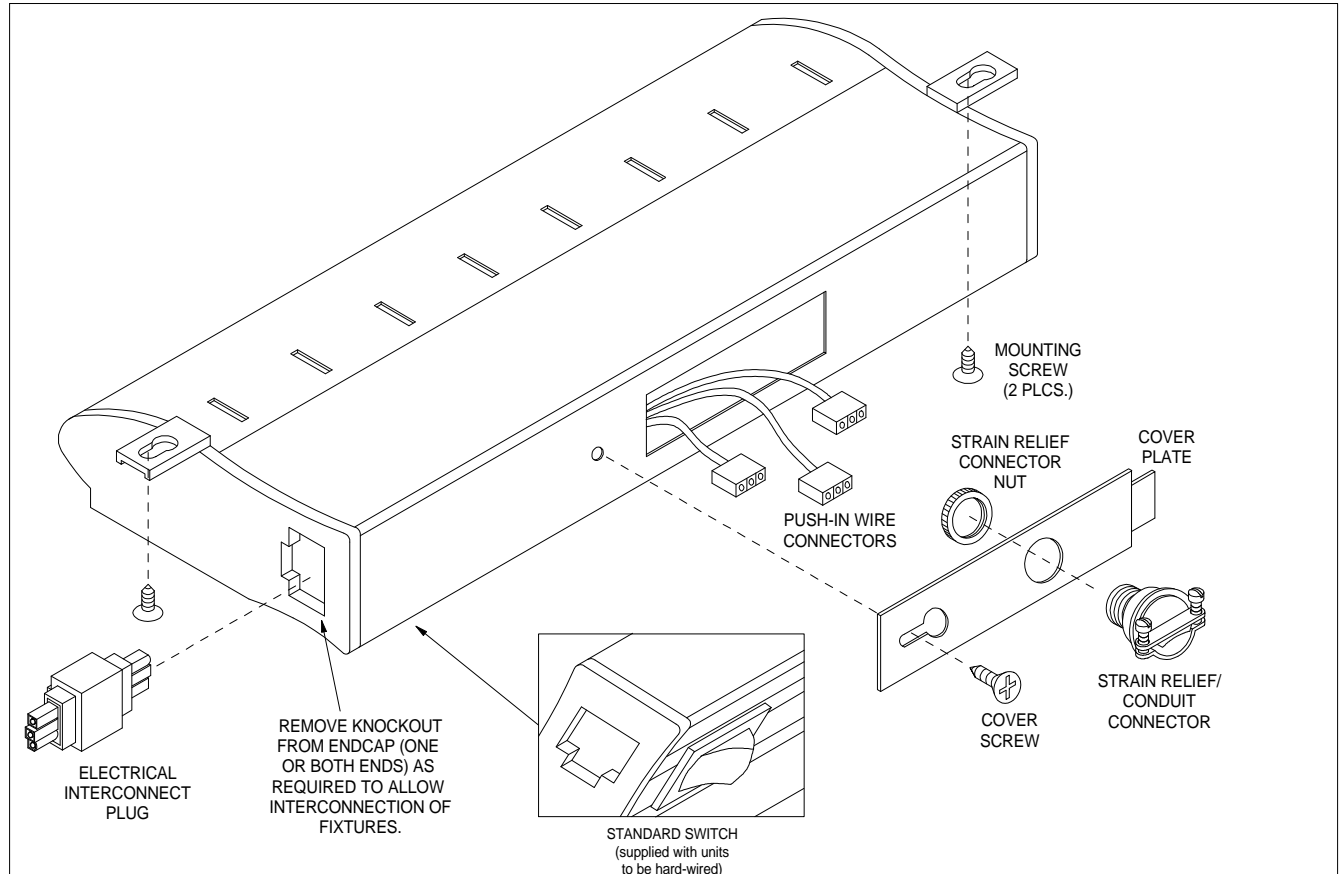


Figure 1

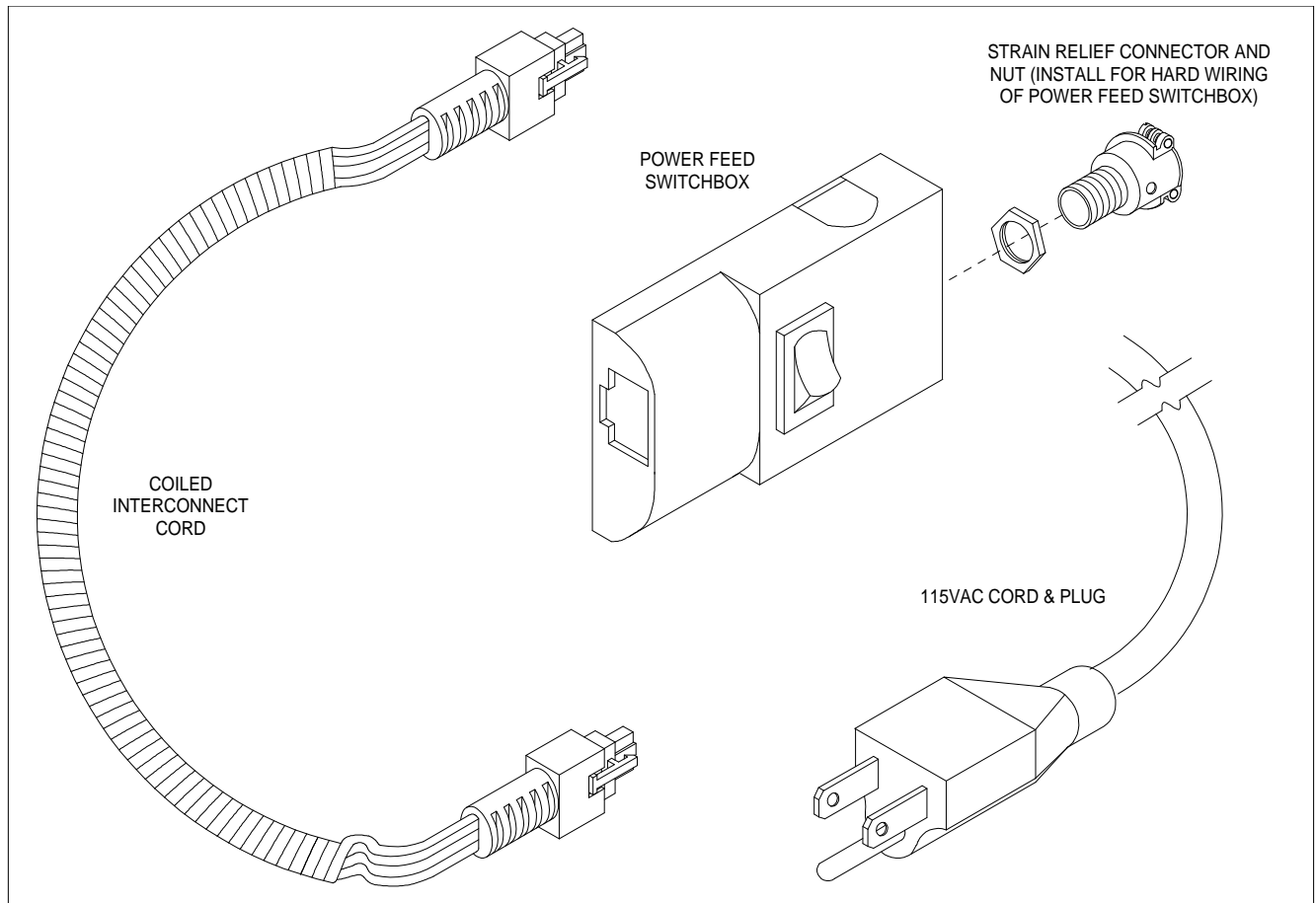


Figure 2

1.0 INITIAL FIXTURE MOUNTING PROCEDURE (cont.)

1. Determine where the fixture(s) will be mounted.
2. Ensure that there is adequate room for the depth of the fixtures, and adequate clearance at the back and/or ends of the fixture for electrical feed, AC cord, and/or optional interconnect cord.

Note: If multiple fixtures are to be mounted end-to-end and electrically connected with only the interconnect plug (Figure 1), they must be precisely mounted in a straight line. Otherwise, electrical contact may be marginal, resulting in unreliable operation.

3. Draw a straight line indicating the position for the back edge of all the fixtures to be mounted.

2.0 ELECTRICAL CONNECTION

Power may be supplied to the fixture through hard-wiring, through the optional power cord (factory-installed in the fixture cover plate) or through the optional power feed switchbox. Follow the appropriate procedure below for the desired power supply configuration.

NOTE: If the optional power cord/plug option is already present in the fixture cover plate, go to section 3.0 Multiple Fixture Mounting.

2.1 Rear-supplied Hard Wiring Procedure

1. Remove the cover plate from the back of the fixture housing (Figure 1).
2. Install the supplied FMC/Romex strain-relief connector into the cover plate.
3. Secure the proper length of power supply wiring into the strain-relief connector.

2.1 Rear-supplied Hard Wiring Procedure (cont.)

WARNING: SHOCK HAZARD!
**MAKESURE AC POWER IS
TURNED OFF BEFORE
CONNECTING FIXTURE TO
SUPPLY LINES.**



4. Connect the AC feed to the three fixture pigtails (provided with push-in connectors). Connect the green ground lead to the green pigtail, the white neutral lead to the white pigtail, and the black hot lead to the black pigtail. Make sure the wires are secure and that no wire strands or uninsulated conductor lengths are left exposed.
5. Install the cover plate on the back of the fixture and secure it as shown in Figure 1.
6. If mounting a single fixture, test it now. Refer to the Troubleshooting Table for additional information.
7. Remove the plastic knockout plug in the appropriate endcap of the fixture if additional fixtures are to be interconnected to it.
8. Lift the fixture into place so its rear edge aligns with the line drawn in step 3. Make sure it is positioned precisely.
9. Use the mounting tabs as templates, and secure the fixture with the mounting screws provided, as shown in Figure 1.
10. Go to section 3.0 if additional fixtures are to be installed and electrically interconnected to the initial fixture just wired.

2.2 Optional Power Feed Wiring Procedure

The power feed switchbox receives its electrical supply either through a cord and plug, or through hard wiring installed in the field. To facilitate hard wiring, install the FMC/Romex strain-relief connector as indicated in Figure 2. Remove two Phillips screws from the back of the power feed switchbox to open the back cover. Securely install wire nuts on all electrical connections. If hard wiring

is required, perform this conversion prior to conducting the steps below.

1. Mount the optional power feed switchbox (Figure 2) in suitable proximity to the fixtures that allows its interconnect cord to reach the initial fixture housing.
2. Connect the interconnect cord between the initial fixture and the power feed switchbox.
3. Plug in the AC cord of the power feed switchbox (unless it was hard wired as mentioned previously) and turn on its switch to test and confirm fixture illumination. If any lamps fail to start, refer to the Troubleshooting Table.

3.0 MULTIPLE FIXTURE MOUNTING

Additional fixtures may be mounted in an in-line group or string with the initial fixture previously mounted and wired according to sections 1.0 and 2.0. There are two different mounting configurations to select among:

- 1) end-to-end with the interconnect plug (see Figure 1) providing electrical continuity, or
- 2) spaced at intervals with the gaps spanned by the optional interconnect cords (Figure 2) providing electrical continuity.

The procedure below is written to cover the more complex mounting of configuration 1. If configuration 2 has been chosen, remove the appropriate knockout plugs from the fixtures, mount the fixtures at suitable intervals and then install the power feed cables between them.

1. If the initial fixture has not been mounted and electrically connected to the supply power, conduct the procedures in sections 1.0 and 2.0 to do so before continuing below.
2. Firmly insert the electrical interconnect plug (Figure 1) into the initial fixture through the appropriate end cap (see section 1.0, step 4).
3. Remove one or both plastic knockout tabs from the second fixture endcap(s) as is appropriate for the fixture string you are configuring.

3.0 MULTIPLE FIXTURE MOUNTING (cont.)

4. Raise the second fixture into place, align its endcap knockout hole with the interconnect plug and then slide it onto the plug firmly to ensure positive electrical contact. While doing so, be sure to slide the mounting tab of the new fixture into the gap between the top of the initial fixture and the mounting surface (no mounting screw is required at that end).
5. Position the new fixture so that its rear edge aligns precisely with the line drawn to mount the initial fixture. Install the mounting screw.
6. Repeat steps 2 through 5 for the third and all subsequent fixtures to be mounted in the string.
7. Apply power to confirm operation of all the fixtures. If any fail to light up, refer to the Troubleshooting Table following.

4.0 HALOGEN LAMP REPLACEMENT

IMPORTANT! Be sure to read and observe all the precautions listed on the first page of this document.

1. Remove diffuser lens by sliding it toward the front of the fixture housing.
2. Gently pinch the old lamp and slide it straight out of its socket.
NOTE: Do not touch the new lamp with your bare hand. The natural oils in your hand will leave a residue on the lamp and shorten its service life.
3. Use a clean rag to handle the new lamp. Insert the new lamp into the socket.
4. Reinstall the diffuser lens. Confirm operation.

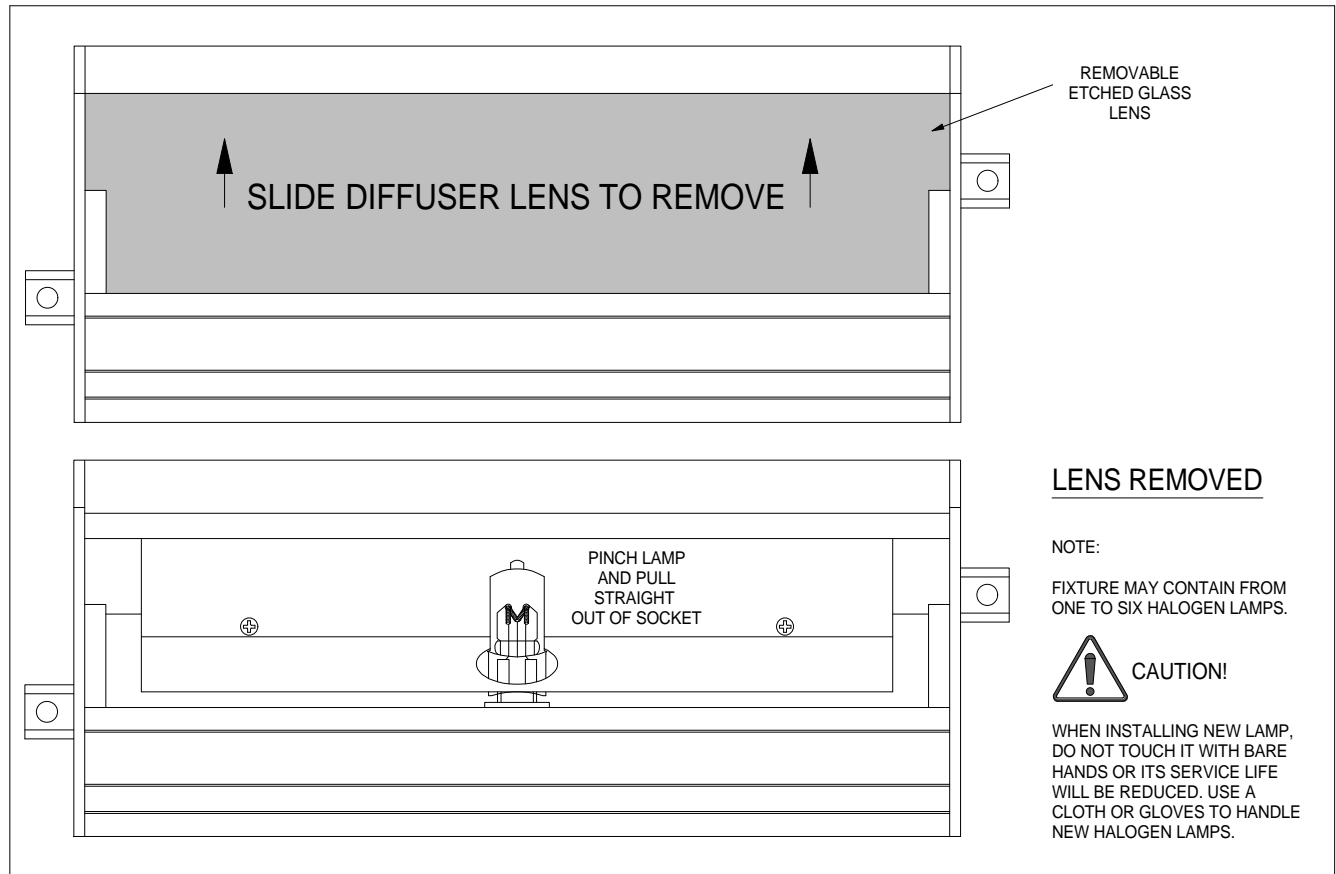


Figure 3

TROUBLESHOOTING TABLE

| Problem | Probable Cause | Corrective Action |
|------------------------------------|---|--|
| Lamp(s) won't light. | Lamp is not installed correctly. Dimmer is set to minimum or is turned off. | Check for firm contact between lamp pins and pin socket. Turn dimmer to full on. |
| Lamp operation is dim. | Defective or old lamp. Incorrect voltage supply to fixture (110-130VAC req.). Dimmer is set to minimum or is turned off. | Replace lamp. Check/adjust supply voltage. Turn dimmer to full on. |
| Lamp life is short. | Defective lamp. Voltage to fixture is too high (above 130VAC). | Replace lamp. Check/adjust supply voltage. |
| Some fixtures lit, others are not. | Not all fixtures are turned on. Insufficient electrical contact between fixture connector and interconnection plug due to incorrect fixture spacing or misalignment. | Turn on rocker switch (if applicable) on each fixture. Remount fixtures in a straight line making sure each one plugs securely into the next. |

DLQ 200
Energy Efficient FLuorescent

INSTRUCTION SHEET

DLQ 200 Series

Energy Efficient Fluorescent
Square Down Lighting

ALKCO where quality comes to light™
11500 Melrose Avenue, P.O. Box 1389
Franklin Park, IL 60131-8389



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- Carefully read the instructions appropriate to your fixture. IF YOU HAVE ANY QUESTIONS REGARDING THE PROPER INSTALLATION OR LOCAL CODES, CONSULT A QUALIFIED ELECTRICIAN.
- Fixtures are intended for connection to a grounded, three-wire source of supply.
- To avoid shock hazard, do not work with live electrical wires.
- Install and wire fixture in locations in accordance with national, state, and local codes.
- Fixtures are intended for installation in dry and damp locations.

WARNING: THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.



GENERAL

The DLQ 200 Series lighting system is designed to be installed in new construction. The rough-in tray and die-cast lamp housing are packaged together in the same box. The rough-in tray is to be installed and wired during the initial stage of construction. After the ceiling is completed, the die-cast lamp housing, lamps, and optional decorative trim/louvers are added.

CUSTOMER SERVICE

For additional information about this or other light fixture components, please contact us.

Monday - Friday (except holidays)
8:00 a.m. to 4:30 p.m. Central time
Phone: (847) 451-0700
Fax: (847) 451-7512

INSTALLING THE ROUGH-IN TRAY

NOTE: For mounting in a grid ceiling, the rough-in tray mounts with structural members (not supplied) that rest on the T-runners and are secured with clips or wires. For sheetrock ceilings, the rough-in mounting tray mounts with structural members that are secured to ceiling joists.

Refer to Figure 1 and conduct the following procedure to install the rough-in mounting tray.

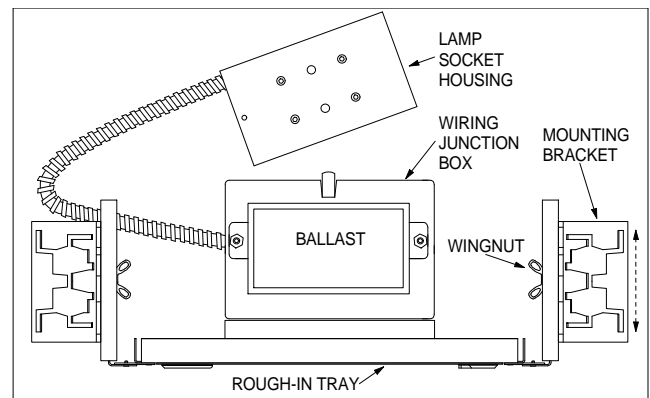


Figure 1 - Rough-in Tray Components

1. Determine where the fixture is to be mounted.
2. Slide the structural members (channel bars, conduit, etc.) through the mounting brackets.

NOTE: The mounting brackets allow approximately 5 inches (13 cm) of vertical adjustment. Final adjustment can be made just prior to ceiling installation and finishing.

3. Secure the structural members to ensure a level and permanent installation.
4. Loosen the two wing nuts that secure the mounting brackets to the rough-in tray.

INSTALLING THE ROUGH-IN TRAY (cont.)

5. Adjust the tray so that it is level and positioned just above the plane of the ceiling. Tighten the two wing nuts to secure the rough-in tray.
6. Connect the fixture wiring as described below.

WIRING THE FIXTURE

WARNING: TURN OFF POWER BEFORE WIRING THE FIXTURE TO SUPPLY LINES. LIVE WIRES PRESENT A POTENTIAL SHOCK HAZARD.



NOTE: Make sure that all wiring is in accordance with local, state, and national electrical codes. This fixture must be connected to a three-wire source of supply (hot, neutral, and ground).

1. Open the wiring junction box (Fig. 1) and install the conduit connector into a suitable knockout hole. Secure the fitting with the hex nut.
2. Secure a flexible metal conduit to the fitting.
3. Connect the black and white wires in the fixture to the “hot” and “neutral” supply wires, respectively. Connect the supply “ground” to the bare ground wire provided in the junction box. Be sure that all connections are secure. Ensure that wirenuts are tight and no strands of wire are exposed.
4. Test the installation before final construction. To do so, install the fluorescent lamps by guiding the top of the lamp into the reflector opening opposite the sockets, and then guide the lamp base into the socket and press firmly to snap it in place. After testing the installation, remove the lamps to prevent damage.

CEILING INSTALLATION

The ceiling-panel cut-out dimensions are shown in Figure 2.

NOTE: The rough-in tray may be used as a template for marking the cut-out in the ceiling.

1. Install the ceiling panel beneath the applicable fixture rough-in tray.

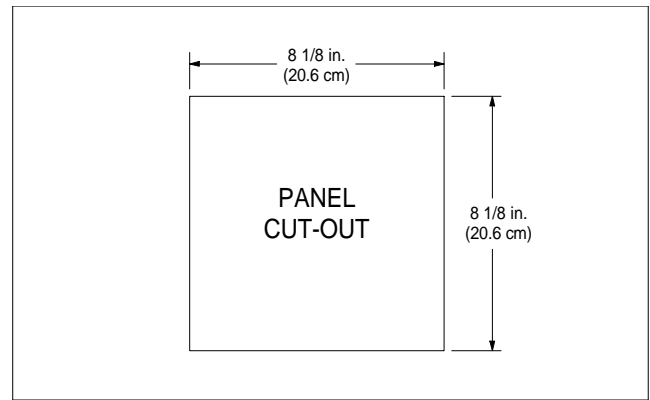


Figure 2 - Panel Cut-out Dimensions

2. Loosen the two wingnuts on the fixture mounting brackets (Fig. 1) and position the rough-in tray flush against the ceiling panel. Tighten the wingnuts securely.
3. Use a pencil and mark the outline of the hole in the rough-in tray onto the ceiling panel.
4. Remove the ceiling panel and carefully cut out the marked hole.

COMPLETING THE INSTALLATION

After the ceiling is installed, the lighting fixture installation can be completed. Conduct the following procedure to install the die-cast lamp housing, the decorative trim ring and/or other options, and the lamps.

IMPORTANT: If you will be installing the optional **suspended glass trim**, install the four screws and four plated standoffs in the die-cast lamp housing before continuing, as shown in Figure 5.

1. Feed the lamp socket housing (Fig. 1) down through the rough-in tray and ceiling cut-out.
2. Mount the lamp socket housing onto the die-cast housing with the two screws provided, as shown in Figure 3.
3. Angle the die-cast lamp housing upward (conduit connection downward) and insert it up into the ceiling with the lamp socket housing oriented at the end of the rough-in tray opposite from the ballast. Insert it fully into the tray.
4. Secure it in place by installing the three standoffs (Fig. 3) and tightening their thumb-screws. Make sure that the black plastic trim of the lamp housing is fully inserted into the ceiling panel and flush against it.

COMPLETING THE INSTALLATION (cont.)

5. Install the two fluorescent lamps into the lamp sockets. Do so by guiding the top of the lamp into the reflector opening opposite the sockets, and then guide the lamp base into the socket and press firmly to snap it in place. Available

lamp selections are listed below. (The number to the left of the "W" indicates lamp wattage.)

- | | |
|---------------|----------------|
| CFQ18W/G24q-2 | PL-T32W/G24q-3 |
| CFQ26W/G24q-3 | PL-T42W/G24q-4 |

6. Install the trim and related components onto the fixture as shown in Figures 4 and 5.

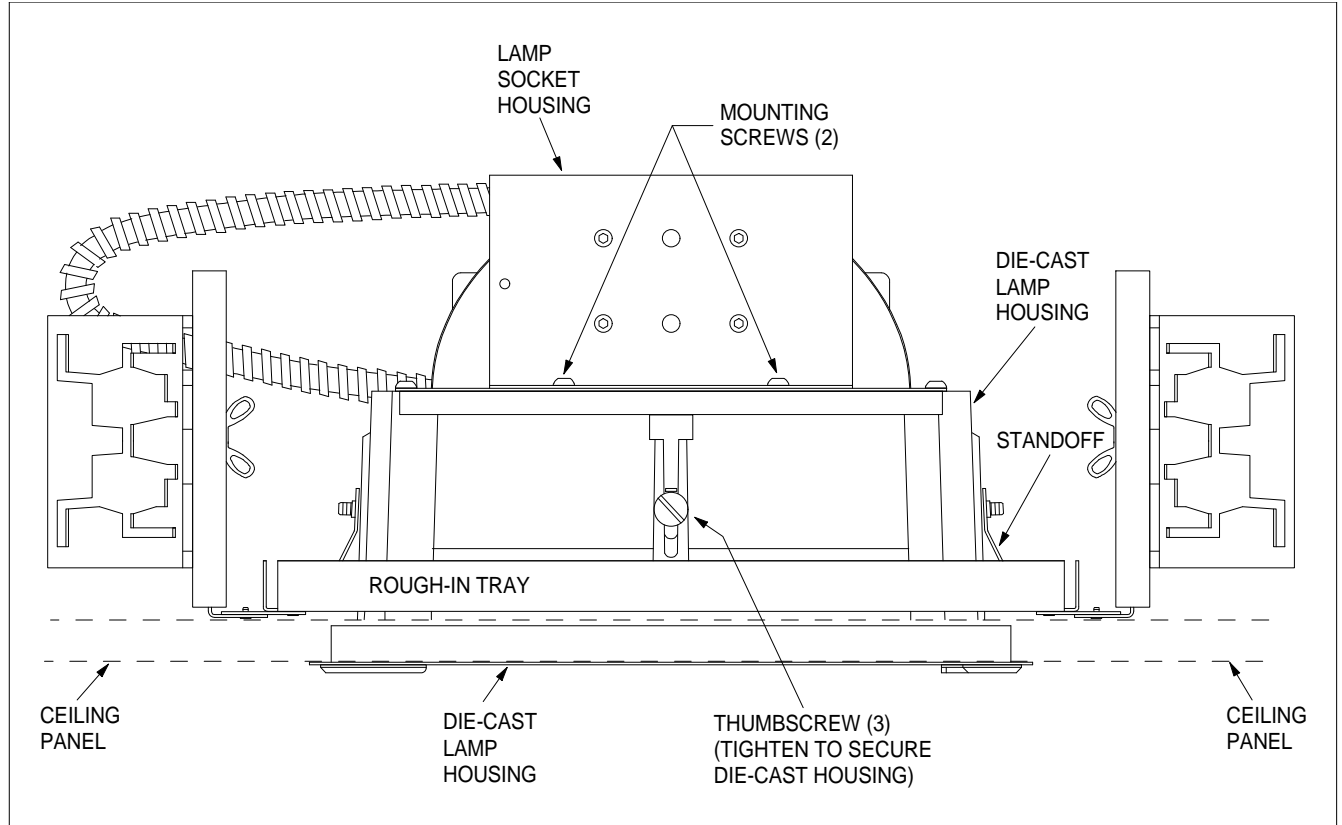


Figure 3 - Lamp Socket Housing and Die-cast Lamp Housing Installation

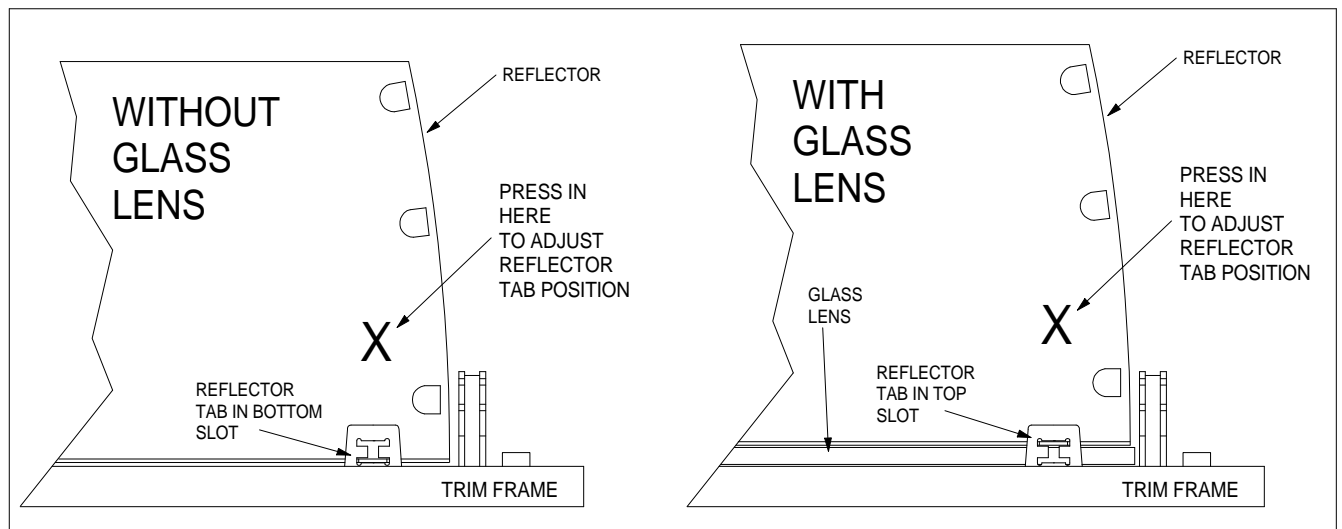


Figure 4 - Optional Glass Lens Installation

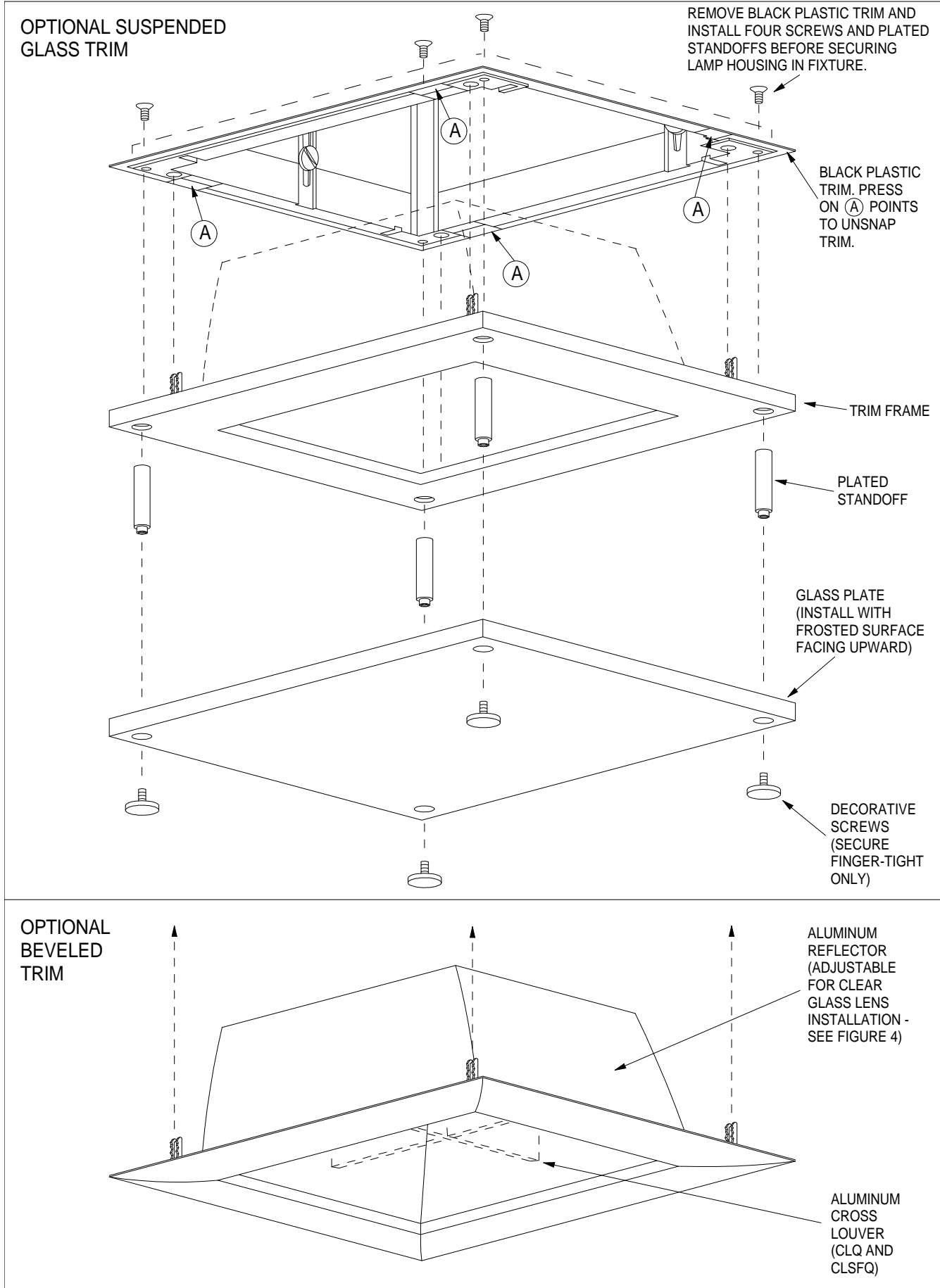


Figure 5 - Optional Trim Installation