

## Installation Instructions for ML9Sx Commercial Recessed Housings

### ⚠ WARNING

#### Risk of Electrical Shock

Disconnect power at fuse or circuit breaker before installing or servicing.

### ⚠ WARNING

#### Risk of Fire

Supply conductors (power wires) connecting the fixture must be rated minimum 90°C. If uncertain, consult an electrician.

### ⚠ WARNING

#### Risk of Fire

Do not install insulation within 3 inches (76 mm) of any part of the enclosed fixture or in a way that may trap heat.

**CAUTION:** To avoid possible electrical shock, be sure that power supply is turned off before installing or servicing this fixture.

**CAUTION:** Metal halide lamps have arc tubes that operate at extremely high temperatures and may shatter unexpectedly as a result of misapplication, system failure or internal factors. **This violent failure could cause extremely hot glass and lamp parts to discharge into the surrounding environment, creating a risk of personal injury, fire or property damage.** Therefore, it is incumbent on the user to use common sense and good judgment in anticipation of these potential violent failures. Never use or operate this fixture without safety glass or lens properly installed and secured in place.

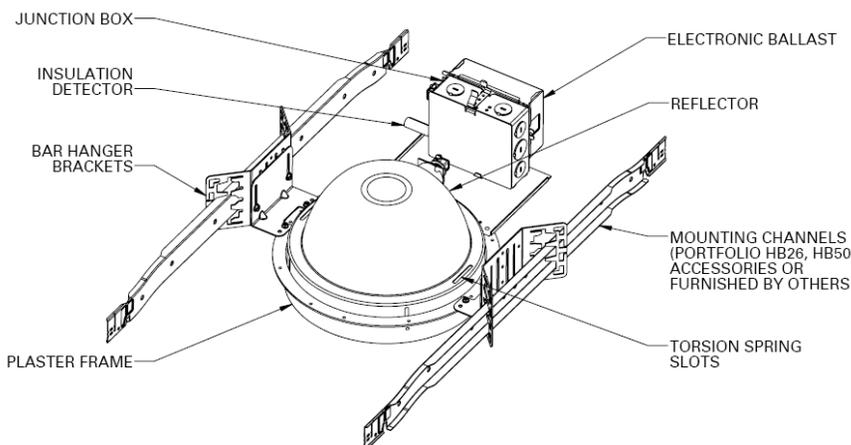
**CAUTION:** Use with ceramic metal halide lamps approved for use in open fixtures. Do not use an incandescent lamp as this may cause extremely short lamp life and may damage the ballast.

### Reduction of Risk

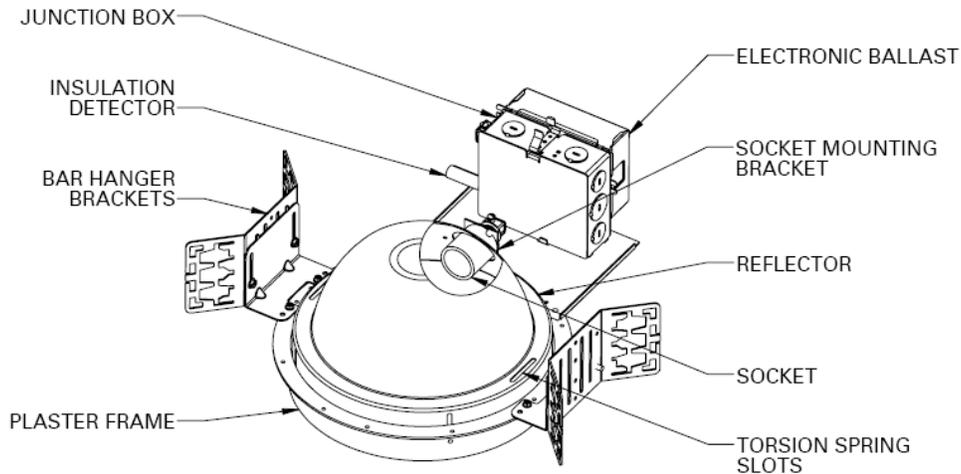
The potential of violent failure can be significantly reduced by relamping at or before the rated end of life. In applications where the lamps burn continuously, the lamps should be turned off for a period of 15 minutes at least once per week which will cause lamps nearing their end of life to fail passively upon relighting. Careful adherence to the above precautions may not eliminate all possible risks associated with the use of Metal Halide lamps, but it will reduce the likelihood of personal injury or property damage.

## Rough-In Mounting

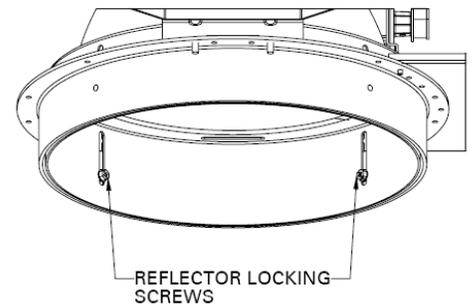
- This fixture should be supported by main runners or other structure that is capable of supporting fixture weight of 9 lbs.
- The junction box will accept both ½" and ¾" trade size metal conduit.
- The housing is designed for installation where it will not come in contact with insulation. Thermal insulation must be kept a minimum of three inches (3") away from the housing sides, top and junction box.
- This housing/trims are designed to be used with ED17 Metal Halide lamps for the specified wattages only. These lamps can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if the envelope of the lamp is broken or punctured.



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- Step 1.** Install fixture into ceiling cavity using 1/2" electrical conduit, 3/4" channel, 1 1/2" channel or 1/8" x 1/2" bar stock as mounting rails (furnished by others) by inserting them into hanger brackets at both ends of the fixture as shown.
- Step 2.** Secure mounting rails to support structures by dropping the notch on each end of the hanger bar on to the support structure of the suspended ceiling to lock into place.
- Step 3.** Adjust fixture so bottom of plaster frame is flush with finished ceiling line, using screws securing hanger brackets. Hanger bracket is reversible for a total adjustment of 5".
- Step 3.** For further adjustment, there are four reflector locking screws accessible from the aperture. Loosen the screws but do not remove. The reflector can then be adjusted a maximum distance of 1-5/16". After desired position is reached, tighten screws to lock position.



## Electrical Connection

**CAUTION:** Make certain no bare wires are exposed outside of the wire nut connectors.

- Step 4.** Provide electrical service according to the "National Electrical Code" or your local electrical code to the junction box (located on the plaster frame). Supply wire insulation must be rated for at least 90°C. The junction box is rated for a maximum of 8 No. 12 AWG Branch Circuit conductors and is also suitable for at least 90°C.
- Step 5.** Remove the junction box cover.
- Step 6.** Remove appropriate round pryout and connect conduit to junction box with proper connector (not included).
- Step 7.** Connect supply lead wires to junction box lead wires (line, neutral and ground) in the fixture using properly sized wire nuts. Be careful not to leave any bare conductors outside of the wire nut connectors.
- Step 8.** For either 120V or 277 V, connect white to white, black to black, and green (from electrical service) on the supply side to the bare copper wire in the junction box. Place all excess wiring and connections into the junction box and replace the cover.

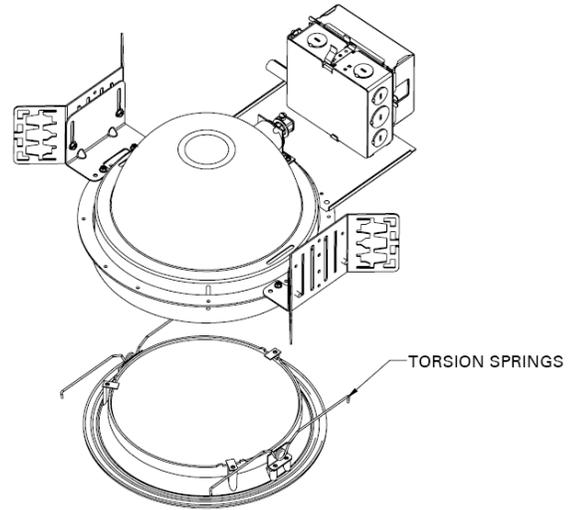
BLACK →> LINE  
WHITE →> NEUTRAL  
GREEN/BARE COPPER →> GROUND

## Trim Installation

**Step 1.** Install the proper lamp type and wattage into the socket. Make sure the new lamp does not have any fingerprints, dust, lint, etc. Screw lamp into socket until hand-tight.

**Step 2.** Install the trim by pushing compressing the torsion springs up through the torsion spring slots in the plaster frame.

**Step 3.** Push trim up until it is flush against ceiling.

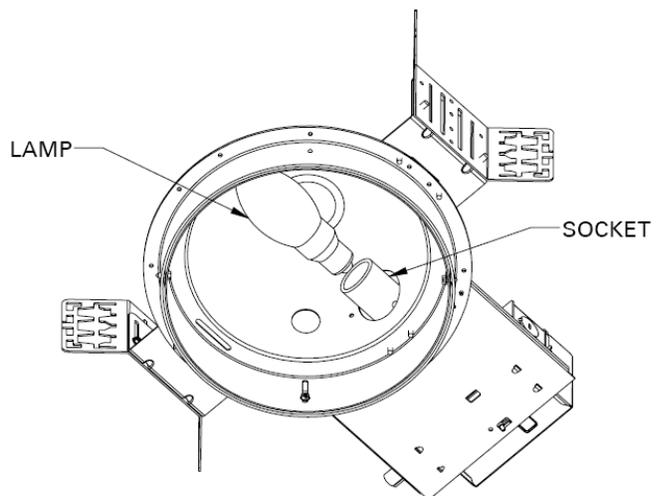


## Lamp Information

- The electronic ballast has a very important shutdown timing feature that turns off the ballast output after time periods ranging from 2 minutes up to 30 minutes if a lamp does not start or operate properly or if the fixture wiring is improper. For proper system diagnosis and at lamp replacement time, the **INPUT POWER TO THE BALLAST MUST BE RESET** (turn power off, wait 10 seconds, turn power back on) to start a new lamp.
- Take proper care in handling and disposing of the old lamp. Do not touch glass bulb with bare hands.
- Lamp contains Mercury. Manage in accordance with disposal laws. See [www.lamprecycle.org](http://www.lamprecycle.org) or 1-866-666-6850.

### Ceramic Metal Halide Lamp

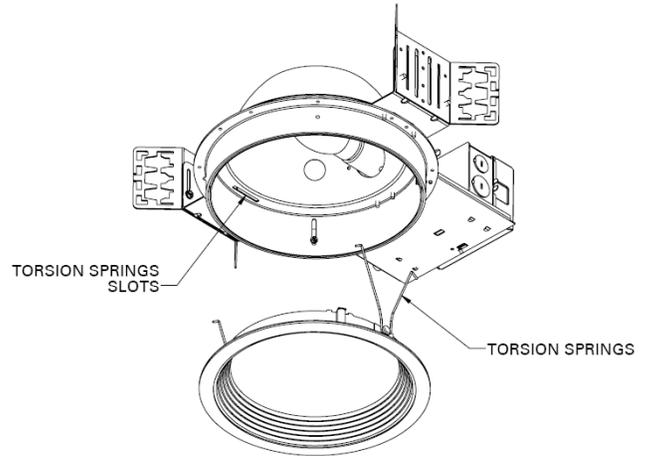
MLS13x Housings  
Medium Base E26 socket for one 50W, 70W, or 100W  
ED17 MH lamp.  
Generic lamp designations (lamp by others):  
M110 (50W)  
M98 (70W)  
M90 (100W)



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To re-lamp from below the ceiling:

- Step 1.** Remove the lower trim by gently pulling the trim downwards until the torsion spring stops are reached. Compress the torsion springs and pull the trim out of the torsion spring receivers.
- Step 2.** Remove the lamp by unscrewing the lamp from the socket. Use gloves if the lamp is still warm. Dispose of the old lamp according to local recycling code.
- Step 3.** Install the new lamp by screwing the lamp into the socket. Make sure the new lamp does not have any finger prints/dust/lint etc. Clean with a lint free cloth if necessary.
- Step 4.** Install the trim back into the housing using the torsion springs.

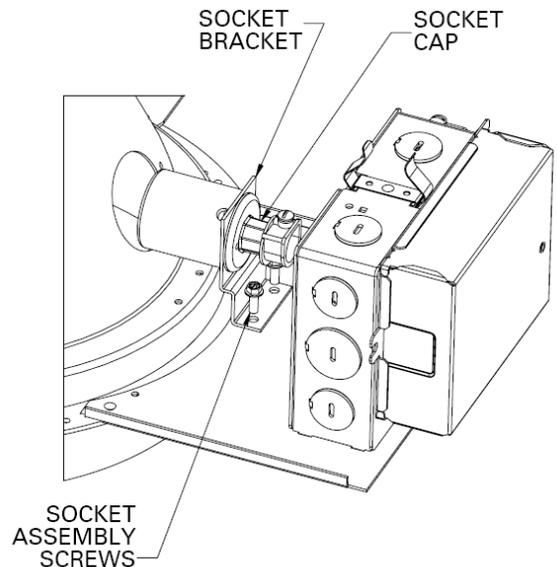


To clean trim: First, gently wipe with a soft, clean, dry lint-free cloth to remove loose dust. Then, use mild detergent solution on a soft clean cloth to remove finger prints and stains. Rinse with clean, soft water and dry with lint-free cloth.

## Reflector Removal

The reflector can only be removed from below the ceiling.

- Step 1.** Remove the trim assembly and the lamp.
- Step 2.** Remove the four reflector locking screws. Do not discard.
- Step 3.** Remove the socket assembly by removing the two screws attaching the socket bracket to the reflector. Install the socket assembly to the new reflector.
- Step 4.** Re-install the reflector. Line up the adjustment slots for the reflector with the corresponding holes in the plaster frame and re-insert the four reflector locking screws.
- Step 5.** Adjust the reflector position until it is at the desired level. Tighten the reflector locking screws to lock the reflector into place.
- Step 6.** Re-install the lamp and the trim assembly.



## Ballast Replacement

**CAUTION:** To avoid possible electrical shock, be sure that the power is turned off before installing or servicing this fixture.

- The ballast should be replaced by a qualified electrician.
- The ballast may be replaced either from below or above the ceiling.

**Step 1.** Remove the trim assembly.

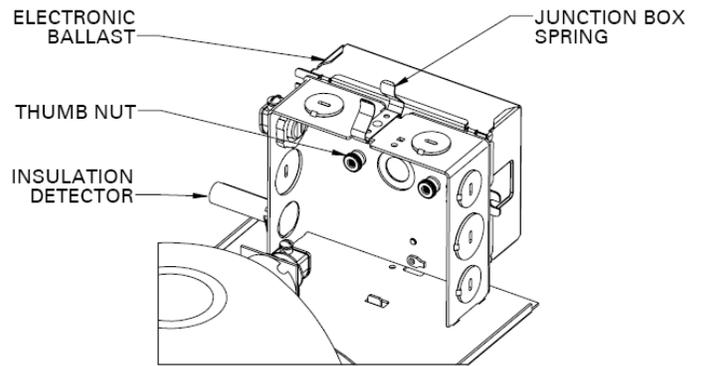
**Step 2.** If servicing below the ceiling, remove the reflector.

**Step 3.** Remove the ballast assembly from the junction box by compressing the springs on the junction box.

**Step 4.** Disconnect the wiring to the ballast by undoing the wire nuts. Remove the existing ballast by loosening and removing the thumb nuts securing the ballast to the junction box door.

**Step 5.** Install the new ballast. Refer to the table for a list of approved ballasts, and refer to the applicable wiring diagram at the end of this document for wiring information. Reconnect wiring using existing wire nuts.

**Step 6.** Close the access door. Re-install the reflector if necessary, and then re-install the trim.



| Wattage | Ballast                            |
|---------|------------------------------------|
| 50      | Vossloh-Schwabe M5012/27CK-5EU-JT3 |
| 70      | Advance IMH-70-A-BLS-ID            |
| 100     | Advance IMH-100-A-BLS-ID           |

## Insulation Detector Replacement

**CAUTION:** To avoid possible electrical shock, be sure that the power is turned off before installing or servicing this fixture.

- The insulation detector should be replaced by a qualified electrician.
- The insulation detector may be replaced either from below or above the ceiling.

**Step 1.** Open the Junction Box.

**Step 2.** Disconnect the wires of the insulation detector and remove the existing insulation detector. Replace only with the exact type of insulation detector that is being removed.

**Step 3.** Wire new insulation detector as before. For reference, see the wiring diagrams contained in this document.

## Socket Replacement

**CAUTION:** To avoid possible electrical shock, be sure that the power is turned off before installing or servicing this fixture.

- The socket should be replaced by a qualified electrician.

**Step 1.** If replacing from below the ceiling, remove the trim assembly and reflector from the housing.

**Step 2.** If lamp is installed, unscrew and remove the lamp from the socket.

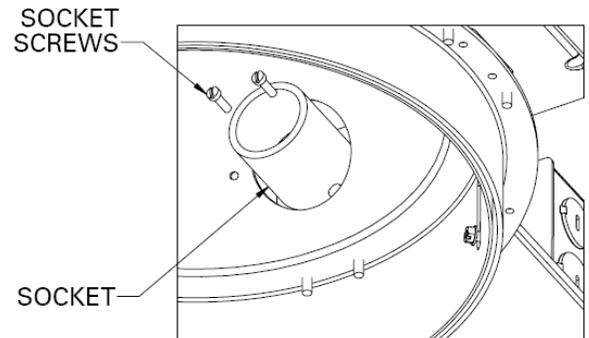
**Step 3.** Disconnect all wire connections in the junction box to the lamp wires.

**Step 4.** Remove the socket from socket bracket and socket cap which secures it in place by unscrewing the socket screws. Extract the socket wires from the conduit.

**Step 5.** Install the new socket using the original screws to the socket bracket and socket cap. Slide the socket wires through the conduit until it extends into the junction box.

**Step 6.** Install the lamp by screwing into socket.

**Step 7.** Install the reflector and trim assembly back into the housing.



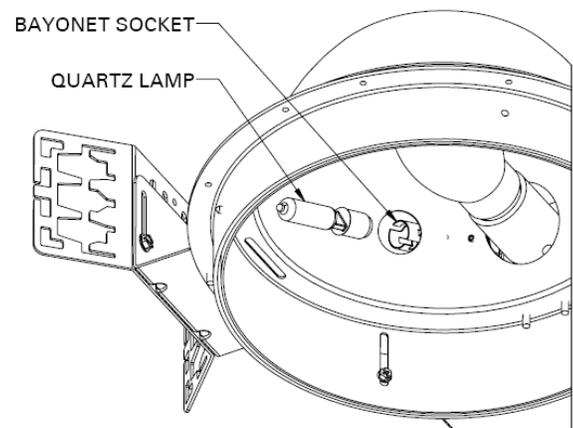
## Quartz Standby Lamp Installation / Replacement

- Take proper care in handling and disposing of the quartz lamp. Do not touch glass bulb with bare hands.

**Step 1.** For fixtures provided with the quartz standby lamp circuit, the quartz lamp is stored inside the junction box. Replace the junction box cover once the quartz lamp is removed from the junction box.

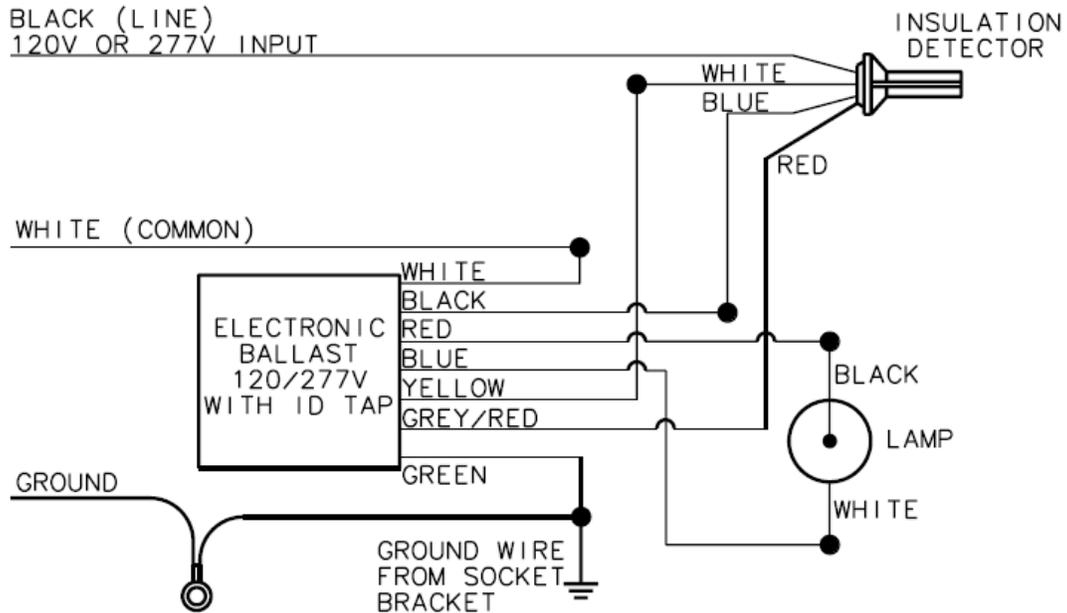
**Step 2.** Insert quartz lamp into the bayonet socket. Secure by twisting lamp until lamp is locked into socket

**NOTE:** The bayonet socket can be removed from the reflector loosening the hex nut at the rear of the socket.

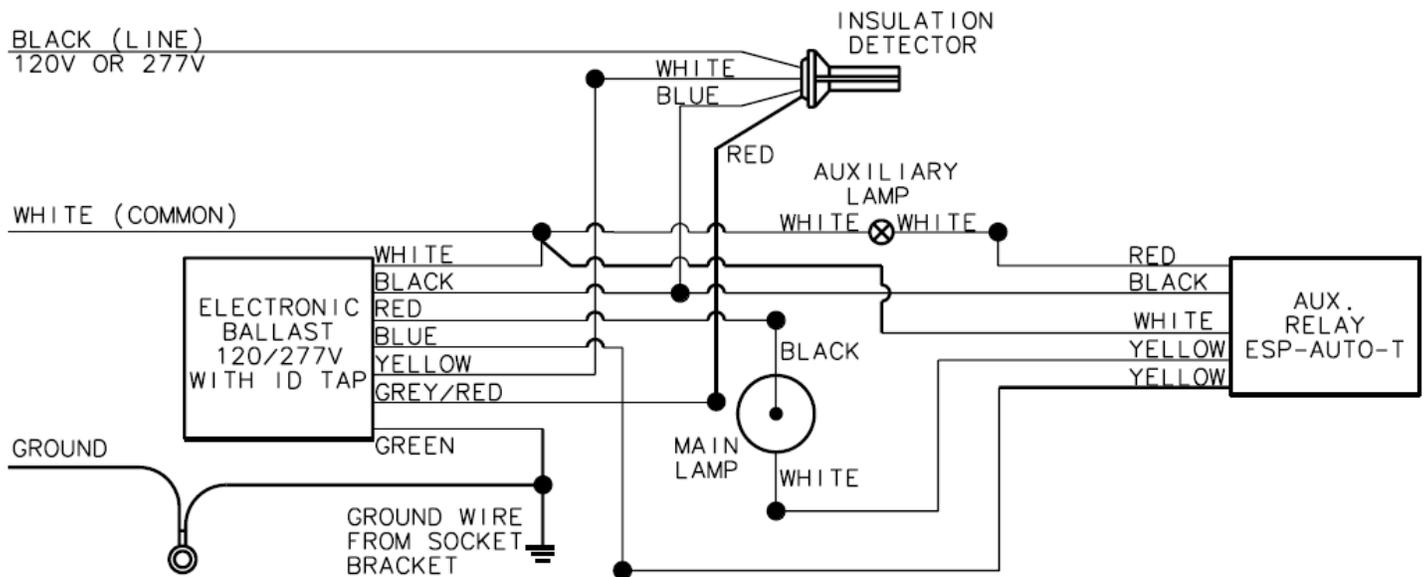


## Wiring Diagrams

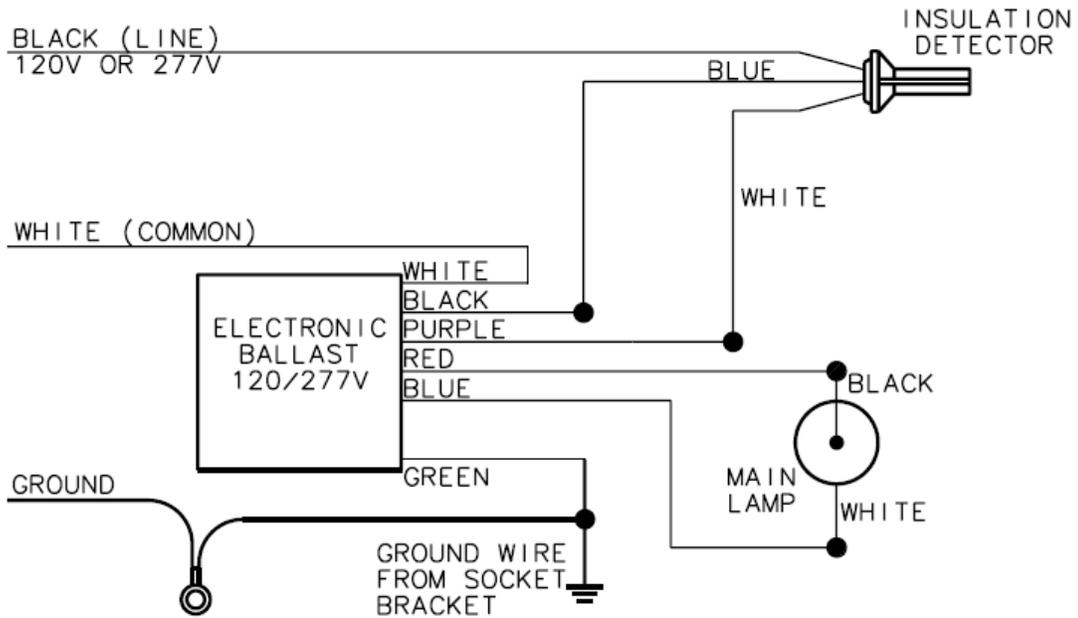
1. For Housings with Universal voltage input, 120-277V, with Advance Ballast (70W or 100W). Includes Catalog Numbers ML9S70E and ML9S100E.



2. For Housings with Quartz Re-strike System and Universal voltage input, 120-277V, with Advance Ballast (39W, 70W or 100W). Includes Catalog Numbers ML9S70EQ and ML9S100EQ.



3. For Housings with Universal voltage input, 120-277V, with Vossloh Schwabe Ballast (50W). Includes Catalog Numbers ML9S50E.



4. For Housings with Quartz Re-strike System and Universal voltage input, 120-277V, with Vossloh Schwabe Ballast (50W). Includes Catalog Numbers ML9S50EQ.

