

# PHILIPS

## Fusion

**120 or 277VAC Input  
12VDC 72 Watt Output**

### IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

### READ AND FOLLOW ALL SAFETY INSTRUCTIONS

All servicing should be performed by qualified personnel only.

Equipment should be mounted in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.

The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

Do not use this equipment for other than intended use.

Do not use outdoors.

Do not let supply cords touch hot surfaces.

Do not mount near gas or electric heaters.



### INSTALLATION AND OPERATING INSTRUCTIONS

Caution: Halogen cycle lamp(s) are used in this equipment. To avoid shattering: Do not operate lamp in excess of rated voltage, protect lamp against abrasion and scratches and against liquids when lamp is operating, dispose of lamp with care.

Halogen cycle lamps operate at high temperatures. Do not store or place flammable materials near lamp.

Use caution when servicing batteries. Battery acid can cause burns to skin and eyes. If acid is spilled on skin or eyes, flush acid with fresh water and contact a physician immediately.

CAUTION: To avoid electrical overload, total connected lamp load (factory and field installed) should not exceed output rating.

### SAVE THESE INSTRUCTIONS

**WARNING** – Shut off AC power to branch circuits to which units will be connected. All wiring should be per N.E.C. Articles 501-4(b) and local codes.

To maintain warranty, equipment with batteries must be installed or placed on charge within prescribed period after shipment.

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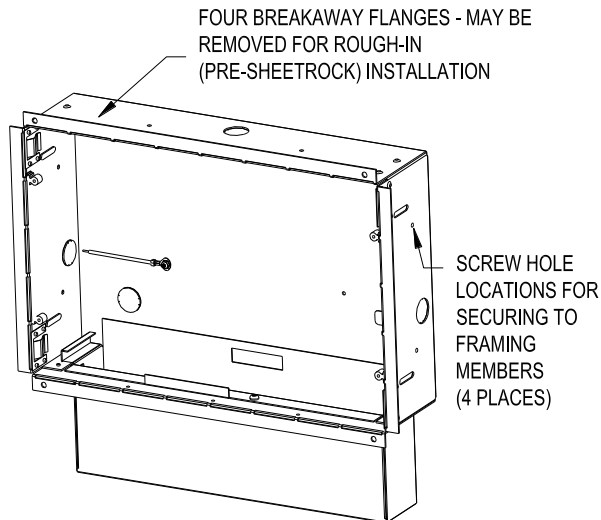
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## GENERAL INSTRUCTIONS

Follow the “Step 1” that is appropriate to the desired mounting orientation. Steps 2 through 7



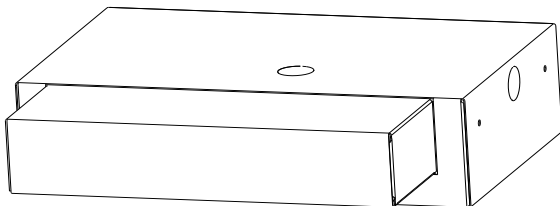
apply to both wall and ceiling installations.

### Step 1 - Recessed Sheetrock Wall Mount (14-1/4" x 9-1/8" cutout required)

Remove one knockout in sheetmetal housing for AC service entry.

Unit is attached to studs through holes provided in sides of enclosure.

**ATTENTION:** Unit must be framed in properly on at least two sides in order to ensure adequate support.



Break away tabs are provided on the edges of the larger sheetmetal box and are recommended to be removed for rough-in installations. These tabs may be removed by bending them until they snap off using large pliers or klines. Beware of any sharp

edges remaining after removal. A “Sheetrock Thickness Gauge” is printed on the sides of the housing to help set the box at the correct depth. Line up the edge of the line corresponding to the finished sheetrock thickness with the outer surface of the stud before securing the backbox to the stud. After sheetrock installation, the leading edge of the backbox should be flush with the outer sheetrock surface (room or finished surface).

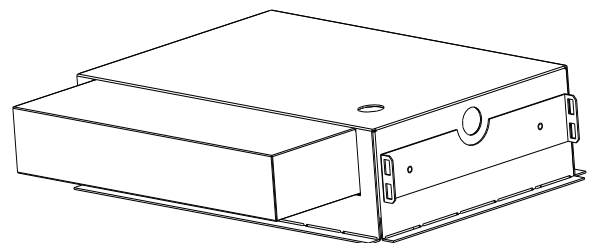
**Step 1 - Sheetrock Ceiling Mount (14-1/4" x 9-1/8" cutout required)** Note: This product is U.L. approved for use in IC rated ceiling constructions.

Remove one knockout in sheetmetal housing for AC service entry.

Unit is attached to studs through holes provided in sides of enclosure.

**ATTENTION:** Unit must be framed in properly on at least two sides in order to ensure adequate support.

Break away tabs are provided on the edges of the larger sheetmetal box and are recommended to be removed for rough-in installations. These tabs may be removed by bending them until they snap off using large pliers or klines. Beware of any sharp edges remaining after removal. A “Sheetrock Thickness Gauge” is printed on the sides of the housing to help set the box at the correct depth. Line up the edge of the line corresponding to the finished sheetrock thickness with the outer surface of the stud before securing the backbox to the stud. After sheetrock installation, the leading edge of the backbox should be flush with the outer sheetrock surface (room or finished surface).



**Step 1 - Grid Ceiling Mount (14-1/4" x 9-1/8" cutout required)** Note: This product is U.L. approved for use in IC rated ceiling constructions.

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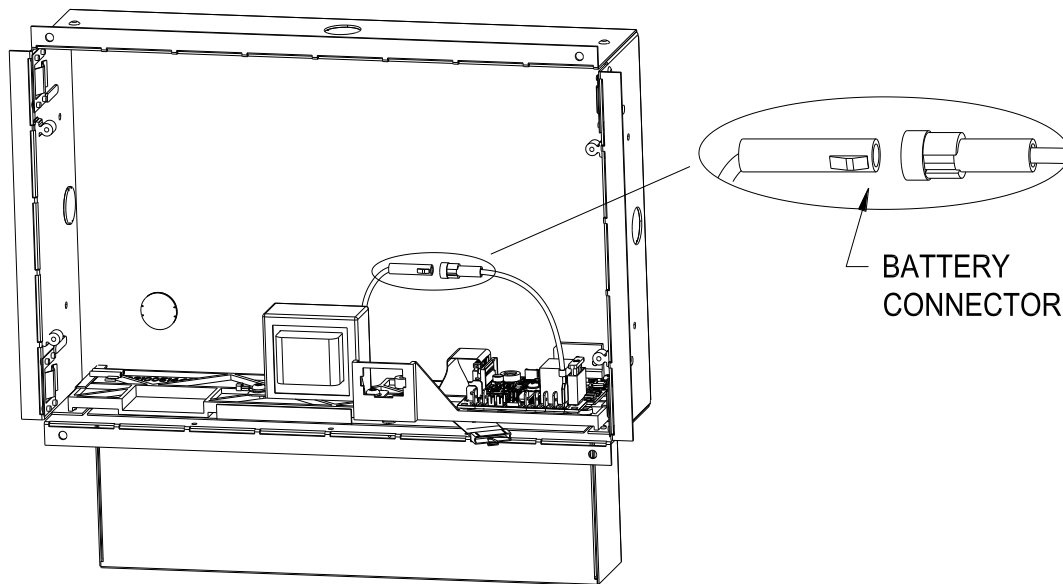
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(Note: Grid ceiling installation requires Chloride p/n FBHK bar hanger kit.) Remove one knockout in sheetmetal housing for AC service entry. Two grid ceiling adapters are provided – one for each side of the main housing. They are attached to the main housing by removing the four oblong knockouts in the short sides of

the main housing and using the four #8 nuts provided. Place bar hangers through the lowest set of holes in the adapters and attach to ceiling grid. Adjust the vertical alignment so that the backbox flanges are flush with the bottom (room side) of the ceiling tile.



## Step 2 -

Connect red battery lead by pushing connector halves together (see above illustration). Refer to “AC Hookup” table below for AC supply wiring guide.

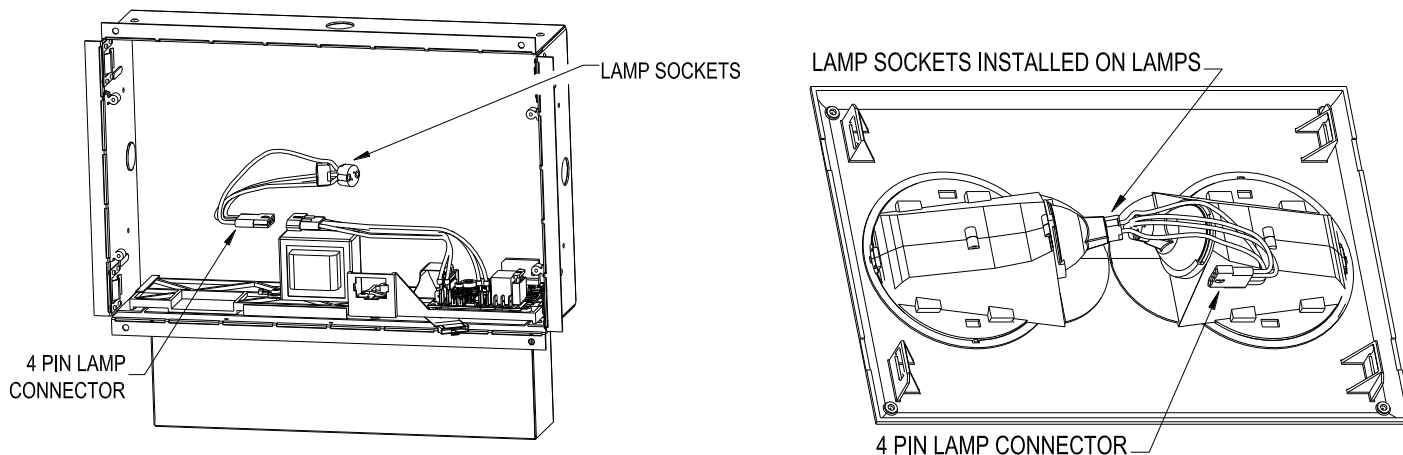
AC Hookup	
120VAC Operation	277VAC Operation
White Wire – Common	White Wire – Common
Black Wire – 120VAC Line	Black Wire – Cap Off
Blue Wire – Cap Off	Blue Wire – 277VAC Line
Green Wire - Ground	Green Wire - Ground
<b>CAUTION:</b> Unused primary wire must be insulated to prevent shorting.	



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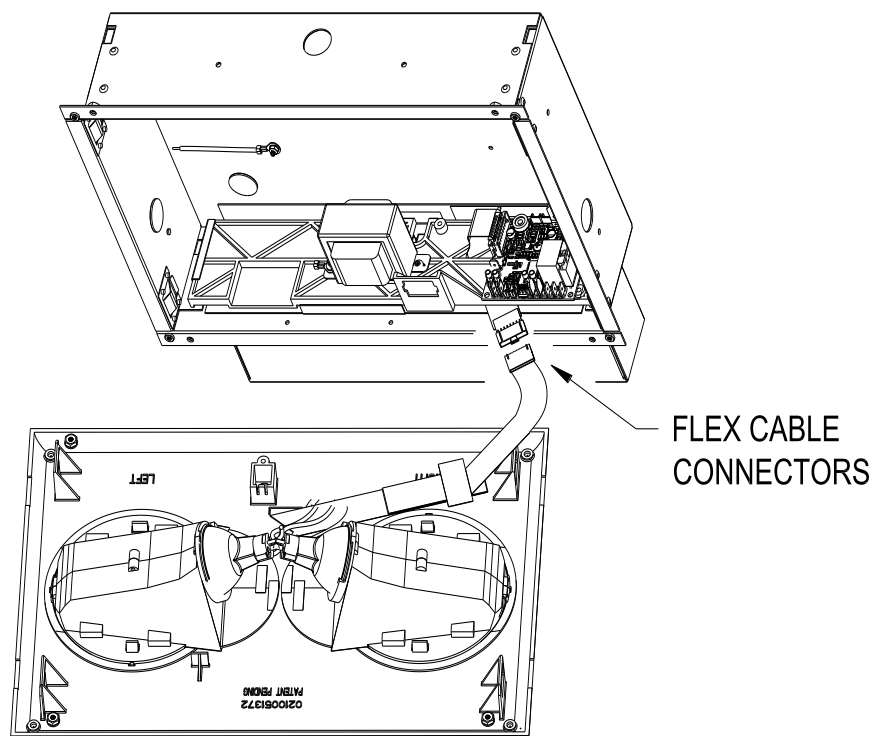
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### Step 3 -

Snap MR-16 lamps into position as shown. Remove 4 pin lamp connector from main housing. Push lamp sockets onto pins on MR-16 lamps.

Note: The reflector/lens system has been designed so that rotation of the system will not be required for most installations. Reflectors and lenses may be rotated 90° if necessary.



### Step 4 -

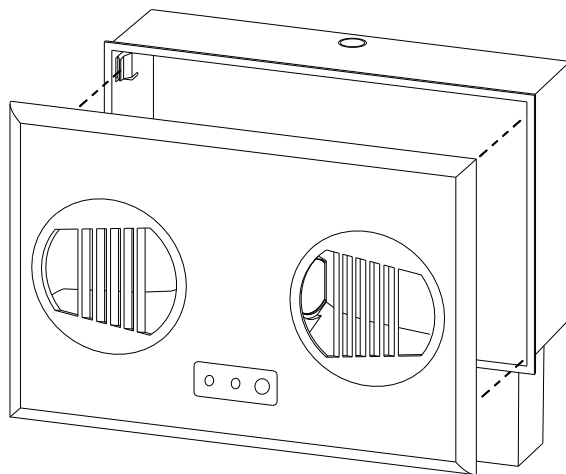
Connect flex cable connectors from circuit board assembly and cover together as shown. The flex cable is keyed for proper alignment and locking. Ensure that connector is fully seated. Reconnect the 4 pin lamp connector from Step 3.



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**Step 5 –**

Snap front panel onto enclosure. Front panel may be removed by inserting a flat bladed instrument such as a putty knife or screwdriver under the edge and gently prying away from mounting surface.

**CAUTION: The halogen lamps used in this product operate at very high temperatures. Care should be taken when servicing unit to avoid burns.**

**Note:**

- A. This equipment is provided with a lockout feature whereby connecting battery leads prior to energizing AC power will not turn on the emergency lamps. After AC power is energized the emergency lamps will turn on upon AC power failure.
- B. This equipment is provided with a low battery disconnect feature which prevents full discharge of batteries. If the building is to be unoccupied for an extended period and AC power is shut off, the batteries should be disconnected from the charger to prevent damage.
- C. The batteries provided in this equipment are sealed and require no maintenance.



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## Self Diagnostic System Operation – Emergency Light or EXIT Sign Products

### Normal Power Up Sequence

At power up the red and green LED indicators will alternately flash for one to two seconds. Next the product will execute a “Power Up Quick Test” causing the green LED indicator to flash rapidly. If any faults are detected during the “Power Up Quick Test” these will be evident by a flashing red LED indicator. If the audible diagnostic option has been ordered, the flashing red LED will be accompanied by a simultaneous beeping tone. **(Note: A continuous rapid alternating Red/Green flash with rapid beeping tone indicates 277V applied to 120V input lead. TURN OFF POWER IMMEDIATELY!)**

### Emergency Operation

Emergency operation occurs when AC power fails. The product remains in emergency operation until AC power is restored or battery capacity is depleted. During emergency operation both red and green LED indicators are disabled.

### User Interface

#### **Green LED indicator**

- Slow Flash/Continuous ON = AC power present; normal operating condition
- Rapid Flash = product performing an automatic or manually initiated diagnostic test

#### **Red LED indicator**

- Single Flash = battery fault
- Two Flashes = lamp failure (light bar failure – EXIT signs)
- Three Flashes = charger fault
- Four Flashes = transfer fault

(If more than one fault condition is present simultaneously, the red LED will flash the indication pattern for each fault independently then repeat the cycle.)

#### **Pushbutton Test Switch**

- Long Press (longer than 0.5sec) transfers product to emergency operation during time the button is pressed.
- Short Press initiates self diagnostic activities as follows:
  - One Press cancels diagnostic test presently running.
  - Two Presses starts a one minute diagnostic test.
  - Three Presses starts a 90 minute diagnostic test.
  - Four Presses conducts a lamp load calibration (emergency light products only).
  - Seven Presses initiates a system reset.

(Note: the microprocessor will allow up to seven, one minute diagnostic tests within the first 24 hours of operation. Allow 24 hours of charging before performing any long duration testing.)

**Buzzer** (optional)– Sounds in unison with the flashing red LED if a fault condition is present. Buzzer may be silenced for up to 196 hours by a short press of either the test switch or the optional IR remote control device “silence” button. Correcting fault condition will cancel fault notification. Lamp failure indication requires a manually activated diagnostic test after lamp replacement to cancel notification.






**IR Remote Control** (optional)- is a hand held device that allows remote activation of diagnostic testing and silencing of the optional buzzer during fault conditions.



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 <p><b>SILENCE ALARM</b></p>  <p><b>1 MINUTE TEST</b></p>  <p><b>30 MINUTE TEST</b></p>  <p><b>90 MINUTE TEST</b></p>  <p><b>CANCEL</b></p>		<p><b>OPTIONAL REMOTE CONTROL</b></p> <p>Front</p> <p>Press appropriate button to perform the indicated test or silence the audible alarm.</p> <p>Cancel stops any test currently in process.</p>
<div data-bbox="277 926 654 1352"> <p>System Reset: Two presses of "SILENCE ALARM" button followed by two presses of "CANCEL" button.</p> <p>Interpretation of flashing indicator lights on Equipment:</p> <p>Green LED Indicator:</p> <ul style="list-style-type: none"> <li>• Steady On - Normal</li> <li>• Slow Flash - Battery Charging</li> <li>• Fast Flash - Unit is self-testing</li> </ul> <p>Red LED Indicator:</p> <ul style="list-style-type: none"> <li>• Single Flash - Battery Fault</li> <li>• Double Flash - Lamp Failure</li> <li>• Triple Flash - Charger Fault</li> <li>• Quad Flash - Emergency Transfer Failure</li> </ul> <p>Red and Green LED Indicators flashing together:</p> <ul style="list-style-type: none"> <li>• Slow Flashing - Low Line Voltage</li> <li>• Fast Flashing - High Line Voltage</li> </ul> <p>Unit Equipment Lamp Calibration</p> <p>Press "Silence Alarm" twice followed by one press of "Cancel" and one press of "Silence Alarm"</p> <p>For Service Call (910)259-1000</p> </div>		<p>Back</p> <p>Explanation of indicator light flash sequences.</p> <p>Refer to Table 2 above for further information.</p>