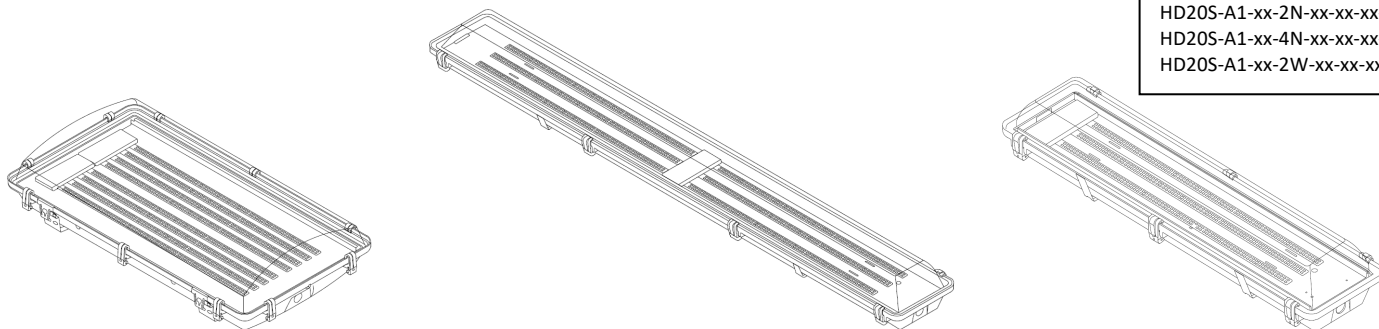




**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

The Hosedown Series of commercial and industrial LED watertight fixtures is for ceiling applications with Suspension, pendant, stem(conduit), or surface mount installation methods. The Hosedown Series is designed for use in 120/277V and 347/480V, 50/60Hz protected (max 20A) circuits. Size line voltage service wire as required per the National Electrical Code (NEC).



These instructions apply to the following part numbers:  
HD20S-A1-xx-2N-xx-xx-xx-xx-10V  
HD20S-A1-xx-4N-xx-xx-xx-xx-xx-10V  
HD20S-A1-xx-2W-xx-xx-xx-xx-xx-10V

**SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING \_\_\_\_ °C**  
**PEUT ÊTRE UTILISÉ À UNE TEMPÉRATURE AMBIANTE N'EXCÉDANT PAS \_\_\_\_ °C.**  
**WARNING: DO NOT EXCEED MAXIMUM RECOMMENDED AMBIENT TEMPERATURES.**  
THE TABLE SHOWS THE MAXIMUM AMBIENT FOR EACH MODEL. SURFACE MOUNT REDUCES MAX AMBIENT 5°C.

Housing	Series/Model	Ambient Range
2N 2' Narrow	HD20S-A1-06K-2N-xx-xx-BC	-13°F to 104°F (-25°C to 40°C)
	HD20S-A1-12K-2N-xx-xx-BC	-13°F to 104°F (-25°C to 40°C)
4N 4' Narrow	HD20S-A1-06K-4N-xx-xx-CL	-13°F to 104°F (-25°C to 40°C)
	HD20S-A1-12K-4N-xx-xx-BC	-13°F to 104°F (-25°C to 40°C)
	HD20S-A1-24K-4N-xx-xx-CL	-13°F to 104°F (-25°C to 40°C)
2W 2' Wide	HD20S-A1-18K-2W-xx-xx-CL	-13°F to 113°F (-25°C to 45°C)
	HD20S-A1-24K-2W-xx-xx-CL	-13°F to 104°F (-25°C to 40°C)
	HD20S-A1-30K-2W-xx-xx-CL	-13°F to 113°F (-25°C to 35°C)





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

### **GENERAL NOTES:**

1. MAKE SURE ALL WIRE AND CONNECTORS ARE UL-LISTED. IF THE ELECTRICAL SYSTEM CONTAINS NO GROUNDING WIRE, CONSULT WITH A QUALIFIED ELECTRICIAN BEFORE PROCEEDING WITH THE INSTALLATION.
2. SUSPENSION CABLE OR CHAIN SHALL BE RATED TO SUPPORT WEIGHT OF FIXTURE(S) – INCLUDING ALL ACCESSORIES AND OPTIONS. AIRCRAFT SUSPENSION CABLE MAY BE ORDERED SEPARATELY FROM LINMORE LED OR OTHERWISE PROVIDED BY CONTRACTOR.

### **ITEMS NOT INCLUDED**

#### **(BUT REQUIRED FOR INSTALLATION):**

- PERSONAL PROTECTIVE EQUIPMENT
- SCREWDRIVER
- PLIERS
- SUPPLY CONDUCTORS (BUILDING LINE POWER)
- RECEPTACLE (IF APPLICABLE)

### **ITEMS INCLUDED:**

- LINMORE LED LIGHT FIXTURE (WITH TWO SAFETY SCREWS)
- CORD AND PLUG (OPTIONAL, SOLD SEPARATELY)
- MAY ALSO INCLUDE SOME OPTIONAL ACCESSORIES (IF ORDERED)

REFER TO SPECIFICATIONS SHEET FOR ALL POSSIBLE OPTIONS.

### **WARNING:**

#### **FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DEATH, SERIOUS INJURY OR SIGNIFICANT PROPERTY DAMAGE.**

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH APPLICABLE BUILDING AND ELECTRICAL CODES, BY A QUALIFIED PERSON WHO IS FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED. CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE PERSONNE QUI CONNAÎT BIEN LE PRODUIT ET SON FONCTIONNEMENT AINSI QUE LES RISQUES INHÉRENTS.

- This product must be installed in accordance with the applicable Installation code by a person familiar with operation of the product and hazards involved.
- CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE PERSONNE QUI CONNAÎT BIEN LE PRODUIT ET SON FONCTIONNEMENT AINSI QUE LES RISQUES INHÉRENTS INSTALLATION OR ASSEMBLY INSTRUCTIONS
- Fully inspect lens and housing of the fixture prior to installation. If damaged, notify factory.
- To avoid electric shock: disconnect electrical power (Line Power) before and during installation and maintenance.
- Verify supply voltage is same as rated fixture voltage. The electrical ratings of the fixture are clearly indicated on the product label.
- Hosedown fixtures are suitable for dry, damp, and wet locations only. Be cautious of any sharp edges. Wear proper safety gear (such as gloves and safety glasses) while handling.
- SUITABLE FOR WET LOCATIONS
- CONVIENT AUX EMPLACEMENTS MOUILLÉS (S24-L2)
- Account for small parts and destroy packing material, as these maybe hazardous to children.  
**Caution-Risk of electric shock**
- ALL LATCHES MUST REMAIN IN PLACE IN ORDER TO MAINTAIN RAIN TIGHT
- BONDING IS NOT AUTOMATIC AND MUST BE PROVIDED AS A PART OF THE INSTALLATION
- For indoor and outdoor applications. Turn power off before servicing—see instructions. Properly ground fixture.
- Ensure no bare wires are exposed outside the electrical connections.
- To prevent wiring damage or abrasion, do not expose wiring to internal metal plate or other sharp objects.
- **Caution-Risk of fire**
- Minimum 90°C supply conductors.
- Not intended for recessed installation in ceilings or soffits.





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

THESE INSTRUCTIONS DO NOT ATTEMPT TO COVER ALL INSTALLATION AND MAINTENANCE SITUATIONS. FOR MORE INFORMATION OR QUESTIONS REGARDING THE INSTALLATION OR USE OF THE HOSEDOWN FIXTURE, CALL 913-851-3000 OR EMAIL AT [info@linmoreled.com](mailto:info@linmoreled.com)

## MAINTENANCE

### ACRYLIC CLEANING INSTRUCTIONS:

#### 1. CLEANING ACRYLIC

- DAMPEN A SOFT CLOTH OR SPONGE WITH WARM WATER. ADD 2 OR 3 DROPS OF DISH SOAP TO THE CLOTH OR SPONGE.
- WIPE THE CLEAR ACRYLIC THOROUGHLY WITH THE WET SPONGE OR CLOTH. RE-WET THE SPONGE OR CLOTH AS OFTEN AS NECESSARY.
- RINSE THE CLOTH OR SPONGE WITH WATER. WIPE OVER THE CLEAR ACRYLIC TO REMOVE ANY SOAP RESIDUE.
- RINSE THE SPONGE OR CLOTH WITH CLEAN WATER. WRING IT OUT, AND WIPE IT OVER THE CLEAR ACRYLIC TO ABSORB ANY EXCESS WATER. DO NOT USE A DRY CLOTH ON ACRYLIC, AS IT MAY SCRATCH THE SURFACE.

#### 2. REMOVE TAR, GREASE AND PAINT STAINS

- DAMPEN A SOFT CLOTH WITH A SMALL AMOUNT OF KEROSENE OR NAPHTHA.
- WIPE AWAY ANY STAINS WITH THE CLOTH.
- RINSE THE CLEAR ACRYLIC WITH A WET CLOTH OR SPONGE.

### TIPS & WARNINGS

- DO NOT USE HARSH CLEANING PRODUCTS OR SOLVENTS SUCH AS ALCOHOL AND GASOLINE ON PLEXIGLAS.
- DON'T USE A WINDOW CLEANER LIKE WINDEX OR OTHER AMMONIA-BASED CLEANER ON ACRYLIC WINDOWS. AMMONIA WILL DAMAGE THE ACRYLIC, CAUSING A HAZE. DON'T USE AN ABRASIVE OR CAUSTIC CLEANER. THESE CHEMICALS WILL ALSO DAMAGE ACRYLIC WINDOWS. DO NOT USE WD-40 OR ANY OTHER PETROLEUM-BASED CHEMICAL ON YOUR ACRYLIC WINDOWS. NEVER USE A SCRUBBING PAD OR OTHER ABRASIVE PAD TO CLEAN YOUR ACRYLIC WINDOWS. AVOID USING A RAZOR BLADE OR PUTTY KNIFE TO REMOVE SUBSTANCES ON THE WINDOW. ONLY USE A CHEMICAL DESIGNED FOR ACRYLIC WINDOWS AND WIPE WITH A LINT-FREE TOWEL ONLY. DO NOT CLEAN ACRYLIC WINDOWS IN DIRECT SUNLIGHT, WAIT UNTIL THE SUN HAS MOVED FROM THE AREA OR IS DOWN.

## TROUBLESHOOTING

TURN ELECTRICITY OFF AT THE MAIN CIRCUIT BREAKER, PANELBOARD, FUSE BOX OR DISCONNECT. DO NOT ATTEMPT TO TROUBLESHOOT WITH THE POWER ON.

#### ISSUE 1 - LIGHT DOES NOT COME ON

- VERIFY THAT POWER IS BEING DELIVERED TO THE FIXTURE. CHECK ALL UPSTREAM CIRCUIT BREAKERS, FUSES AND DISCONNECT TO ENSURE THEY ARE ON AND IN PROPER WORKING ORDER.
- CONFIRM ALL ELECTRICAL CONNECTIONS ARE COMPLETE AND CONTINUOUS.
- IF THE ISSUE REMAINS UNRESOLVED, CONTACT LINMORE LED.

#### ISSUE 2 - ONE OR MORE LEDS ARE OUT WHILE OTHERS REMAIN ON

- DETERMINE IF REPLACEMENT IS DESIRED. AFTER ONE OR MORE LEDS FAILS, THE FIXTURE MAY CONTINUE TO OPERATE NORMALLY, ALTHOUGH WITH A REDUCED LUMEN OUTPUT.
- IF REPLACEMENT FIXTURE IS DESIRED, CONTACT LINMORE LED.

## WARRANTY SUPPORT

PHONE: 559.485.6010

EMAIL: [INFO@LINMORELED.COM](mailto:INFO@LINMORELED.COM)

## GENERAL INSTRUCTIONS:

### PREPARING TO INSTALL

- CONSULT A LOCAL LICENSED ELECTRICIAN OR ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- REVIEW WARNINGS FOUND IN THIS DOCUMENT PRIOR TO STARTING WORK.
- INSPECT PACKAGE(S) FOR SIGNS OF DAMAGE. NOTIFY CARRIER IMMEDIATELY IF FIXTURE PACKAGING IS DAMAGED.
- UNPACK THE FIXTURES FROM PACKAGING. RECYCLE AND PROPERLY DISPOSE OF PACKAGING. REMOVE PLASTIC FILM FROM LENS.
- INSPECT FIXTURES. IF THERE IS ANY FIXTURE DAMAGE OBSERVED, TAKE PHOTOGRAPHS AND IMMEDIATELY CONTACT [INFO@LINMORELED.COM](mailto:INFO@LINMORELED.COM).
- TURN OFF ELECTRICITY AT THE MAIN CIRCUIT BREAKER, PANELBOARD, FUSE BOX OR DISCONNECT.  
**DO NOT ATTEMPT TO INSTALL FIXTURE WITH THE POWER ON.**
- MAKE SURE THE MOUNTING SURFACE IS CAPABLE OF SUPPORTING WEIGHT OF FIXTURE.
- MAX AMBIENT REDUCED 5°C WHEN MOUNTED NEAR CEILING.
- ENSURE PROPER AIRFLOW AROUND FIXTURE.





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**CABLE READY MOUNT**

**PREPARING TO INSTALL**

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. IF FIXTURE HAS A CORD, CHECK TO ENSURE CORD GROMMET IS TIGHT. IF NOT TIGHT, NOTIFY INFO@LINMORELED.COM IMMEDIATELY
3. SECURE SUSPENSION CABLE TO STRUCTURE. (ORDERED SEPARATELY – CABLEKIT OR CABLEKITSS FOR 2W MODEL OR CABLEKIT2P OR CABLEKIT2PSS FOR 2N AND 4N MODELS) OR CHAIN (NOT INCLUDED).
4. ATTACH SUSPENSION CABLE OR CHAIN TO BAIL HOOKS (2N AND 4N MODELS ONLY, FIG. 1) OR MOUNTING TABS (2W MODEL ONLY, FIG. 2).
5. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT THE END OF THIS SECTION).

FIG. 1

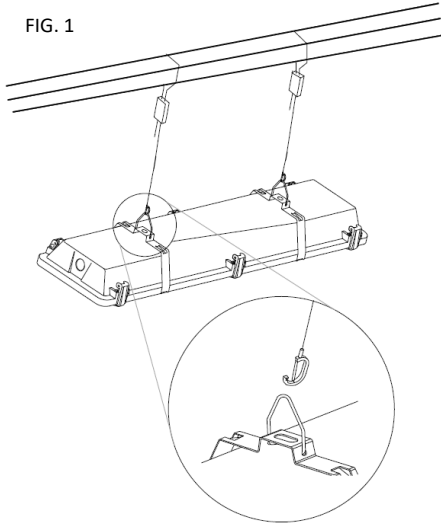
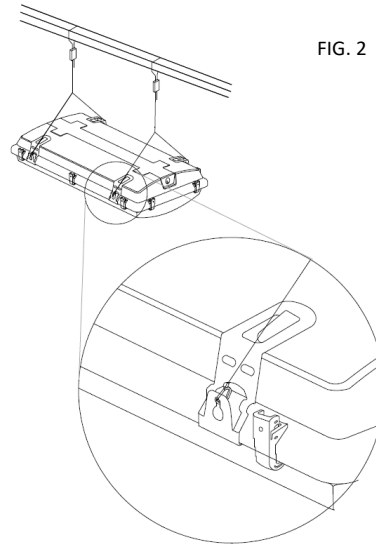


FIG. 2



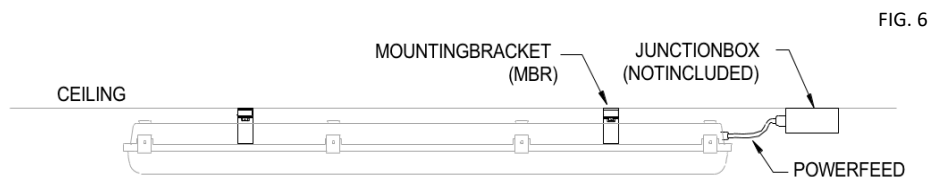
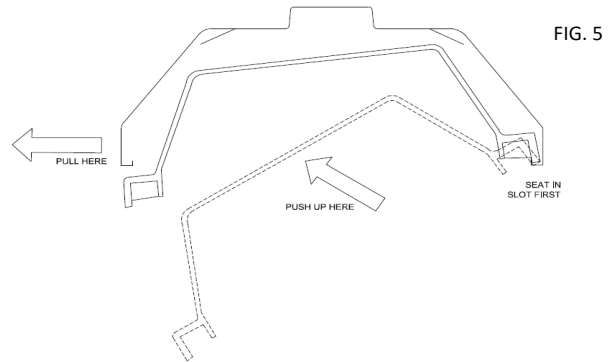
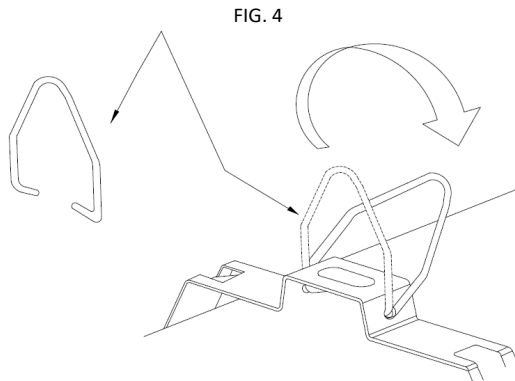
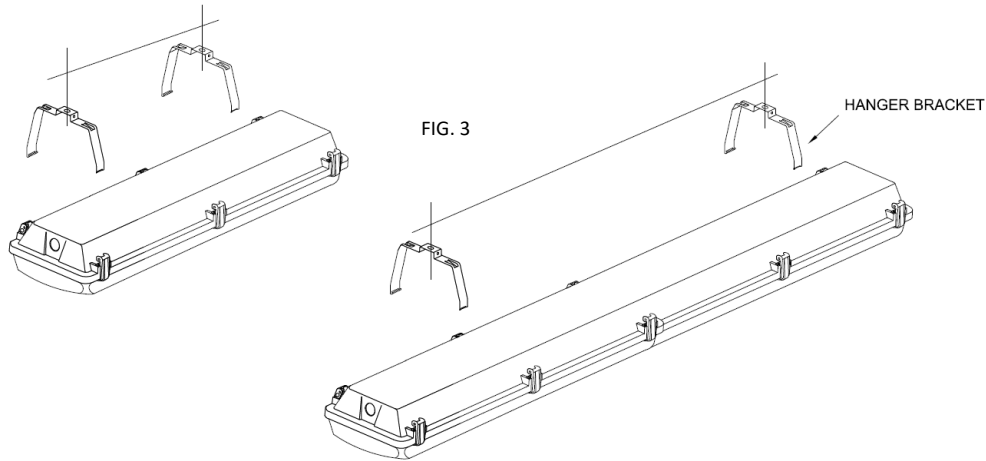


**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**SURFACE MOUNT (MLT) – 2N AND 4N MODELS ONLY**

**PREPARING TO INSTALL**

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. MEASURE SPACING BETWEEN BRACKETS – TRANSFER MEASUREMENT FROM FIXTURE TO MOUNTING SURFACE, FIG. 3.  
BRACKETS SHOULD BE SPACED AT LEAST 18" O.C. FOR 2N MODEL, 36" O.C FOR 4N MODEL.
3. REMOVE MOUNTING BRACKETS FROM FIXTURE HOUSING. REMOVE BAIL HOOK OR LAY BAIL HOOK TO ONE SIDE, FIG. 4.
4. ATTACH BRACKET TO MOUNTING SURFACE.
5. RAISE FIXTURE TO MOUNTING BRACKETS AND SECURE IN PLACE, FIG. 5.
6. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION), FIG. 6.





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**45° HANGER MOUNT – SEPARATELY ORDERED ACCESSORY (45M) – 2N AND 4N MODELS ONLY**

**PREPARING TO INSTALL –**

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. BRACKETS SHOULD BE SPACED AT LEAST 18" APART FOR 2N MODEL, 36" APART FOR 4N MODEL.
3. MEASURE DESIRED SPACING BETWEEN BRACKETS – TRANSFER MEASUREMENT MOUNTING SURFACE, FIG. 7.
4. ATTACH BRACKET TO MOUNTING SURFACE.
5. RAISE FIXTURE TO MOUNTING BRACKETS AND SECURE IN PLACE, FIGS 8 AND 9.
6. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT THE END OF THIS SECTION).

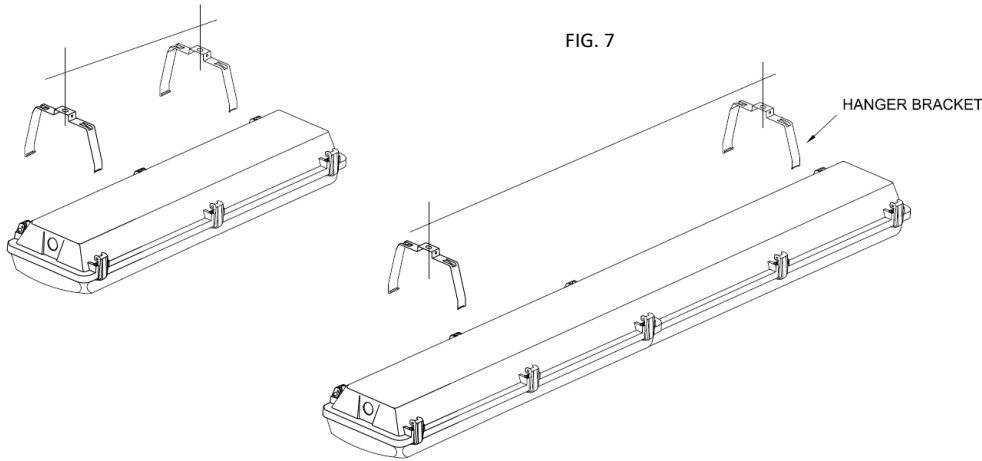
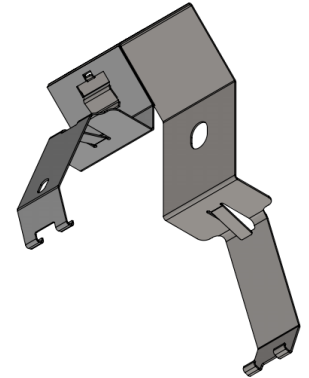


FIG. 7

FIG. 8

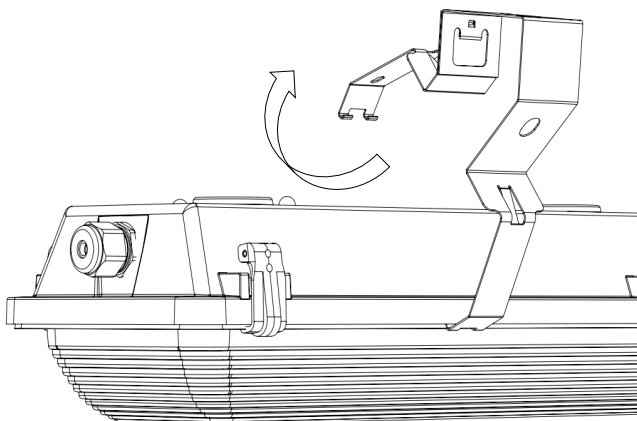
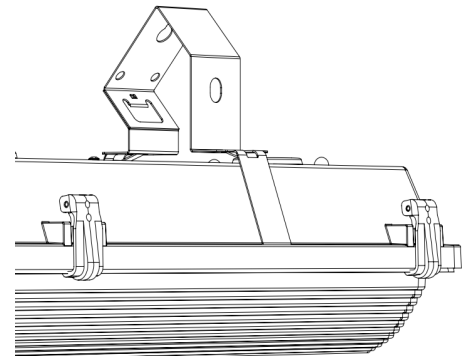


FIG. 9





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**SURFACE MOUNT (FM2WSS) - (2W MODEL ONLY)**

**PREPARING TO INSTALL**

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. MEASURE SPACING BETWEEN BRACKETS – TRANSFER MEASUREMENT FROM FIXTURE TO MOUNTING SURFACE.  
BRACKETS ARE SPACED AT 17" O.C. FOR 2W
3. ATTACH BRACKET TO MOUNTING SURFACE.
4. RAISE FIXTURE TO MOUNTING BRACKETS AND SECURE IN PLACE, FIG. 9.
5. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION), FIG.10.

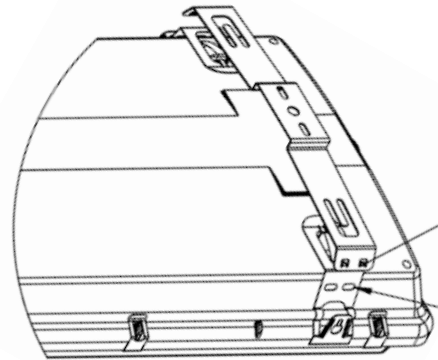
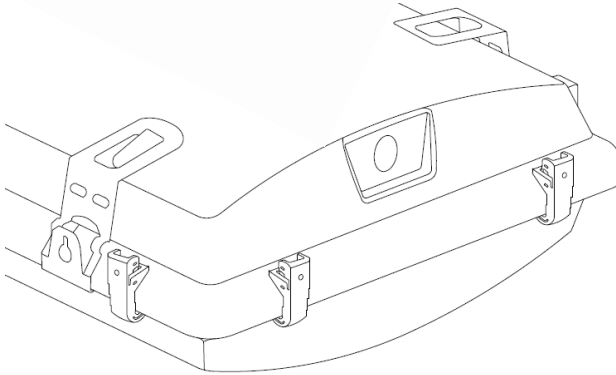
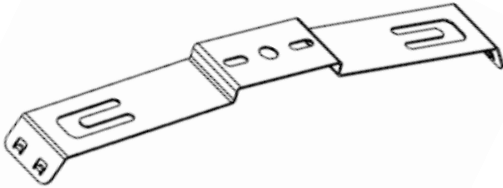


FIG. 9

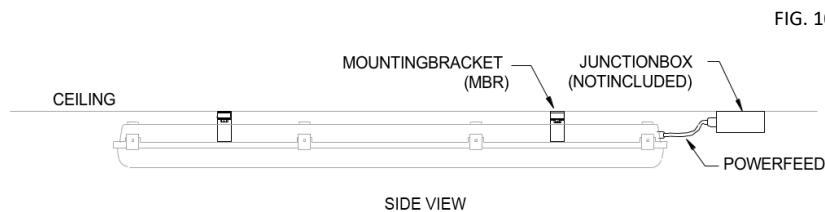


FIG. 10





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**RIGID STEM MOUNTING (MLT) - 2N AND 4N MODELS ONLY**

**PREPARING TO INSTALL**

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. MLT BRACKET (PROVIDED BY FLS) ACCEPTS 1/4" THREADED ROD.
3. REMOVE MOUNTING BRACKETS FROM FIXTURE HOUSING. REMOVE BAIL HOOK OR LAY BAIL HOOK TO ONE SIDE, FIG. 11.
4. LOCATE EXISTING THREADED ROD (IF APPLICABLE) AND SECURELY ATTACH BRACKET TO THREADED ROD. IF THREADED ROD NOT PRESENT, PROVIDE STEMS AND FASTENERS (NOT INCLUDED) AND SECURELY ATTACH BRACKET, FIG. 12.
5. BRACKETS SHOULD BE SPACED AT LEAST 18" O.C. FOR 2N MODEL, 36" O.C. FOR 4N MODEL (IF POSSIBLE).
6. ATTACH FIXTURE TO MOUNTING BRACKETS, FIG. 13.
7. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION), FIG. 14.

FIG. 11

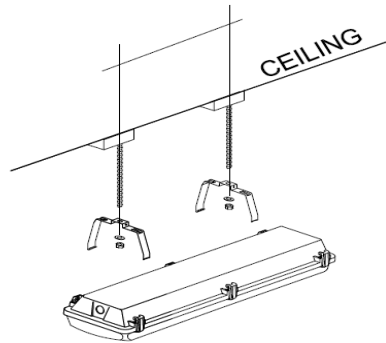
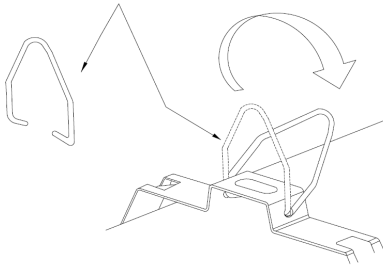


FIG. 12

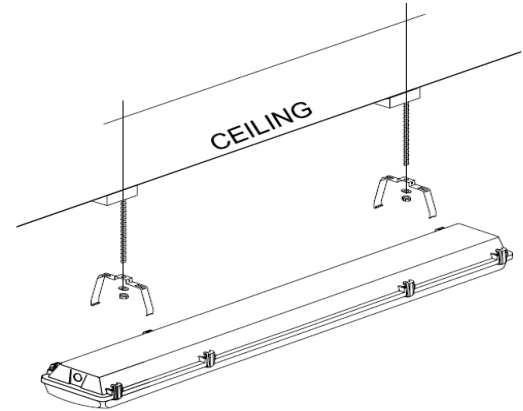


FIG. 13

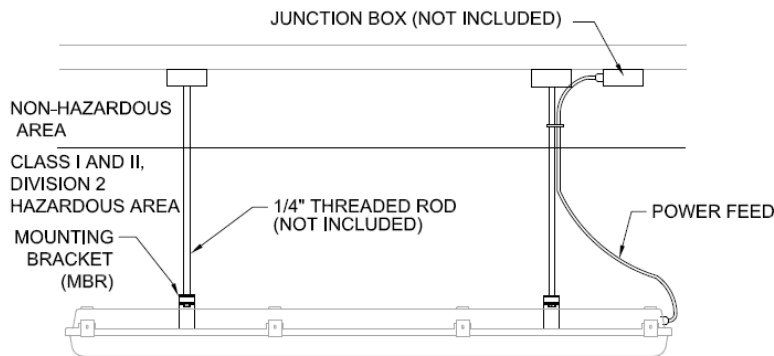
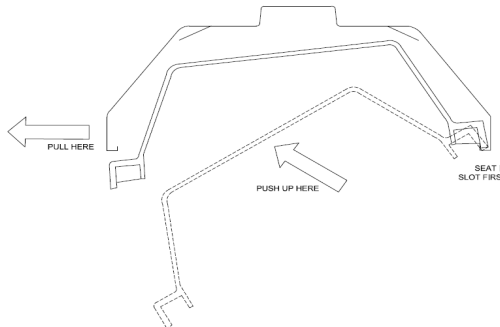


FIG. 14







**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**RIGID STEM MOUNTING (PENDSS) – 2W MODEL ONLY**

**PREPARING TO INSTALL**

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. PENDSS BRACKET (PROVIDED BY FLS AND PACKAGED SEPARATELY) ACCEPTS 3/4" THREADED ROD.
3. NEW PENDANT MOUNT: MEASURE SPACING BETWEEN BRACKETS – TRANSFER MEASUREMENT FROM FIXTURE TO MOUNTING SURFACE. THIS MEASUREMENT IS HOW FAR APART THE NEW PENDANTS SHALL BE SPACED. BRACKETS ARE SPACED AT 17" O.C. FOR 2W
4. FOR EXISTING PENDANT: ENSURE PENDANT SPACING MATCHES BRACKET LOCATION ON FIXTURE, FIG 15.
5. REMOVE BRACKET AND OPERATORS FROM PACKAGING. (2 OPERATORS PROVIDED WITH EACH BRACKET).
6. REMOVE MOUNTING TAB FROM FIXTURE HOUSING. ATTACH OPERATOR PIECE TO TAB. AND REINSTALL TAB, (4 TIMES), FIG 16.
7. SECURELY ATTACH BRACKET TO THREADED ROD (STEMS AND FASTENERS PROVIDED BY OTHER).
8. RAISE FIXTURE TO BRACKETS AND SNAP OPERATOR PIECE TO BRACKET, (4 TIMES), FIG 17.
9. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION)

FIG. 15

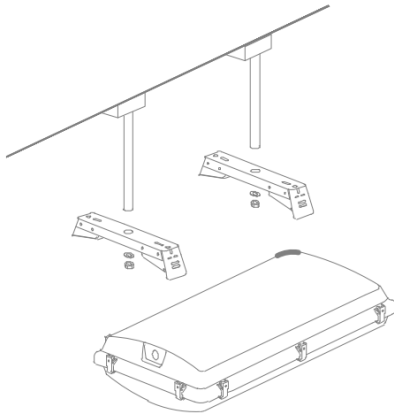
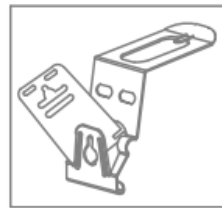


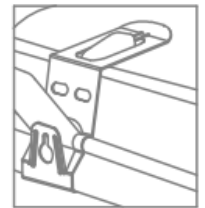
FIG. 16



Remove the bracket from the fixture.

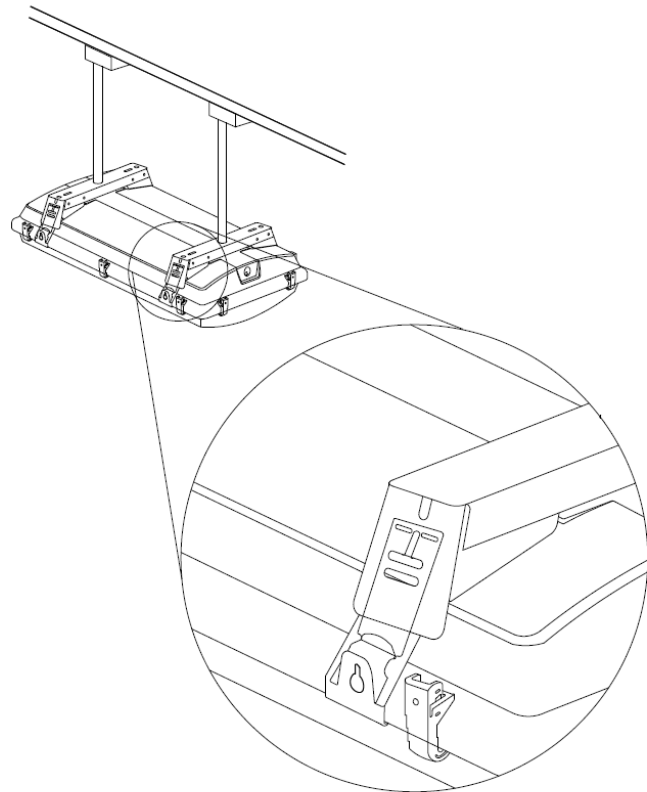


Place hanger into the slot and twist



Reassemble back onto the fixture

FIG. 17





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

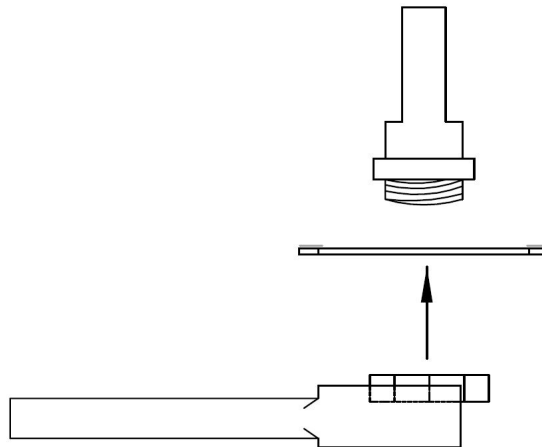
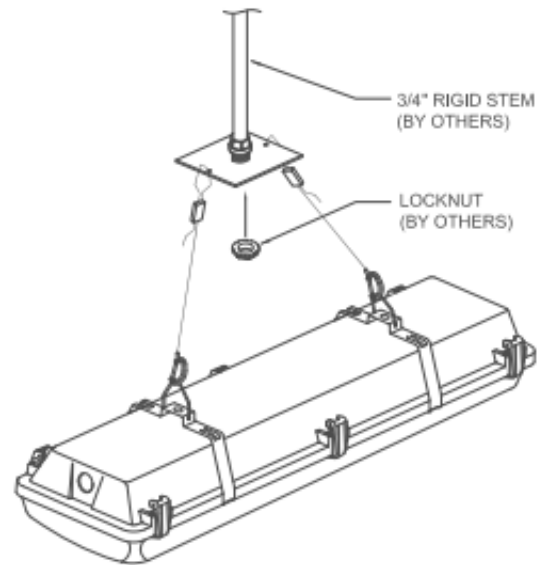
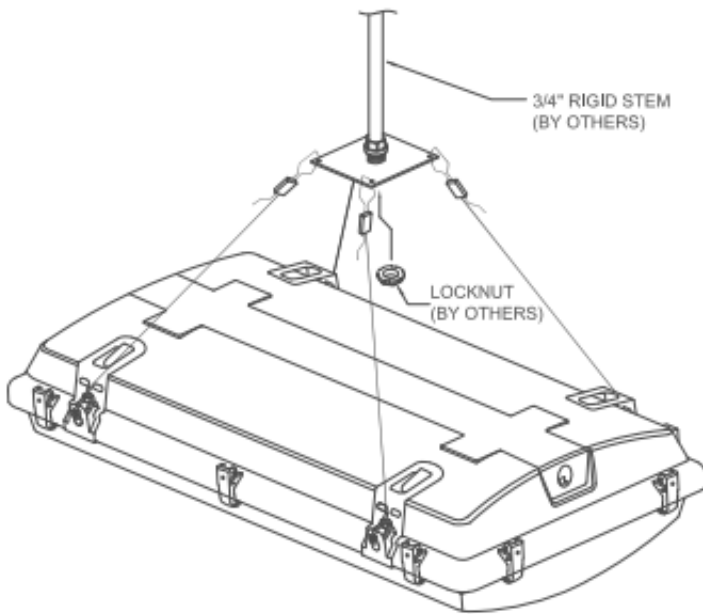
### PLATE MOUNT (PLATESS)

#### INSTALLATION

1. REFER TO GENERAL INSTRUCTIONS 1 THROUGH 9 AT THE BEGINNING OF THIS SECTION.
2. INSTALL 3/4" RIGID STEM (PROVIDED BY CONTRACTOR) IN ACCORDANCE WITH LOCAL BUILDING CODES AND AUTHORITY HAVING JURISDICTION. MAKE SURE THE RIGID STEM IS CAPABLE OF SUPPORTING WEIGHT OF FIXTURE.
3. RAISE PLATE TO RIGID STEM.
4. THREAD WASHER (PROVIDED BY CONTRACTOR) ONTO BOTTOM OF THREADED RIGID STEM, SECURING PLATE IN PLACE. FINGER TIGHTEN, THEN USE WRENCH TO SECURELY TIGHTEN LOCKNUT.
5. ATTACH SUSPENSION CABLES (FOUR (4) SUPPLIED) TO ALL FOUR (4) MOUNTING TABS FOR 2W, OR TWO (2) TO BOTH MOUNTING RINGS FOR 2N/4N) ON FIXTURE AND ON MOUNTING HOLES ON PLATE. LEVEL FIXTURE PLUMB TO BUILDING LINES.
6. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION).

#### INSTALLING OPTIONAL SAFETY CABLE

1. SECURE SAFETY CABLE (ORDERED SEPARATELY) TO STRUCTURE (NOT PLATE OR EXISTING STEM).
2. ATTACH SAFETY CABLE TO ONE OF THE MOUNTING TABS.





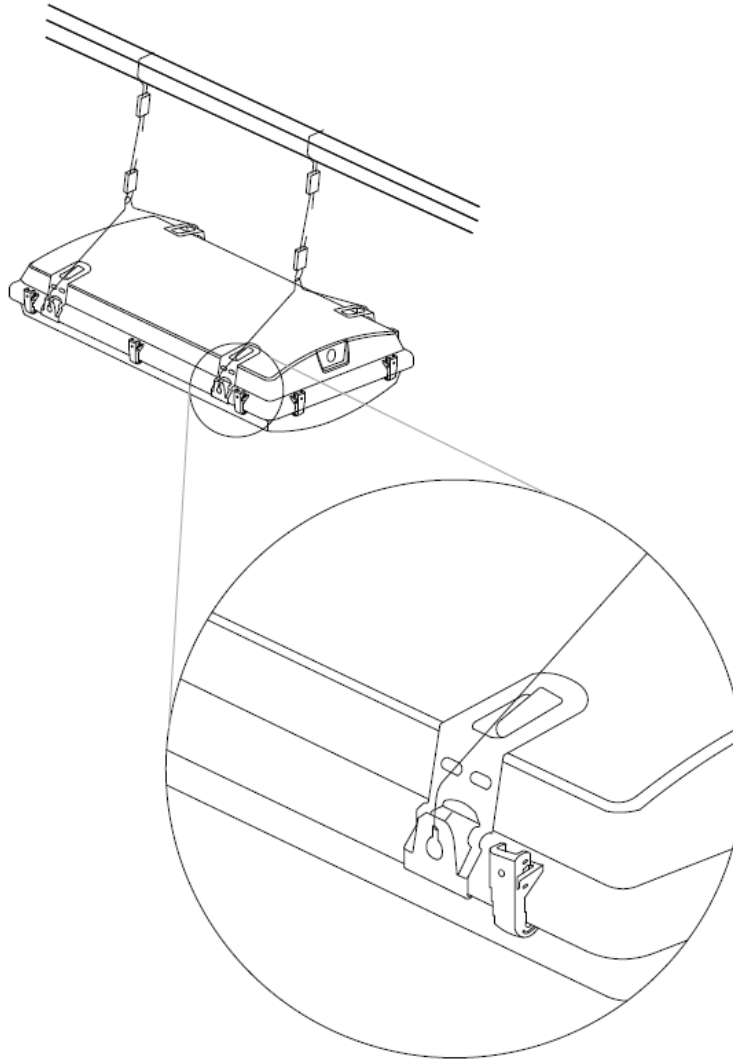
**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**HANGER MOUNT – SEPARATELY ORDERED ACCESSORY (HANGERS) - 2W ONLY**

**PREPARING TO INSTALL –**

7. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
8. ENSURE SUSPENSION CABLE (ORDERED SEPARATELY – CABLEKIT2P OR CABLEKIT2PSS) OR EXISTING CABLE OR CHAIN (NOT INCLUDED) IS SECURED TO STRUCTURE.
9. ATTACH CABLES TO HANGERS.
10. RAISE FIXTURE TO HANGER AND ATTACH TO FIXTURE THROUGH FOUR (4) MOUNTING TABS, FIG. 18.
11. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT THE END OF THIS SECTION).

FIG. 18





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**CUSTOMER SUPPLIED POWER CORD FIELD INSTALLATION**

**PREPARING TO INSTALL –**

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. REMOVE RUBBER CAP, FIG. 19.
3. REMOVE LENS (SEE “LENS REMOVAL AND REPLACEMENT,” BELOW) AND LOWER/REMOVE TRAY, FIG 23.
4. INSERT POWER CORD THROUGH APPROPRIATE SEALING OR WATER TIGHT CORD GRIP (PROVIDED BY CONTACTOR), FIG’S. 20 AND 21.
5. PULL THE CORD INTO FIXTURE A MINIMUM OF 6”.
6. TIGHTEN CORD GRIP PER CORD GRIP INSTRUCTIONS, ENSURING A WATERTIGHT SEAL, FIG. 22.
7. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT THE END OF THIS SECTION).

**REFER TO LENS REMOVAL AND REPLACEMENT INSTRUCTION IN THIS MANUAL**

FIG. 19

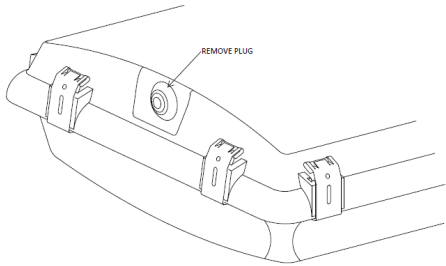


FIG. 20

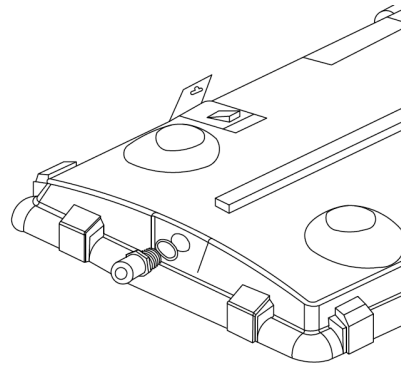


FIG. 21

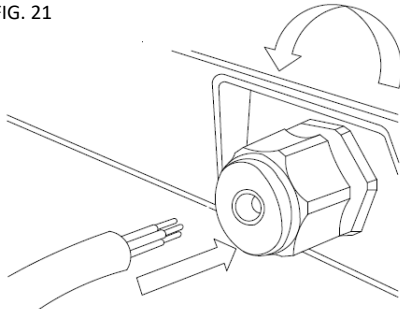


FIG. 22

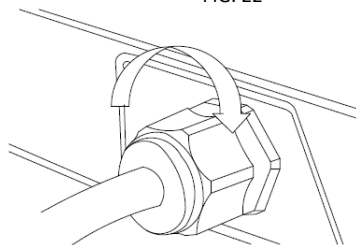
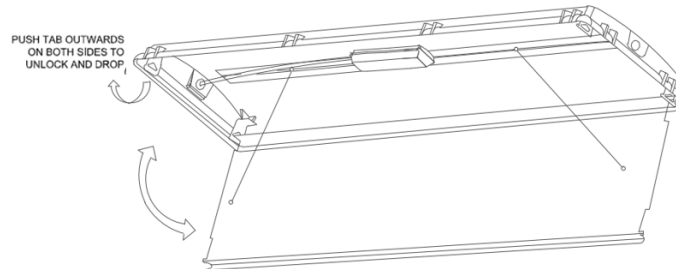


FIG. 23





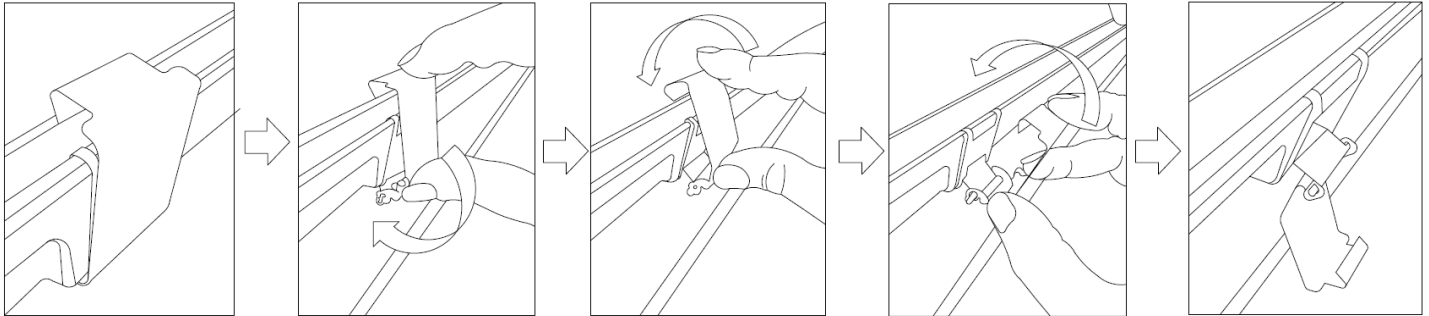
**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

### LENS REMOVAL AND REPLACEMENT

#### REMOVING LENS

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. IF INSTALLED, REMOVE 2 SAFETY SCREWS, 1 EACH ON OPPOSING SIDES.
3. UNBUCKLE ALL LATCHES ON LENS, FIG.24.
4. REMOVE LENS.

FIG. 24

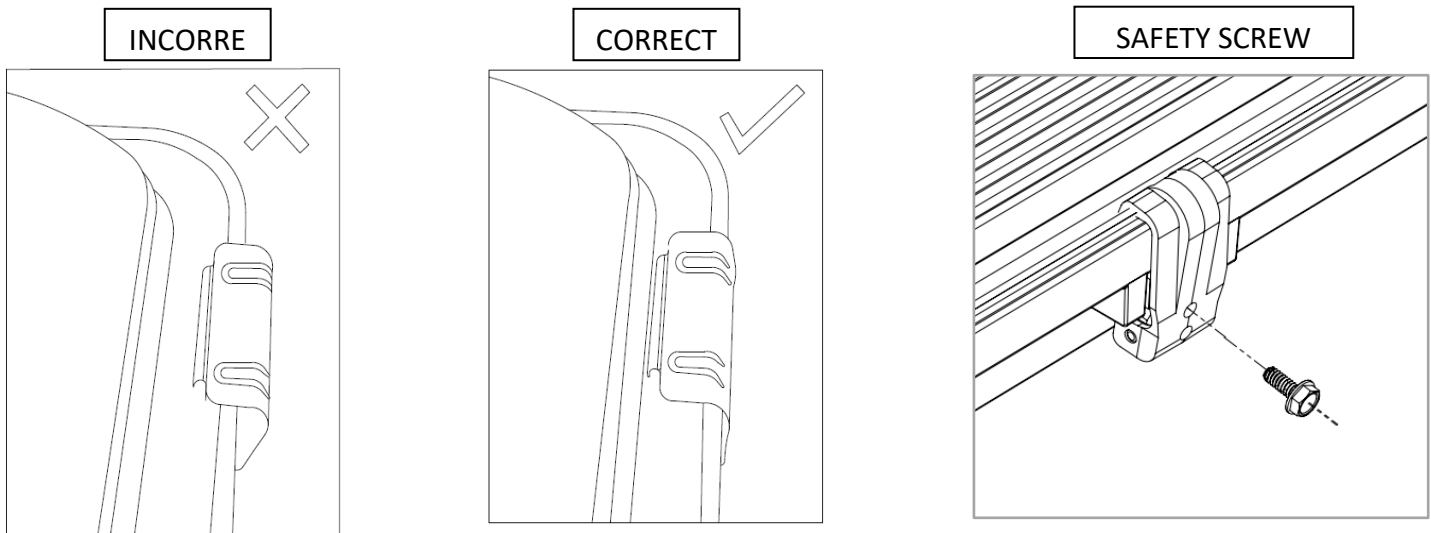


#### REPLACING LENS

1. REFER TO GENERAL INSTRUCTIONS AT THE BEGINNING OF THIS SECTION.
2. PROPERLY SEAT LENS ON GASKET ON HOUSING, FIG 25.
3. BUCKLE ALL LATCHES ON LENS.
4. PLACE 2 SAFETY SCREWS (INCLUDED, IF APPLICABLE), 1 EACH ON OPPOSING SIDES TO PREVENT UNAUTHORIZED TAMPERING., FIG 26.

FIG. 25

FIG. 26





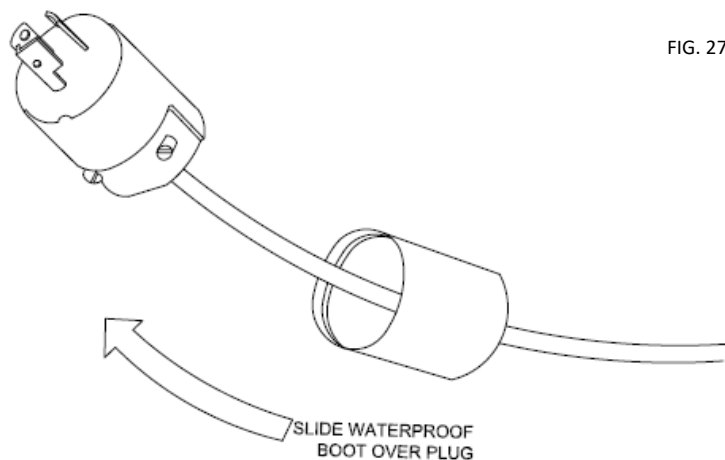
**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**WATERPROOF SLEEVE INSTALLATION - (ORDERED AS AN OPTION - WPSLV)**

**PREPARING TO INSTALL –**

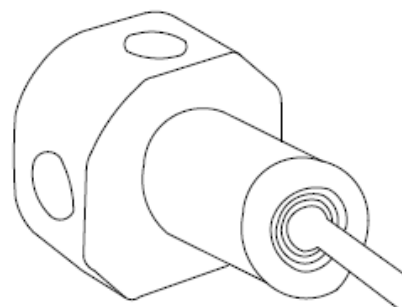
1. ONLY USED FOR CORD AND PLUG APPLICATIONS.
2. STRETCH SLEEVE OVER PLUG/SOCKET, FIG. 26.
3. PLUG CORD INTO SOCKET (PROVIDED BY CONTRACTOR).
4. SLEEVE SHOULD PRESS FIRMLY AGAINST THE SOCKET, CREATING A SEAL, FIG. 27.

FIG. 26



PLUG WITH SLEEVE ATTACHED TO SOCKET

FIG. 27





**IMPORTANT: READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.**

## WIRING INSTRUCTIONS:

### MAKING FINAL ELECTRICAL CONNECTIONS – HARDWIRED

1. **WIRING THROUGH HOLE IN HOUSING:** IDENTIFY AND REMOVE CAP AT SELECTED END OF HOUSING. EXTEND BUILDING POWER WIRING TO FIXTURE AND FEED THROUGH OPENING. PROVIDE UL/ETL APPROVED WATER TIGHT STRAIN RELIEF.
2. **REMOVE LENS** (SEE “LENS REMOVAL AND REPLACEMENT”) AND LOWER/REMOVE TRAY. TAKE CARE NOT TO DAMAGE THE FIXTURE. TRAY IS CAPTIVE AND WILL FREELY HANG OPEN (HANDS FREE).
3. **MAKE FINAL ELECTRICAL CONNECTIONS** INSIDE HOUSING PER ALL APPLICABLE CODES - BLACK TO BLACK (HOT/LINE/LIVE); WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND). MAKE SURE ELECTRICAL CONNECTIONS ARE SECURE AND ENSURE NO BARE WIRES ARE EXPOSED.
4. **DIMMING (IF APPLICABLE):** MAKE FINAL ELECTRICAL CONNECTIONS INSIDE WIREWAY PER ALL APPLICABLE CODES – VIOLET TO VIOLET (DIM +), GREY TO GREY (DIM -). MAKE SURE ELECTRICAL CONNECTIONS ARE CONTINUOUS AND ENSURE NO BARE WIRES ARE EXPOSED.
5. **EMERGENCY BATTERY BACKUP (EMB) OPTION (WITH SWITCH LEG): MAKE FINAL ELECTRICAL CONNECTIONS INSIDE WIREWAY PER ALL APPLICABLE CODES** - BLACK TO BLACK (HOT/LINE/LIVE); RED (SWITCH LEG) TO BLACK/RED; WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND). MAKE SURE ELECTRICAL CONNECTIONS ARE SECURE AND ENSURE NO BARE WIRES ARE EXPOSED.
6. **EMERGENCY BATTERY BACKUP (EMB) OPTION (WITHOUT SWITCH LEG):** MAKE FINAL ELECTRICAL CONNECTIONS INSIDE WIREWAY PER ALL APPLICABLE CODES - BLACK TO BLACK (HOT/LINE/LIVE); REMOVE WAGO FROM FIXTURE BLACK/RED WIRE AND PLACE FIXTURE BLACK/RED WIRE IN WAGO WITH BLACK WIRES (HOT/LINE/LIVE); WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND). MAKE SURE ELECTRICAL CONNECTIONS ARE SECURE AND ENSURE NO BARE WIRES ARE EXPOSED.
7. **NEATLY ARRANGE** WIRES IN HOUSING. PAY CLOSE ATTENTION ALL WIRES AND CONNECTIONS ARE PROPERLY LAYING INSIDE FIXTURE HOUSING BEFORE CLOSING.
8. **CLOSE AND ATTACH TRAY:** PRESS THE TRAY INTO THE CLIPS UNTIL A POSITIVE “CLICK” IS HEARD.
9. **PROPERLY SEAT LENS** ON GASKET ON HOUSING.
10. **BUCKLE ALL LATCHES ON LENS.**
11. PLACE 2 SAFETY SCREWS (INCLUDED, IF APPLICABLE), 1 EACH ON OPPOSING SIDES TO PREVENT UNAUTHORIZED TAMPERING.
12. TURN ELECTRICITY ON AT THE CIRCUIT BREAKER, PANELBOARD, OR FUSE BOX – FIXTURE SHOULD ILLUMINATE. IF IT DOESN'T, REFER TO TROUBLESHOOTING INSTRUCTIONS OR CALL TECHNICAL SUPPORT (913-851-3000).

### MAKING FINAL ELECTRICAL CONNECTIONS – FIXTURES WITH OPTIONAL FACTORY INSTALLED CORD (CORD/PLUG):

13. **FIXTURES WITH CORD AND NO PLUG (WIRE ENDS):**
  - a. MAKE FINAL ELECTRICAL CONNECTIONS PER ALL APPLICABLE CODES - BLACK TO BLACK (HOT); WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND).
  - b. EXTEND CORD WITH WIRE ENDS TO NEAREST ELECTRICAL JUNCTION BOX (PROVIDED BY CONTRACTOR) AND ENSURE NO BARE WIRES ARE EXPOSED.
14. **FIXTURE WITH CORD AND PLUG:**
  - a. EXTEND CORD AND PLUG TO NEAREST APPROPRIATELY RATED RECEPTACLE (PROVIDED BY CONTRACTOR) AND CONNECT.

### MANUFACTURER WARNINGS FOR EMERGENCY BATTERY BACKUP (EMB):

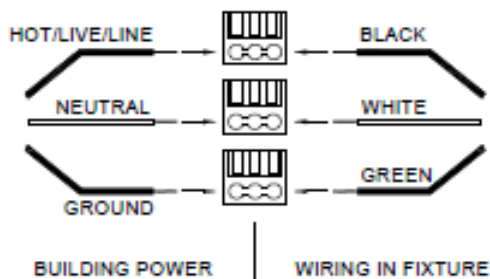
1. **IMPORTANT:** INDICATOR (LED LIGHT) ILLUMINATED INDICATES BATTERY IN CHARGE MODE WHEN AC POWER IS APPLIED. IT IS RECOMMENDED AND REQUIRED BY APPLICABLE CODE TO TEST EMERGENCY BALLAST TO ENSURE PROPER FUNCTION OF THE SYSTEM; PUSH THE TEST SWITCH FOR THIRTY (30) SECONDS EVERY 30 DAYS TO ENSURE THE EMERGENCY DRIVER IS
  - a. FUNCTIONING AS LED LIGHT SOURCE ILLUMINATED. CONDUCT A NINETY MINUTE (90) DISCHARGE TEST ONE TIME (1) PER YEAR LED LIGHT SOURCE SHOULD BE ILLUMINATED FOR A MINIMUM OF NINETY MINUTES (90).
2. **TESTING SYSTEM:** THE EMERGENCY BATTERY REQUIRES A CHARGE MINIMUM OF ONE (1) HOUR BEFORE TESTING THE CIRCUIT.
  - a. A FULL CHARGE REQUIRES THIRTY-TWO (32) HOURS.
3. **CAUTION:** DO NOT MOUNT EMB FIXTURES NEAR GAS OR ELECTRIC HEATERS.
4. **CAUTION:** BATTERY IS RECHARGEABLE NiCad TYPE AND MUST BE RECYCLED OR DISPOSED OF PROPERLY.
5. **SERVICING** SHOULD ONLY BE PERFORMED BY QUALIFIED SERVICE PERSONNEL. DO NOT USE THIS EMERGENCY DRIVER FOR OTHER THAN INTENDED USE. EQUIPMENT SHOULD BE MOUNTED IN LOCATIONS AND AT HEIGHTS WHERE IT WILL NOT READILY BE SUBJECTED TO TAMPERING BY UNAUTHORIZED PERSONNEL.



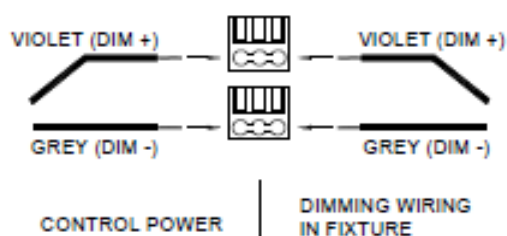


**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

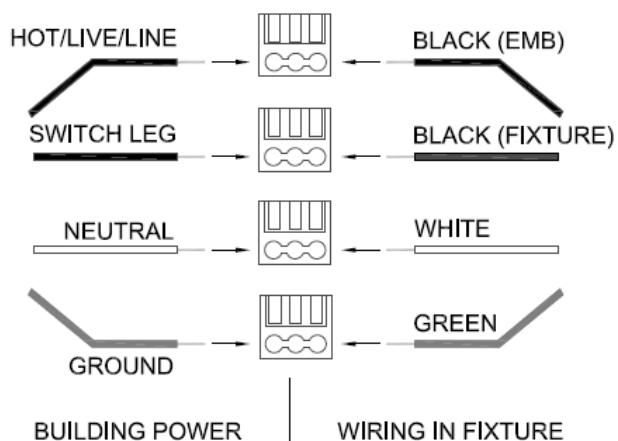
**NORMAL POWER WIRING**



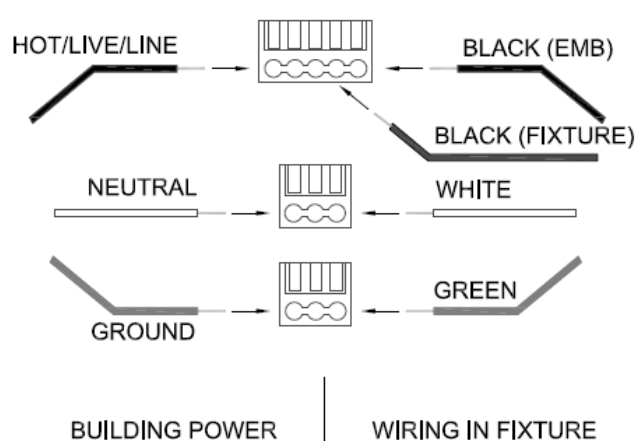
**DIMMING WIRING**



**EMB WIRING (WITH SWITCH LEG)**



**EMB WIRING (WITHOUT SWITCH LEG)**







**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

**MICRO WAVE OCCUPANCY SENSOR - (ORDERED AS AN OPTION - MWOCC)**

For most up to date instructions, please visit: <https://www.legrand.us/wattstopper.aspx>

**SPECIFICATIONS-LEGRAND WATTSTOPPER FM-105**

VOLTAGES.....120/277VAC, 50/60Hz  
 LOAD REQUIREMENTS  
     @ 120VAC, 60Hz..... 0-800W BALLAST OR TUNGSTEN  
     @ 277VAC, 60Hz.....0-1200W BALLAST  
 TRIMPOT ADJUSTMENTS  
     LIGHT LEVEL.....2-200fc  
     RANGE/SENSITIVITY .....3' to 20' (1m to 6m)  
     TIME DELAY ..... 10 SECONDS TO 30 MINUTES  
 POWER OUTPUT ..... 1 mW (SIMILAR OR LESS THAN A CELL PHONE)  
 FREQUENCY ..... 5.8GHz

**DESCRIPTION AND OPERATION**

THE FM-105 HIGH FREQUENCY OCCUPANCY SENSOR USES ULTRA-HIGH-FREQUENCY RADIO WAVES, ALSO KNOWN AS “MICROWAVES,” AND THE PRINCIPLE OF THE DOPPLER EFFECT TO DETECT MOTION. THE SENSOR SENDS OUT RADIO WAVES THAT BOUNCE OFF OF NEARBY SURFACES AND RETURN TO THE SENSOR. MOTION IN THE AREA CHANGES THE SPEED OF THE WAVES RETURNING TO THE SENSOR. THE SENSOR DETECTS THE CHANGE AND INTERPRETS IT AS OCCUPANCY. THIS CAUSES THE SENSOR TO TURN **ON** THE LOAD.

HIGH FREQUENCY RADIO WAVES CAN PENETRATE CERTAIN MATERIALS, THEREFORE, THE FM-105 CAN BE INSTALLED BEHIND A LUMINARIES’ PLASTIC OR GLASS LENS.

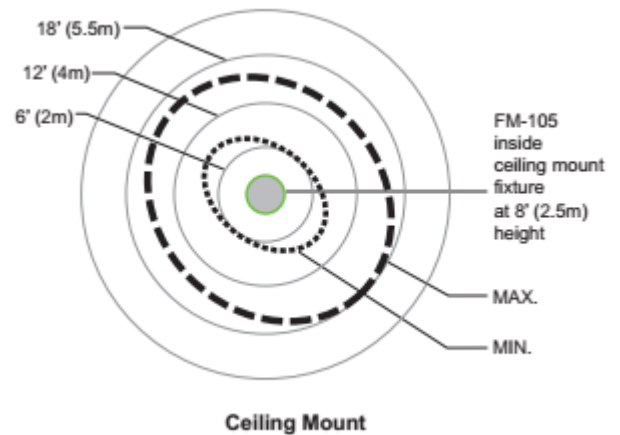
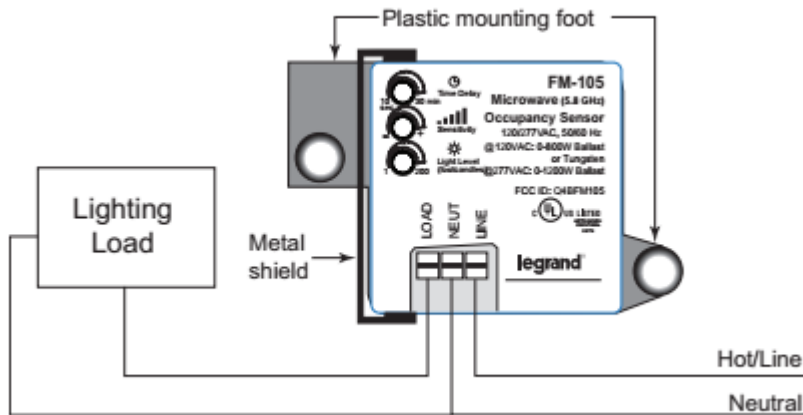
THE FM-105 CAN BE USED IN A WATER-TIGHT NON-METALLIC BOX, OR A WATER-TIGHT LUMINAIRE FOR WET OR DAMP LOCATION APPLICATIONS.

**DAYLIGHTING CONTROL**

THE FM-105 ALSO HAS DAYLIGHTING CONTROL CAPABILITY. THE DAYLIGHT CONTROL ON THE FM-105 IS A “HOLD-OFF” TYPE. THE SENSOR STOPS THE LOAD FROM TURNING **ON** IF THE AMBIENT LIGHT IS GREATER THAN THE DAYLIGHTING SETPOINT. IF THE LOAD IS ALREADY **ON**, THE SENSOR WILL NOT TURN **OFF** THE LOAD DUE TO HIGH AMBIENT DAYLIGHT.

**SENSOR COVERAGE AREA**

THE COVERAGE PATTERN MAY VARY BASED ON SENSOR LOCATIONS AND CHARACTERISTICS OF SURROUNDING MATERIAL. SHIELD PLACEMENT, OR THE USE OF A SECOND SHIELD, MAY ALTER THE COVERAGE PATTERN.



**WIRING**

THIS PRODUCT COMES PREINSTALLED IN THE FIXTURE AND PRESET TO THE FOLLOWING—

TIME DELAY—10 MINUTES  
 SENSITIVITY—75%  
 LIGHT LEVEL—200 FOOTCANDLES





**IMPORTANT:** READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ESSENTIALS SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

### ADJUSTMENTS

THREE TRIMPOTS ON THE FM-105 ALLOW YOU TO ADJUST THE TIME DELAY, SENSITIVITY/RANGE, AND LIGHT LEVEL SETPOINT. TO REDUCE A SETTING, TURN THE ASSOCIATED TRIMPOT COUNTER-CLOCKWISE TOWARD THE MINIMUM SETTING. TO INCREASE A SETTING, TURN THE TRIMPOT CLOCKWISE TOWARD THE MAXIMUM SETTING.

**WARNING: DO NOT OVERTURN THE ADJUSTMENT TRIMPOTS!**

#### **TIME DELAY**

THE FM-105 AUTOMATICALLY TURNS **OFF** THE LOAD AFTER THE COVERAGE AREA HAS BEEN VACANT FOR THE AMOUNT OF TIME SET IN THE TIME DELAY. THE MINIMUM SETTING IS 10 SECONDS, MAXIMUM IS 30 MINUTES.

#### **RANGE/SENSITIVITY**

IT IS POSSIBLE FOR A HIGH FREQUENCY SENSOR TO “SEE” THROUGH SOLID OBJECTS AND DETECT MOTION IF THE SENSITIVITY IS SET TOO HIGH. IF YOU ARE GETTING DETECTIONS AND THE LOAD WILL NOT TURN **OFF**, REDUCE THE SENSITIVITY SLIGHTLY AND SEE IF THAT CORRECTS THE SITUATION.



#### LIGHT LEVEL

ADJUST THE DAYLIGHTING SETPOINT WHEN AMBIENT LIGHT IS SUFFICIENT TO KEEP THE LIGHTS **OFF**. SET THE TIME DELAY TO MINIMUM. ADJUST THE LIGHT LEVEL TRIMPOT IN SMALL INCREMENTS. WAIT 1 TO 2 MINUTES BETWEEN ADJUSTMENTS. AFTER THE TIME DELAY EXPIRES AND THE LOAD TURNS **OFF**, MOVE WITHIN THE DETECTION AREA OF THE SENSOR. IF THE LOAD COMES BACK **ON**, YOU NEED TO REPEAT THE PROCEDURE.

#### IMPORTANT STARTUP INFORMATION

THE FIRST TIME THE SENSOR IS POWERED-UP, THE LOAD WILL FLASH **ON** THEN **OFF** ONCE, THEN THERE WILL BE 10 SECONDS WHILE THE SENSOR WARMS-UP. AFTER THAT TIME, THE SENSOR WILL WORK NORMALLY.

#### TROUBLESHOOTING

TO QUICKLY TEST THE UNIT, TURN THE TIME DELAY TO MINIMUM. MOVE OUT OF THE SENSOR'S VIEW. LIGHTS SHOULD TURN **OFF** AFTER 10 SECONDS. MOVE INTO THE SENSOR'S VIEW. THE LIGHTS SHOULD TURN **ON**.

#### LIGHTS DO NOT TURN ON:

1. COVER THE SENSOR TO SIMULATE DARKNESS THEN MOVE IN THE COVERAGE AREA. IF THE LOAD TURNS **ON**, ADJUST THE LIGHT LEVEL.
2. CHECK ALL WIRE CONNECTIONS. VERIFY ALL WIRES ARE SECURE.

#### LIGHTS DO NOT TURN OFF:

1. IF THERE IS NO MOTION IN THE DESIRED COVERAGE AREA, THE SENSOR MAY BE PICKING UP MOVEMENT ON THE OTHER SIDE OF A WALL, PARTITION, WINDOW OR DOOR. REDUCE THE SENSITIVITY.
2. VERIFY TIME DELAY AND THAT THERE IS NO MOVEMENT WITHIN THE SENSOR'S VIEW FOR THAT TIME PERIOD.

### FCC NOTICE

#### **FCC ID: Q48FM105**

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

**CAUTION:** ANY CHANGES OR MODIFICATIONS TO THIS DEVICE NOT EXPLICITLY APPROVED BY WATTSTOPPER COULD VOID YOUR AUTHORITY TO OPERATE THIS EQUIPMENT.

**NOTICE:** THE FM-105 MAY CAUSE INTERFERENCE TO A NEARBY WIRELESS NETWORK OPERATING AT A SIMILAR FREQUENCY, AROUND 5.8 GHZ.

