

## Code•Master Jr.™ HID Factory Sealed Fixtures: Explosion-Proof, Dust-Ignition-Proof.

Integrally Ballasted for H.P.S., P.S.M.H., M.H. or M.V. Lamps. For Use with Threaded Metal Conduit.

### Applications

- For use in chemical and petrochemical plants and manufacturers of plastics, paints and thinners; in refineries; and in other areas where ignitable vapors, dust, moisture and corrosive elements may be present.
- Suitable for outdoor saltwater locations and for other wet locations.

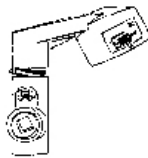
### Features

- Fixtures operate safely in high ambient temperatures.
- Patented “wireless” design. Threading of fixture unit onto mounting hood makes electrical connection. The only wiring required is the attachment of two wires to the connection block in mounting hood.
- Connection block is easily wired: (a) loosen two screws, (b) make wire connections, (c) re-position connection block. (See Figure 3)
- Safe, easy servicing without disconnecting any wiring. “Wireless” fixture unit threads off mounting hood for convenient servicing or for immediate replacement with a “stand-by” unit.
- Acme double-lead threads speed installation and fixture removal from mounting hood, only half as many turns are required as for single-lead threads. The threads do not stick or gall, eliminating problems often encountered with single-lead threads during fixture unit removal.
- Eight threads are always fully engaged in an explosion-proof manner, even after fixture unit is backed off to break the electrical connection.
- Engineered for safety. Safe even if current is accidentally left on because arcing, if any, is safely confined to the interior.
- All threaded joints are flame-tight.
- Integrally-ballasted HID lighting fixtures; separate ballasts not required.
- Factory sealed. External seals not required for Groups C and D.
- Fixtures for use in Group B locations are furnished complete with UL required sealing fitting.
- Shock-absorbing medium-base socket mount prolongs lamp life.

CLASS I, Div. 1 & 2, Groups B,C,D  
CLASS II, Div. 1, Groups E, F, G  
CLASS II, Div. 2, Groups F, G  
CLASS III



CAP-75B



CAS-150B

CLASS I, Div. 1 & 2 Groups C, D  
CLASS II, Div. 1, Groups E, F, G  
CLASS II, Div. 2, Groups F, G  
CLASS III

CAP-75



CAC-75



CALB-75



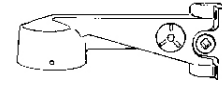
CAS-150

CLASS I, Div. 1 & 2 Groups D  
CLASS II, Div. 1, Groups E, F, G  
CLASS II, Div. 2, Groups F, G  
CLASS III

CAP-100



CAC-100



CALB-100

- Porcelain socket with nickel plated phosphor bronze screw shell. Assures trouble-free operation in high ambient areas.
- Choice of mountings: pendant, ceiling, bracket and stanchion.
- Fiberglass reinforced polyester reflectors in standard dome, or 30° angle styles are ideal in installations where luminaire is subject to exceptionally severe corrosive atmospheres.
- Optional guards protect globes from damage. Secured to fixture with three stainless steel screws. (See Figure 3)

### Standard Materials

- Ballast bodies and guards: copper-free aluminum (less than 4/10ths of 1% maximum copper content).
- Pendant mounting hoods: die-cast copper-free aluminum (less than 4/10ths of 1%).
- Ceiling, bracket and stanchion mounting hoods: sand cast copper-free aluminum (less than 4/10ths of 1%).
- Reflectors: fiberglass reinforced polyester.

### Standard Finishes

- Ballast bodies, guards and mounting hoods: Epoxy powder coated finish. Two coat baked finish, electrostatically applied for complete uniform corrosion protection.

### Electrical Specifications

- Wide range of wattages and voltages. Code-Master Jr. HID fixture with in-head ballasts available for 35 to 175 watt medium base lamps (35W HPS in 120V only). 50W HPS fixtures have dual-tap ballast (120V and 277V). All other wattages have multi-tap (120V, 208V, 240V, 277V) and 480V.
- Ballasts operate at low temperatures: MV, PSMH, and MH — minus 20°F; HPS — minus 40°F.
- 35W through 150W high pressure sodium ballasts are high reactance, high power factor type.

### Compliances

- UL Listed.
- UL Standard 844 and 1598A.
- Suitable for use in wet locations.
- Class I, Div. 1 and 2, Class II, Div. 1 and 2. See listing pages for specific groups.
- Appleton aluminum products are produced from a high strength copper-free alloy (less than 4/10ths of 1% maximum copper content).

### Options

- “Hot Restart” Emergency Option: available for 35W through 150W HPS only.

# INSTALLATION AND MAINTENANCE INSTRUCTION

## ⚠ **WARNING** GENERAL

1. Do not modify unit in any way. Modification may affect safety and reliability.
2. Improper use or failure to follow these instructions could result in serious injury or property damage.
3. Operator should be instructed in the safe and proper usage and maintenance of this product.

## ⚠ **WARNING** ELECTRICAL

1. Disconnect electrical power before installation, adjustment and maintenance.
2. DO NOT overload; the amperage and voltage indicated on the name plate must not be exceeded.
3. Check continuity before connecting electrical power.
4. This fixture intended for use with ballast suitable for lamp type and wattage shown on fixture label.

### Read Carefully Before Attempting To Install Fixture

**Class I, Div. 1 and 2, Groups B, C, D**  
**Class II, Div. 1, Groups E, F, G**  
**Class II, Div. 2, Groups F, G**  
**Class III**  
**UL 844, 1598A (Marine)**  
**Suitable for use in wet locations**

### GROUP B INSTALLATIONS:

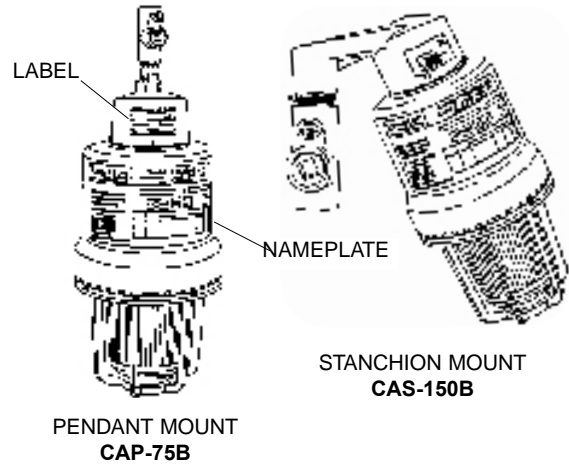
**WARNING:** This fixture is designed for permanent installation in GROUP B classified locations (as defined by the National Electrical Code) only when installed with appropriate Appleton Electric Company mounting hoods. For GROUP B installations, the mounting hood, sealing fitting and fixture must all be marked as suitable for use in GROUP B areas. (See Figure 1)

**WARNING:** Only the CAP75B 3/4" pendant hood and the CAS150B, 1-1/2" 25j stanchion hood, are approved for use in Group B locations, and the Group B markings will appear on label of the mounting hood. Mounting hoods without the Group B marking are not acceptable for Group B installations even if sealing fittings are used.

**WARNING:** Both the CAP75B and the CAS150B mounting hoods must have a Group B approved sealing fitting of the appropriate trade size installed within two inches of the hood. Any manufacturer's Group B approved sealing fitting may be used. Follow the manufacturers sealing fitting instructions for proper seal installation.

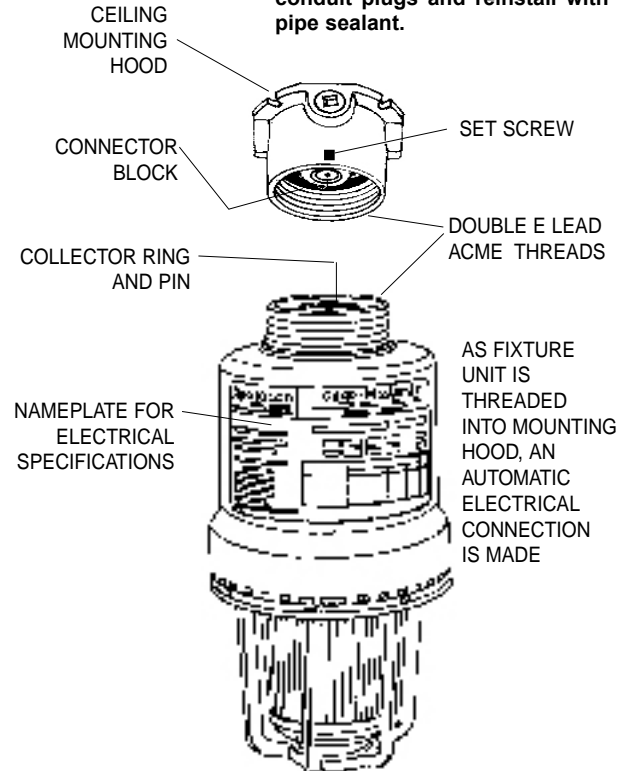
**Pendant and Stanchion Hood:** Remove connection block from hood by loosening two mounting screws, Thread hood onto conduit at least five threads (conduit should engage the internal stop) and tighten locking set screw. Connect the ground wire to the green screw provided in hood. Connect the black wire to the brass colored screw and the white wire to the silver colored screw on the mounting block. Replace the connection block into the mounting hood and re-tighten the screws securely. (See standard assembly instructions on page 3 for remainder of fixture installation.)

## **FIGURE 1** CLASS I, DIV. 1 & 2, GROUP B INSTALLATIONS:



## **FIGURE 2** CLASS I, DIV. 1 & 2, GROUP C, D INSTALLATIONS:

**IMPORTANT:** Remove all unused conduit plugs and reinstall with pipe sealant.



**IMPORTANT**  
FOR CORRECT CODE CLASSIFICATION AND GROUPING SEE CHART ON PAGE 1.

## INSTALLATION OF MOUNTING ACCESSORIES

(Not listed for Group B)

Read Carefully Before Attempting To Install Fixture

### ⚠ WARNING

- All mounting hoods using 3/4" conduit are Listed for Groups C and D.
- All mounting hoods using 1" conduit are Listed for Group D ONLY.
- 25° stanchion mount tapped 1-1/2" with 1-1/4" reducer are rated for Groups C, D. (See listing on page 1)

### PENDANT HOOD: See Figure 3

Remove connection block from hood by loosening two (2) mounting screws. Thread hood onto conduit at least five (5) threads (conduit should engage the internal conduit stop) and tighten locking set screw. Connect the ground wire to the green screw provided in hood. Connect the black supply wire to the brass colored screw and the white supply wire to the silver colored screw on the connection block. Replace connection block into the mounting hood and re-tighten the screws securely.

### WALL BRACKET AND CEILING BOX

Install wall bracket or ceiling box on structural support member with four bolts through four external mounting holes. Remove connection block and connect electrically as described under "Pendant Hood".

### STANCHION MOUNT

Remove connection block. Thread stanchion onto conduit at least five (5) threads (conduit should engage the internal conduit stop) and tighten locking set screw. Connect electrically as described under "Pendant Hood".

### ⚠ WARNING

- Disconnect power supply before servicing fixture.
- Failure to ground this fixture can result in an electric shock which may be fatal.
- This fixture is designed for and should be used permanently installed in accordance with the National Electrical Code and all applicable local codes.

## INSTALLATION OF FIXTURES

- Single voltage fixtures are completely wired, needing no additional field wiring. Fixtures with multi-tap ballast (more than one ballast voltage listed on nameplate) need to have one ballast primary lead connected to the fixture lead.
- Verify that the supply line voltage and fixture nameplate voltages are compatible (If more than one ballast voltage is listed on the nameplate, the fixture contains a multi-tap ballast requiring one internal connection. (See wiring diagrams Page 4)
- Verify that the hazardous groups and the fixture operating temperatures marked on the nameplate comply with the temperature restrictions of the hazardous area in which the fixture is to be mounted.
- Use supply wire rated for ambient temperatures to be encountered. (See nameplate Figure 3).

### WIRING MULTI-TAP BALLAST

- Remove globe-ring assembly. Loosen three screws securing socket plate. Remove plate and set aside (enough slack in the lead wires is provided). Locate fixture lead marked "line" and connect to the ballast voltage lead corresponding to supply voltage. All other ballast voltage leads must remain capped. Replace socket support plate and tighten three screws. Replace globe-ring assembly and tighten locking screw.

### INSTALLING LAMP

Check lamp type and wattage against fixture nameplate.

Install and tighten lamp (to achieve sufficient torque) to fully depress the sockets" center contact.

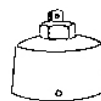
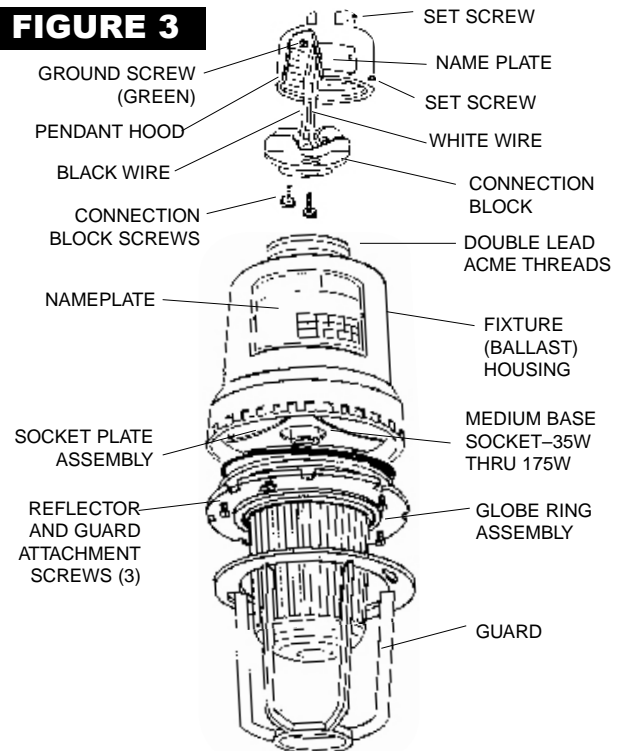
### RELAMPING

To relamp, after disconnecting the power, open fixture as described under "REMOVE GLOBE-RING ASSEMBLY". Remove old lamp and install new lamp as described under "INSTALLING LAMP" and "CLOSING FIXTURE". (See page 4)

### CLOSING FIXTURE

The globe-ring must be tightened to compress gasket, this insures watertightness. Screw the globe-ring assembly into housing by hand until gasket makes contact. Continue to rotate additionally past three notches or for 2" of travel. To assist in rotating globe-ring assembly, use two screwdrivers inserted through slots on opposite sides of ring and operate against pry bars in housing. Lock globe-ring in place by tightening locking screw until it engages the edge of the housing.

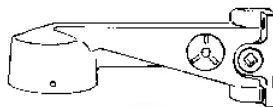
**FIGURE 3**



**Pendant Mount**  
One Hub



**Ceiling Mount**  
Four Hubs  
Three close-up plugs



**Wall Mount**  
Four Hubs  
Three close-up



**25° Stanchion Mount**  
One Hub

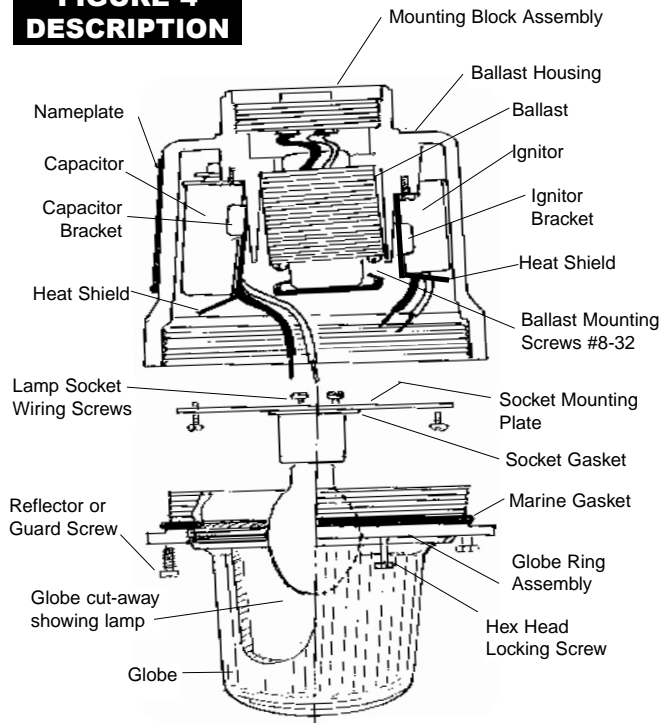
### CMAD-1 MOUNTING ADAPTER With Connection Block



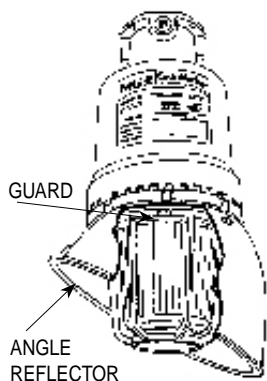
Permits use of existing Code•Master mounting hoods(AAC Ceiling or AALB Brackets) with the new Code•Master Jr. fixture unit. After removing existing fixture unit and adapter, screw in the CMAD-1 adapter. Then thread new fixture into the CMAD-1. Tighten set screws.

**IMPORTANT: CMAD-1 NOT UL LISTED**

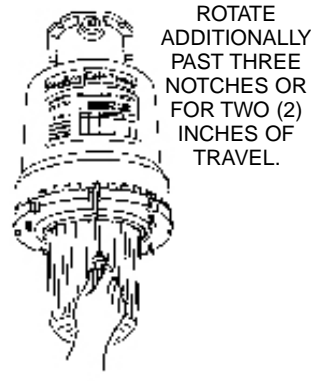
**FIGURE 4  
DESCRIPTION**



**FIGURE 5**



**FIGURE 6**



**REMOVE GLOBE-RING ASSEMBLY**

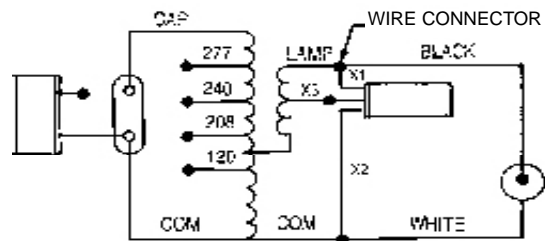
- Loosen hex head locking screw (longest) in globe ring until screw clears ballast housing. Un-thread globe-ring assembly. A screwdriver inserted in housing notches and in globe ring slots, will assist in removing globe-ring assembly (see figure 6). DO NOT use glass globe to un-thread globe-ring assembly as this might loosen the globe locking ring. (Should globe locking ring be accidentally loosened, it should be retightened.)

**INSTALLATION OF REFLECTOR AND GUARD**

- Reflectors and guards are provided with keyhole slots. To install, loosen three shorter screws in globe-ring assembly and insert reflectors or guards over them. (Be sure slots for the locking screw are properly located.) Tighten three screws.
- When an angle reflector is used, orient reflector to direct light output near the desired direction. Fine tune by rotating globe-ring assembly after loosening hex head locking screw. (See Figure 4)
- Be sure marine gasket is still under compression by slightly tightening locking screw.

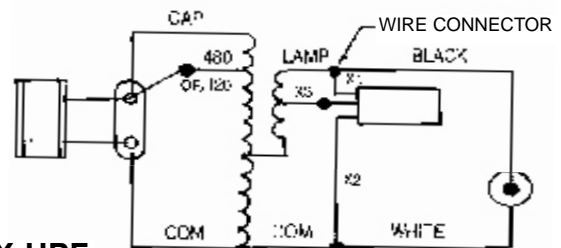
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**WIRING DIAGRAMS:**



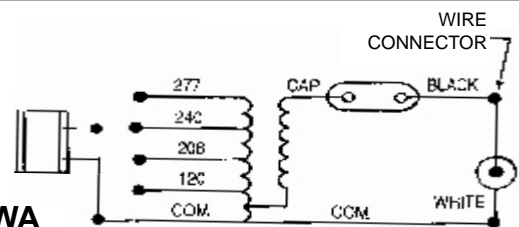
**HX-HPF**

**WIRING FOR HPS AND 50-100W MH MULTI-TAP**



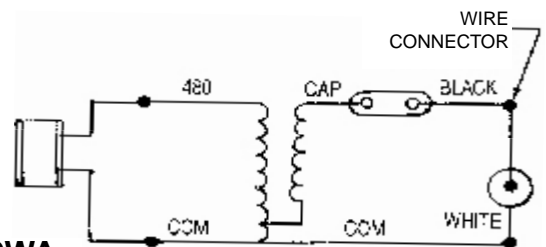
**HX-HPF**

**WIRING FOR HPS 120V OR 480V**



**CWA**

**WIRING FOR 100 MV AND 175W MH MULTI-TAP**



**CWA**

**WIRING FOR 100W MV AND 175W MH 480V**