

# Mercmaster™ III 400 Luminaires

## High Pressure Sodium and Pulse Start Metal Halide

### Enclosed and Gasketed Fixtures — Hazardous Locations

NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class I, Zone 2, AEx nA nR IIC (Z2) | Class I, Zone 2, AEx/Ex nR IIC (ZB) | Class II, Division 1 and 2, Groups E, F, G | Class III | Simultaneous Exposure (Class I, Division 2/ Class II, Division 1) | Fixtures Outside Type (Salt Water) | Type 4X | IP66

#### Applications

- Enclosed and gasketed fixtures suitable for use in:
  - Marine and wet locations
  - A wide range of industrial, chemical processing and other areas where flammable gases and vapors or combustible dusts are present under conditions defined by the National Electrical Code as Class I, Division 2; Class II, Division 1 and 2; and Class III
  - In applications involving medium and high mounting heights
  - In applications where energy efficient, high lumen output is required
  - The AEx nA nR Mercmaster III fixture is factory sealed and prevents vapors and gases from entering the globe chamber. There are no seals or putty required.
  - The AEx/Ex nR Mercmaster III fixture requires all wiring entries to be sealed.
  - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
  - Pulp and paper mills
  - Processing plants
  - Chemical plants
  - Oil refineries
  - Foundries
  - Manufacturing plants
  - Storage areas
  - Waste and sewage treatment
  - Other areas where dust, water, dirt and rough usage are a problem

#### Features

- Superior corrosion resistance.
- Choice of light sources: high pressure sodium, and pulse start metal halide.
- Six mounting arrangements to suit any lighting layout: pendant, ceiling, wall bracket, 25° (angle) stanchion, 90° (straight) stanchion and cone.
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- Choice of optical assemblies: prismatic globe or enclosed reflector with sealed lens; with or without guards.
- Wide choice of photometric distributions.
- All fixtures designed to perform in a +40 °C (+104 °F) ambient temperature. Selected fixtures are suitable for ambient temperatures up to +65 °C (+149 °F), for HPS up to -40 °C (-40 °F) and PSHM up to -30 °C (-22 °F).
- Mogul base porcelain lamp holder with nickel-plated contacts has +200 °C (+392 °F) rated welded leads, pre-wired to the ballast. Assures trouble-free operation in installations where high ambient temperatures are encountered.
- For electrical protection, a ground wire is provided on each Mercmaster to bond hood and ballast housing.
- Terminal blocks are provided for Zone 2 fixtures to facilitate wiring.
- Standard dome of 30° angle reflectors made of fiberglass reinforced white polyester. Highly resistant to corrosive atmospheres.
- A wide range of voltages available (120 to 600 Volt) and ballast types (CWA, Super CWA and REG LAG).
- One-piece ballast housing for each component provides even heat dissipation for cooler operation and longer ballast life.
- All Mercmaster mounting hoods have provision for easy field installation of fuses in fixtures (see fuse kit listings).



Pendant with  
Prismatic Glass Globe



Ceiling with  
Enclosed Reflector



25° Stanchion with  
Prismatic Glass Globe and Guard



90° Stanchion with  
Prismatic Glass Globe and Guard

#### Standard Materials

- Mounting hoods and ballast bodies: cast copperfree (less than 4/10 of 1% copper) aluminum
- Reflectors: Fiberglass reinforced white polyester
- Guards, hardware and catch assemblies: stainless steel
- Globe: heat- and impact-resistant internally fluted glass
- Enclosed reflector: etched Alzak aluminum with sealed, tempered heat- and impact-resistant lens
- Body and globe gaskets: high-temperature silicone rubber

#### Standard Finishes

- Mounting hoods and guards: epoxy powder coat, electrostatically applied for complete and uniform protection

#### Options

- AEx nA nR fixtures are available with a Class I, Zone 2 rating. Add suffix **-Z2**. Only available for certain ballast types.
- AEx/Ex nR fixtures are available with a Class I, Zone 2 rating. Add suffix **-ZB**.

#### NEC/CEC Certifications and Compliances

- cULus Listed: E10444
- UL Standard: ANSI/UL 844, 1598, 60079-0, 60079-15, 1598A
- CSA Standard: CSA C22.2 No. 250.0, C22.2 No. 137; CAN/CSA E60079-0, E60079-15
- 250 W PSMH not available in MT ballast. See Mercmaster III, 50-250 Luminaires.



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## Illustrated Features



### High Temperature Sockets

Mogul base high-temperature porcelain sockets.

### Aluminum Inner Reflector

Solid aluminum inner reflector (for refractor ballast housings only) improves photometric efficiency.

### Globe Chamber

Completely sealed from the ballast housing and outside vapors/air (nR).



### Vented Reflectors

Reflectors are thick, tough fiberglass-reinforced white polyester, vented for cooler operation. Quickly attach with furnished stainless steel screws.

### Terminal Blocks (Zone 2)

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from #8 to #24 AWG.

### Stainless Steel Inserts

Ballast bodies have stainless steel threaded inserts to receive stainless steel screws for reflectors and guard. Prevents "freezing", allowing guards and reflectors to be easily removed and replaced at any time, without damage to the housing.



### Ballast Assembly

Utilizing non-sparking components avoiding the ignition of gases or vapors that may be present (nA).

### Mounting Hood and Globe Gaskets

Silicone rubber gasket seals out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.

### Electrical Protection

Ground wire provided to bond mounting hood to ballast housing.



### "Safety" High Hinge

Extra-high hinge provides additional protection against accidental ballast housing disengagement during installation or maintenance.



### Stainless Steel Latch Assembly

Captive, stainless steel latch assembly bolt and nut closes securely, resists attack of corrosive atmospheres. Swing-away design simplifies servicing.

### Epoxy Finish

Ballast housing, hoods and guards are copperfree aluminum with epoxy powder coat finish.

### Photocell

Available for all fixtures except cone and ceiling mount. Installs through knock-out in mounting hood. Provides continuous ON-OFF dusk-to-dawn control.

### Prismatic Glass Globe and Enclosed Reflector

Heat-resistant globes and enclosed reflector thread into ballast housing and seal against a high temperature silicone rubber gasket.



### Cooler Operating Cone Hood

Larger sloped surface sheds dusts, dirt and combustible fibers providing better heat dissipation.



### Fuses

Two screws secure fuse kit to mounting boss in any Mercmaster mounting hood. Fuse included.

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#### Fuse Kit for Field Installation

| Lamp Watts | Volts | Fuse Quantity Required | Catalog Number HPS | Catalog Number PSMH |
|------------|-------|------------------------|--------------------|---------------------|
| 250        | 120   | 1                      | F7                 | F10                 |
|            | 208   | 2                      | F4                 | F6                  |
|            | 240   | 2                      | F4                 | F6                  |
|            | 277   | 1                      | F3                 | F5                  |
|            | 480   | 2                      | F2                 | F3                  |
|            | 120   | 1                      | F7                 | —                   |
|            | 230   | 2                      | F4                 | —                   |
| 250        | 480   | 2                      | —                  | F2                  |
|            | 230   | 1                      | —                  | F3                  |
| 400        | 120   | 1                      | F15                | F12                 |
|            | 208   | 2                      | F8                 | F6                  |
|            | 240   | 2                      | F8                 | F6                  |
|            | 277   | 1                      | F5                 | F5                  |
|            | 480   | 2                      | F5                 | F3                  |
|            | 120   | 1                      | F10                | F10                 |
|            | 230   | 2                      | F6                 | F5                  |

#### Catalog Number for Ballast Body and Globe

High Pressure Sodium | Constant Wattage (Min. P.F. 90%)  
Pulse Start Metal Halide | Constant Wattage (Min. P.F. 90%)



| Lamp Type | Lamp Watts | Catalog Numbers | Voltage Suffixes |     |    |    |    |     |     |     |     |     |     |     |
|-----------|------------|-----------------|------------------|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|
|           |            |                 | MT               | 5MT | TT | 48 | AM | 125 | 226 | 235 | 236 | 245 | 246 | 385 |
| HPS       | 250        | KPB250L ①       | X                | —   | —  | —  | X  | X   | X   | X   | X   | X   | X   | X   |
| HPS       | 400        | KPB400L ①       | X                | X   | X  | —  | X  | X   | —   | X   | X   | —   | X   | —   |
| PSMH      | 250        | KPB250P ①②      | —                | X   | X  | X  | —  | X   | —   | X   | —   | —   | X   | —   |
| PSMH      | 400        | KPB400P ①       | X                | X   | X  | X  | —  | —   | —   | X   | —   | —   | X   | —   |

Voltages:

MT - 120/208/240/277 V 60 Hz

48 - 480 V 60 Hz

125 - 120 V 50 Hz

5MT - 120/208/240/277/480 V 60 Hz

AM - 127/220 V, 60 Hz

226 - 220 V 60 Hz

245 - 240 V 50 Hz

TT - 120/277/347 V, 60 Hz

235 - 230 V 50 Hz

236 - 230 V 60 Hz

385 - 380/415 V, 50 Hz

① Add **-Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). The **-Z2** suffix (AEx nA nR) is available for use with MT, 48 and 246 voltage suffixes ONLY. Add **-ZB** suffix for restricted breathing protection (AEx/Ex nR).

② Not available in MT. See Mercmaster III 50-250 Luminaires.