

# Mercmaster™ III 400 Luminaire for Hazardous and Wet Locations

## High Pressure Sodium and Pulse Start Metal Halide

Listed for simultaneous exposure to combustible dusts and flammable gases or vapors.

### 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

### NEC/CEC:

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; enclosed reflector with sealed lens; or Type V or Type II closed prismatic glass refractor, 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).

## 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
- Refractors: prismatic 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**.
- Quartz Auxiliary comes to full brightness immediately and remains lit until the HID lamp attains 60-70% of full illumination. Quartz Auxiliary supplied with relay switch and socket to accept 120 V quartz double-contact bayonet base lamp (not included). (Not suitable for hazardous locations.) Add suffix **-E**.
- Factory sealed photocontrol available. See PCD2 Series.
- Smart Starter incorporates a 1-1/2-minute timer and performs as a conventional starter to normally start lamp. Removes itself from circuit if lamp burns out or is removed from socket. Eliminates starter failures caused by prolonged operation with cycling or failing lamps and simplifies finding their location, reducing maintenance and repair costs. Available for all HPS and PSMH fixtures. Add suffix **-S**.

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**Mercmaster III 400 Family Tree**

**Pendant & Flexible  
 Pendant Mount ①**



**KPA & KPAF**

**Pendant Cone Mount**



**KPCH**

**Ceiling Mount**



**KPC**

**Wall Mount ①②**



**KPWB**

**25° Stanchion Mount ①**



**KPS**

**90° Stanchion Mount ①②**



**KPST**

**Ballast Housing**

(250, 400 W HPS, 250 – 400 W PSMH)



**KPB400**

**Globe**



**VPGL-4HR** (Heat-Resistant Glass)

**Guard** (Optional Accessory)



**KPGU400**

**White Polyester Reflector** (Optional Accessory)



**CMR-4ST** (Standard)  
**CMR-4DD** (Deep Dome)



**CMR-4AN** (30° Angle)

**Enclosed Reflector Assembly**



**KPR-4HB** (Glass Lens)

**Guard** (Optional Accessory)



**GHB7000-NG**

**Closed Prismatic Refractors**



**KPRF-400** (Heat-Resistant Glass) ③

**Guard** (Optional Accessory)



**KPBG12**

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① Mounting hood with a 120 V or 208-277 V factory installed photocell is available.

② Standard and deep dome reflectors may interfere with bottom conduit entry if used with KPST and KPWB mounting hoods.

③ Available in NEMA Type II and V.

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Order using catalog numbering guide below or select catalog number from tables on following pages.

### Catalog Numbering Guide

<p><b>KP</b></p> <p>Series:                  KP - Mercmaster                  III 400</p>	<p><b>A</b></p> <p>Mounting:                  A - Pendant (rigid mounting)                  C - Ceiling                  CH - Pendant Cone Hood                  F - Pendant (flexible mounting)                  ST - 90° Stanchion                  S - 25° Stanchion                  WB - Wall</p>	<p><b>L</b></p> <p>Lamp Type:                  L - High Pressure Sodium                  P - Pulse Start Metal Halide</p>	<p><b>40</b></p> <p>Wattage:                  25 - 250 W HPS, PSMH ⑤                  40 - 400 W PSMH &amp; HPS</p>	<p><b>10</b></p> <p>Hub Size:                  75 - 3/4" NPT                  10 - 1" NPT                  125 - 1-1/4" NPT stanchion                  150 - 1-1/2" NPT stanchion</p>	<p><b>J5</b></p> <p>Optical Assembly: ①                  Blank - Glass Globe                  J2 - NEMA II Glass Refractor ④                  J5 - NEMA V Glass Refractor ④                  R - Enclosed Refractor with Sealed Lens ⑦</p>	<p><b>G</b></p> <p>Guard Options: ②                  G - Globe Guard                  BG - Refractor Guard                  Blank - No Guard</p>	<p><b>MT</b></p> <p>Voltage: ③                  MT - 120/208/240/277, 60 Hz                  5MT - 120/208/240/277/480, 60 Hz                  TT - 120/277/347, 60 Hz                  48 - 480, 60 Hz                  AM - 127/220, 60 Hz                  125 - 120, 50Hz                  226 - 220, 60 Hz                  235 - 230, 50Hz                  236 - 230, 60 Hz                  245 - 240, 50 Hz                  246 - 240, 60 Hz                  385 - 380/415, 50 Hz</p>	<p><b>S</b></p> <p>Options:                  E - Emergency Quartz                  F - Fuse Kit (Specify Voltage)                  S - Smart Starter                  H1 - Photocontrol 120 V                  H2 - Photocontrol 208 V                  H3 - Photocontrol 240 V                  H4 - Photocontrol 277 V                  E40 - Export Socket</p> <p>Optional Fusing ⑥                  FN - 120 V                  FP - 208 V                  FS - 240 V                  FT - 277 V                  FF - 480 V</p>	<p><b>Z2</b></p> <p>Suffix:                  Z2 - Zone 2 suffix (required for AEx nA nR rating) ⑧                  ZB - Zone 2 suffix (required for AEx/Ex nR rating)</p>
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### Voltages

Lamp Type	Lamp Watts	Voltage Suffixes											
		MT	5MT	TT	48	AM	125	226	235	236	245	246	385
HPS	250	X	X	—	X	X	X	X	X	X	X	X	X
HPS	400	X	X	X	X	X	X	—	X	X	—	X	—
PSMH	250	—	X	X	X	—	X	X	X	—	—	X	—
PSMH	400	X	X	X	X	—	—	—	X	—	—	X	—

#### Voltages:

<b>MT</b> - 120/208/240/277 V, 60 Hz	<b>48</b> - 480 V, 60 Hz	<b>226</b> - 220 V, 60 Hz	<b>245</b> - 240 V, 50 Hz
<b>5MT</b> - 120/208/240/277/480 V, 60 Hz	<b>AM</b> - 127/220 V, 60 Hz	<b>235</b> - 230 V, 50 Hz	<b>246</b> - 240 V, 60 Hz
<b>TT</b> - 120/277/347 V, 60 Hz	<b>125</b> - 120 V, 50 Hz	<b>236</b> - 230 V, 60 Hz	<b>385</b> - 380/415 V, 50 Hz

Refer to "Mounting Hoods and Ballast" page for available Voltage Configuration.

- ① NO DESIGNATION is required for fixtures with standard type globe.
- ② NO DESIGNATION is required for fixtures without guards.
- ③ Other voltages available. Contact your local sales representative.
- ④ J2 and J5 refractors are not available with Z2 or ZB suffix.
- ⑤ Available for 480 V, 50 Hz and 5MT ballast options. For MT and TT voltage suffix, see Mercmaster III 50-250 Luminaires.
- ⑥ Optional fusing is available for use with MT, 5MT and 48 voltage suffixes ONLY.
- ⑦ Not certified for use with Class I, Zone 2 rated fixtures.
- ⑧ The -Z2 suffix (AEx nA nR) is available for use with MT, 5MT, 48 and 246 voltage suffixes ONLY.

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Description	Catalog Number
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**Prismatic Glass Globes — Heat-Resistant**



Glass Globe

Clear

VPGL-4HR

**Enclosed Reflector Assembly**



Enclosed Reflector

Heat- and impact-resistant glass lens

KPR-4HB

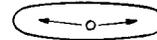
Light Distribution	IES/NEMA Distribution Curves	Catalog Number
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**Closed Prismatic Glass Refractors ② — All Heat-Resistant**



Glass Refractor

NEMA Type II



KPRF400-2

NEMA Type V



KPRF400-5

Item	Description	Catalog Number
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**White Polyester Reflectors**



Standard and Deep Dome



30° Angle

For use with globe fixtures

Standard Dome

CMR-4ST①

30° Angle

CMR-4AN

Deep Dome

CMR-4DD①

**Guards**



Globe Guard



Refractor Guard



Enclosed Refractor Guard

Globe Guard

KPGU400

Refractor Guard

KPBG12

Enclosed Refractor Guard

G-HB7000-NG

① Contact your local sales representative if used with KPWB or KPST mounting hoods.

② Not suitable for use with Z2 or ZB suffixes (Zone 2).