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 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 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) .
- 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 and Super CWA).
- One-piece ballast housing for each component provides even

Enclosed Reflector   **Prismatic Glass Globe**   **12" Glass Refractor**

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**.
- AEx 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**.

NEC/CEC Certifications and Compliances

- cULus Listed: E10444
- UL Standard: ANSI/UL 844, 1598, 60079-0, 60079-15, Marine Type Electric Fixtures Outside Type (Salt Water)
- CSA Certified: 025428
- CSA Standard: CSA C22.2 No. 9, C22.2 No. 137; CAN/CSA E60079-0, E60079-15
- 250 W PSMH not available in MT ballast. See Mercmaster III, 50-250 Luminaires.

HID/AREA: NEC/CEC ENCLOSED AND GASKETED

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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).

"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.

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.

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 Globes, Refractors and Enclosed Reflector
Heat-resistant globes, refractors and enclosed reflector thread into ballast housing and seal against a high temperature silicone rubber gasket.

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.

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

Catalog Numbering Guide

| KP | A | L | 40 | 10 | J5 | G | MT | S | Z2 |

Series:
KP - Mercmaster III 400

Lamp Type:
L - High Pressure Sodium
P - Pulse Start Metal Halide

Hub Size:
75 - 3/4" NPT
10 - 1" NPT
125 - 1-1/4" NPT stanchion
150 - 1-1/2" NPT stanchion

Guard Options: ②
G - Globe Guard
BG - Refractor Guard
Blank - No Guard

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

Optional Fusing ⑥
FN - 120 V
FP - 208 V
FS - 240 V
FT - 277 V
FF - 480 V

Mounting:
A - Pendant (rigid mounting)
C - Ceiling
CH - Pendant Cone Hood
F - Pendant (flexible mounting)
ST - 90° Stanchion
S - 25° Stanchion
WB- Wall

Wattage:
25 - 250 W HPS, PSMH ⑤
32 - 320 W PSMH
35 - 350 W PSMH
40 - 400 W PSMH & HPS

Optical Assembly: ①
Blank - Glass Globe
J2 - NEMA II Glass Refractor ④
J5 - NEMA V Glass Refractor ④
R - Enclosed Refractor with Sealed Lens

Voltage: ③
MT - 120/208/240/277, 60 Hz
5MT - 120/208/240/277/480, 60 Hz
48 - 480, 60 Hz
125 - 120, 50Hz
226 - 220, 60 Hz
235 - 230, 50Hz
245 - 240, 50 Hz

Suffix:
Z2 - Zone 2 suffix (required for AEx nA nR rating)
ZB - Zone 2 suffix (required for AEx nR rating)

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 refractions 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.

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Mounting Hoods

	Description	Hub Size (Inches)	Catalog Number
Pendant	One Hub, Rigid Mounting	3/4	**KPA-75**
		1	**KPA-100**
Pendant — Flexible	One Hub, Flexible Mounting	3/4	**KPAF-75**
		1	**KPAF-100**
Pendant Cone	One Hub, Rigid	3/4	**KPCH-75**
		1	**KPCH-100**
Ceiling	Five Hubs, Four Close-Up Plugs	3/4	**KPC-75**
		1	**KPC-100**
Wall	Five Hubs, Four Close-Up Plugs	3/4	**KPWB-75**
		1	**KPWB-100**
25° Stanchion	One Hub	1-1/4	**KPS-125**
		1-1/2	**KPS-150**
90° Stanchion	One Hub	1-1/4	**KPST-125**
		1-1/2	**KPST-150**

Ballast Bodies

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

Lamp Type	Lamp Watts	Catalog Numbers ②④	Voltage Suffixes							
			MT	5MT	48	125	225	226	235	245
HPS	250	**KPB250L** ①③	X	X	X	X	—	X	X	—
HPS	400	**KPB400L** ①③	X	X	X	X	—	—	X	—
PSMH	250	**KPB250P** ①③④	—	X	X	X	—	—	X	—
PSMH	320	**KPB320P** ①③	X	X	X	X	—	—	X	—
PSMH	350	**KPB350P** ①③	X	X	X	X	—	—	X	—
PSMH	400	**KPB400P** ①③	X	X	X	—	—	—	X	—

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

48 - 480 V 60 Hz
125 - 120 V 50 Hz
225 - 225 V 50 Hz

226 - 220 V 60 Hz
235 - 230 V 50 Hz
245 - 240 V 50 Hz

① Add -**S** after voltage designation for ballast body with Smart Starter (HPS and PSMH only).
② Add -**E** after voltage designation for ballast body with provision for Quartz Emergency Light (not suitable for hazardous location).
③ Add **Z2** suffix for factory sealed non-sparking/restricted breathing protection (AEx nA nR). Add **ZB** suffix for restricted breathing protection (AEx nR).
④ Not available in MT. See Mercmaster III 50-250 Luminaires.

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