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 360º 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 30º 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

Pendant with Prismatic Glass Globe

Pendant Cone with 12" Glass Refractor

Ceiling with Enclosed Reflector

Wall with 12" Glass Refractor

25° Stanchion with Prismatic Glass Globe and Guard

90° Stanchion with Prismatic Glass Globe and Guard

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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© November 2018

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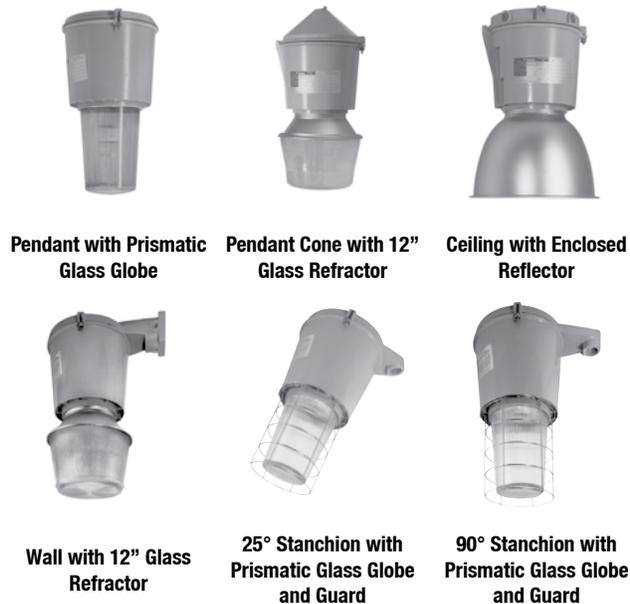Class II, Division 1 and 2, Groups E, F, G
Class III

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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.

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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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 — Constant Wattage (Min. P.F. 90%)

Lamp Type	Lamp Watts	Catalog Numbers	MT	5MT	TT	48	AM	125	226	235	236	245	246	385
											Voltage Suffixes		
HPS	250	**KPB250L** ①②③	X	X	—	X	X	X	X	X	X	X	X	X
HPS	400	**KPB400L** ①②③	X	X	X	X	X	X	—	X	X	—	X	—
PSMH	250	**KPB250P** ①②③④	—	X	X	X	—	X	—	X	—	—	X	—
PSMH	400	**KPB400P** ①②③	X	X	X	X	—	—	—	X	—	—	X	—

Voltages:
MT - 120/208/240/277 V 60 Hz
5MT - 120/208/240/277/480 V 60 Hz
TT - 120/277/347 V, 60 Hz

48 - 480 V 60 Hz
AM - 127/220 V, 60 Hz
235 - 230 V 50 Hz

125 - 120 V 50 Hz
226 - 220 V 60 Hz
236 - 230 V 60 Hz

245 - 240 V 50 Hz
385 - 380/415 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). 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).*
④ *Not available in MT. See Mercmaster III 50-250 Luminaires.*

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