MR Series Installation Manual

IP68 | Encapsulated Variant

CERTIFIED
SAFETY US-CA
MARINE US
E477827

Webpage

APPLICATION

The MR-EN luminaire is an industrial-grade LED product suitable for use in areas subject to extended or continuous submersion, requiring IP68 ingress protection. The MR Series is also certified for use on marine vessels inside, outside and in other severely wet saltwater environments. This product family is commonly exposed to moisture, dirt, corrosion, vibration, and rough usage. Models, including "-EN—," are approved for submersion areas.

MR3 & MR6 Luminaires are suitable for use in the following areas as defined by the National Electrical Code (NEC) and the Canadian Electrical Code (CEC):

UL Listing Numbers:	E477827
Standards that apply to all models:	UL 1598, UL 1598A and UL 8750; CSA C22.2 No. 250.0 and CSA C22.2 No. 250.13;
Housing:	Copper-free die cast aluminum with polycarbonate lens.
Voltage:	AC: 120-277 VAC | HV: 347: 347 VAC 50/60Hz
Rated Current:	MR3: 0.25A@120 VAC | 0.10A@347 VAC MR6: 0.50A@120 VAC | 0.20A@347 VAC
Inrush Current:	Inrush Current 120V: 19A / 303uS Peak / >10% Duration 277V: 47A / 299uS Inrush Current Peak / > 50% Duration 347V: 2.7A / 175uS
Connections:	Standard 10ft 18/3 SOOW Dimming 10ft 18/5 SOOW Refer to wiring diagrams for connections. Class 1 Wiring only.
Temperature Range:	-40° C to +55° C
Ingress Protection:	IP68 Continuous submersion 25ft | Suitable for wet locations. | Marine outside type (salt water)

WARNING / ATTENTION

To avoid the risk of fire, explosion, or electric shock, this product should be installed, inspected, and maintained by a qualified electrician only, in accordance with all applicable electrical codes.

Éviter tout risque d'incendie, d'explosion ou d'électrocution, ce produit doit être installé, inspecté et entretenu par un électricien qualifié uniquement, conformément à tous codes électriques applicables.

WARNING / ATTENTION

To reduce the risk of electric shock, disconnect the luminaire from the supply circuit before opening for installation and servicing. Keep tightly closed when in operation.

Pour réduire le risque de choc électrique, débranchez le luminaire du circuit d'alimentation avant l'ouverture pour l'installation et entretien. Gardez hermétiquement fermé pendant le fonctionnement.

WARNING Potential Electrostatic Charging Hazard
ATTENTION Risque potentiel de charge électrostatique

Avoid electrostatic discharge :
- Clean exterior lens surface with damp cloth only
- Éviter les décharges électrostatiques: nettoyer la surface extérieure de la lentille uniquement avec un chiffon humide

MR-SM – SURFACE/CEILING MOUNT INSTALLATION (Ordered Separately)

If using a different mounting accessory, refer to the corresponding page.

This MR-SM kit is intended for use with UL listed MR luminaire, as marked on the luminaire nameplate.

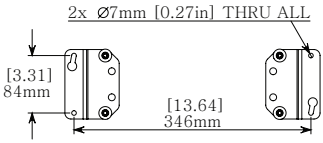
SURFACE MOUNTING CONFIGURATION

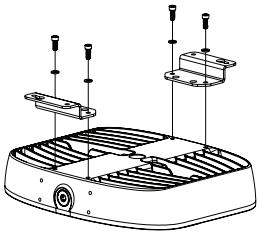
Accessory Package Contents

MR-SM	QTY	PART NAME
	2	SURFACE/SUSPENSION MOUNT BRACKET
	4	M6 X 12mm HEX HEAD CAP SCREW
	4	M6 FLAT WASHER

INSTALLATION STEPS

STEP 1:
Inspect shipping package and contents to ensure no damage has occurred during shipping.



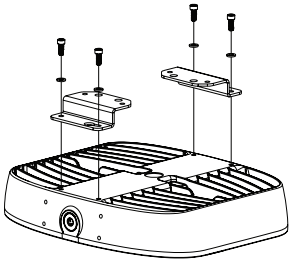


STEP 2:
Install included surface/suspension mount brackets. See diagram for orientation of brackets for each version.

Install with included M6 boltsand washers to 7 N-m (62 in-lbs).

SUSPENSION MOUNTING CONFIGURATION

STEP 3:
- For surface mounting configuration, mount fixture to desired locations with 4x 1/4-20 OR M6 screws or bolts.
- For suspension mounting configuration, connect 4x anchors to points shown

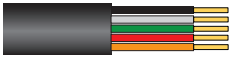


STEP 4:
Terminate the supply end in a suitable Listed junction box using a suitable Listed fitting approved for installation location as required.

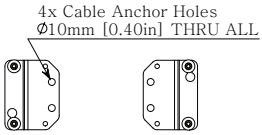
All field wiring supply conductors shall be rated 90°C minimum and rated for supply voltage (300V AC Models, 600V HV models).

Black: Line 1 (L1) | White: Neutral/Line 2 | Green: Ground

Dimming (Flying lead cable), Class 1 Wiring:



Black: Line | White: Neutral/Line 2 | Green: Ground
Red: Dimming (+) | Orange: Dimming



SUSPENSION MOUNTING CONFIGURATION

- LED Drivers will source a combined maximum of 200µA for control needs
- 0-10V Controller must sink current from LED driver 0-10V control connections

Connect the lead wires from the cord to the field supply wiring inside the outlet box. The field wiring terminations are to be made following acceptable practices as outlined by the NEC / CEC

STEP 5:
Energize luminaire.

MR-YM – YOKE MOUNT INSTALLATION (Ordered Separately)

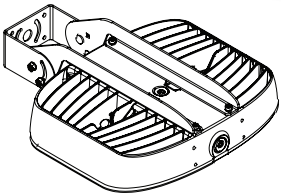
If using a different mounting accessory, refer to the corresponding page.

This MR-YM kit is intended for use with UL Listed MR luminaire as marked on the luminaire nameplate.

Accessory Package Contents

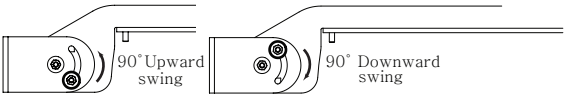
MR-YM	QTY	PART NAME
	1	YOKE MOUNT A
	1	YOKE MOUNT B
	4	1/4-20 HEX NUT
	4	1/4" FLAT WASHER
	4	1/4-20 x 0.5in CARRIAGE BOLT

INSTALLATION STEPS



STEP 1:
Inspect shipping package and contents to ensure no damage has occurred during shipping.

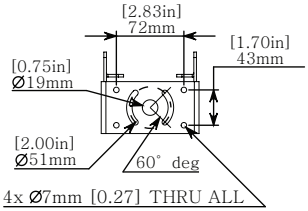
STEP 2:
Assemble Yoke mount with carriage bolts on inside and with washers and nuts.



Note:
By alternating the rotation mounting hole you can determine either an upward swing or downward swing.

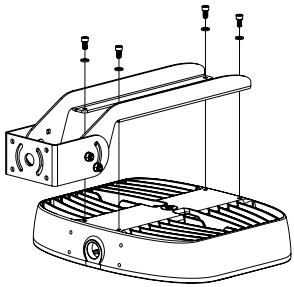
STEP 3:
Install Yoke Mount with included M6 bolts and washers to MR Head.

Torque to 7 N-m (62 in-lbs)



STEP 4:
Mount fixture assembly to desired location 2-4x 1/4-20 OR M6 Screws or Bolts.

STEP 5:
Adjust and Aim fixture to desired position. Torque hardware nuts to 9 N-m (80 in-lbs).

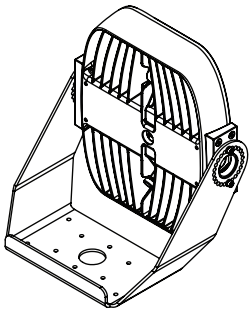


STEP 6:
Resume installation instructions provided with luminaire (STEP 4 on PAGE 2).

MR-YK – HIGH VIBRATION YOKE INSTALLATION (Ordered Separately)

If using a different mounting accessory, refer to the corresponding page.

This MR-YK kit is intended for use with UL Listed MR luminaire as marked on the luminaire nameplate.



Accessory Package Contents

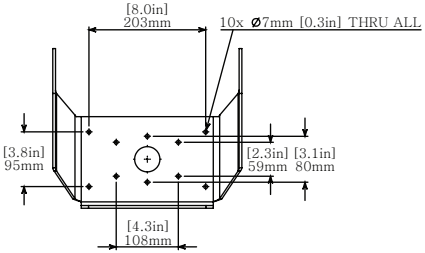
MR-YK	QTY	PART NAME
	1	MR HIGH VIBRATION YOKE
	2	CHEEK PLATE
	8	M6 x 1 x 25mm SOCKET FLAT HEAD CAP SCREW
	4	M6 FLAT WASHER
	4	M6 x 1 x 16mm SOCKET HEAD CAP SCREW

INSTALLATION STEPS

STEP 1.
Inspect shipping package and contents to ensure no damage has occurred during shipping. Discard surface/ceiling mounting bracket provided with MR luminaire.

STEP 2.
Mount MR high vibration yoke to mounting surface using a minimum of 4x ¼-20 or M6 fasteners (not provided).

Step 2

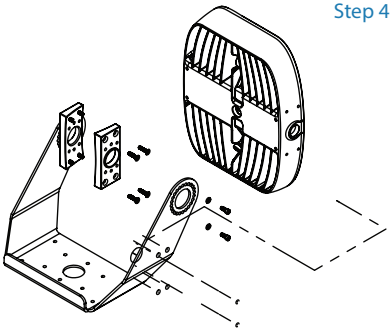


STEP 3.
Install suitable wiring system to the conduit opening per CEC/NEC requirements for the speci-fic location of install.
NOTE:
To aid in assembly and protection against ingress use of a petrolatum or soap thickened mineral oil based thread lubricant/sealant is necessary.

Un-used conduit opening must be plugged to maintain the integrity of the enclosure.

STEP 4.
Mount MR Cheek Plates to sides of MR luminaire using 4x M6 flat head cap screws per side. Thread one cheek plate over installed wiring during assembly. Torque fasteners to 5 Nm (45 in-lbs).

Step 4



STEP 5.
Thread installed wiring through opening in MR high vibration yoke mount and install MR luminaire into yoke. The raised circular bosses on the MR cheek plates should register inside of the large circular holes on the MR high vibration yoke mount arms. Rotate luminaire to aim in the desired direction and fasten in place using 2x M6 socket head cap screws and flat washers per side. Torque fasteners to 5 Nm (45 in-lbs).

STEP 6.
Resume installation instructions provided with luminaire (STEP 4 on PAGE 2).

MR-HK – HOOK PENDANT INSTALLATION (Ordered Separately)

If using a different mounting accessory, refer to the corresponding page.

This MR-HK kit is intended for use with UL listed MR luminaire as marked on the luminaire nameplate.

Accessory Package Contents

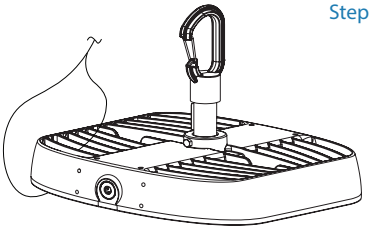
MR-HK	QTY	PART NAME
	1	PENDANT HOOK ASSEMBLY
	1	ANTI-ROTATION ASSEMBLY

INSTALLATION STEPS

STEP 1.
Inspect shipping package and contents to ensure no damage has occurred during shipping.

STEP 2.
It is recommended to install Secondary Safety Cable by looping appropriate steel cable or chain through the outer band of the unit and fastening a closed loop. Secondary safety hardware must be rated for a minimum of 50lbs. Secondary safety cables made from stainless steel aircraft cable are available upon request.

Step 2



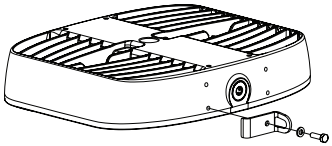
STEP 3.
Latch hook onto eye-bolt or other fixed mounting loop. Mounting point must be rated for a minimum of 50lbs.

STEP 4.
Install remaining loop of secondary safety chain or steel cable to suitable mounting location and fasten securely.

STEP 5.
Resume installation instructions provided with luminaire (STEP 4 on PAGE 2).

MR-SK-## – SECONDARY SAFETY KIT (Ordered Separately)

This MR-K-## kit is intended for use with UL Listed MR luminaire as marked on the luminaire nameplate.



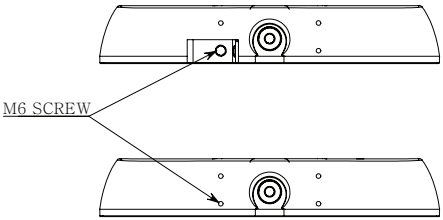
Accessory Package Contents

MR-SK-##	QTY	PART NAME
	1	Secondary Safety Bracket
	1	M6 Flat Washer
	1	M6 x 20mm Hex Cap Screw
	2	Oval Shaped Threaded Connecting Link
	1	Stainless Steel Chain, 1/8" Trade Size

INSTALLATION STEPS

STEP 1.
Remove the bottom-left pre-installed M6 x 16mm Hex Cap Screw.

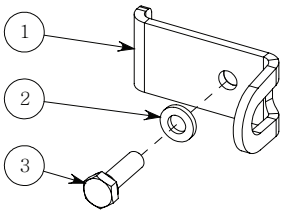
Step 1



STEP 2.
Install bracket on MR luminaire as shown using supplied M6 x 20mm Hex Cap Screw. Torque M6 x 20mm Hex Cap Screw to 40 in-lbs (4.5 Nm). It is strongly recommended that a medium or high strength thread-locker be used when installing the bracket. For units using surface or suspension mounting, install safety kit hardware on top of the surface mount or suspension mount brackets in the same location as shown.

STEP 3.
Attach stainless steel chain to safety kit bracket using stainless steel oval shaped threaded connecting link.

Step 2



STEP 4.
Attach loose end of chain. Secondary safety mounting point must be suitable for supporting a minimum of 50lbs:

- Attach loose end of stainless steel chain to fixed eye-bolt (not supplied) using the second stainless steel oval shaped threaded connecting link.

- Alternate attachment method: Wrap loose end of chain around fixed beam or other immovable support and create a closed loop using the second stainless steel oval shaped threaded connecting link. Supporting beam or structure must form a closed loop to prevent the secondary safety chain