

INSTALLATION, OPERATION & APPLICATION GUIDE

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ELECTRICAL SHOCK HAZARD – Before installing this unit, turn off power at the main service panel by removing the fuse or switching the appropriate circuit breaker to the OFF position.

• **WARNING — Shock hazard** — Do not open (ATTENTION – RISQUE DE CHOC – NE PAS OUVRIR).

MODE OF OPERATION

The ICM496 is an electrical disconnect with an external surge protective device (SPD). The ICM496 is available in two models 30A fused and 60A non-fused.

The included Type 1 SPD is intended for 240 VAC split-phase configurations. When a surge occurs, the ICM496 will absorb the surge up to the limits expressed in the specifications section in this guide. The ICM496 incorporates an external, thermally protected SPD which disables itself when thermal limits are exceeded leaving the load still connected to the service, but without surge protection. The ICM496 has a status light on the bottom of the SPD which indicates surge protection is in place when illuminated. The ICM496 can be installed for both indoor and outdoor applications. Suitable for use on a circuit capable of delivering not more than 10kA RMS symmetrical amperes (Convient à des circuits produisant au plus 10kA eff.).

FEATURES

- 240VAC split-phase
- Features a replaceable and external surge protective device (SPD)
- Maximum Surge Current Rating of 50kA (25kA per phase)
- High nominal discharge current (In 10kA), for increased longevity & durability of the SPD
- Factory pre-wired for quick and easy installation
- NEMA type 3R rated powder coated metal enclosure for indoor/outdoor use
- Fully accessible mounting holes, no disassembling required
- 30A fused & 60A non-fused models available
- Limited lifetime product. Up to a 3-year \$10,000 connected equipment warranty.

DIAGNOSTICS AND MAINTENANCE

Periodically check the status on the SPD. If the green light is OFF, the protection is no longer available and the SPD needs to be replaced immediately. This device features an external SPD that will disconnect the surge protective component at the end of its useful life but will maintain power to the load - now unprotected. 14 AWG stranded copper wire or larger required. If any of the 30 amp fuses blow on the fused model, please replace the fuse or fuses with the appropriate 30 amp fuses. **Note:** the ICM496-60A model does not accommodate fuses.

REPLACES

- **30A:** Mars: 83916, RectorSeal: RSH-50 96417
- **60A:** Mars: 83915, RectorSeal: RSH-50 96419
- All standard disconnect boxes rated for equal voltage and current configurations

Please follow all State, Local and National electrical codes when installing this product. Installation should only be done by a licensed HVAC technician.

SPECIFICATIONS

Service Voltage: 240VAC split-phase

Short Circuit Current Rating (SCCR): 200 kA

Nominal Discharge Current (In): 10 kA

SPD Type: Type 1

Surge Protection Technology: TMOV

Fuse Selectable MOCP: Up to 30A (RK5) (ICM496-30A)

Protection Mode: L-L, L-G

Maximum Continuous Operation Voltage (MCOV):

L-L: 320 VAC, L-G: 150 VAC

VPR (Vpk): Mode: L-L = 1500, L-G = 900

Input Power Frequency: 50/60 Hz

Diagnostics: Green LED indicates surge protection is operational

Enclosure Rating: NEMA/Type 3R metal enclosure for outdoor and indoor installation

Mounting: Four mounting holes located in the back of the enclosure

Dimensions: 10.94" L x 5.44" W x 2.44" D

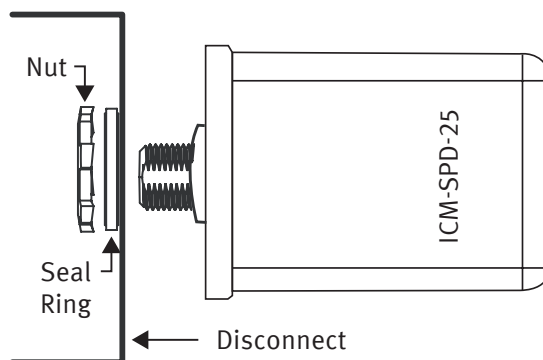
Operating Temperature: 23°F to 104°F (-5°C to 40°C)

Operating Humidity: Less than 85%, non-condensing

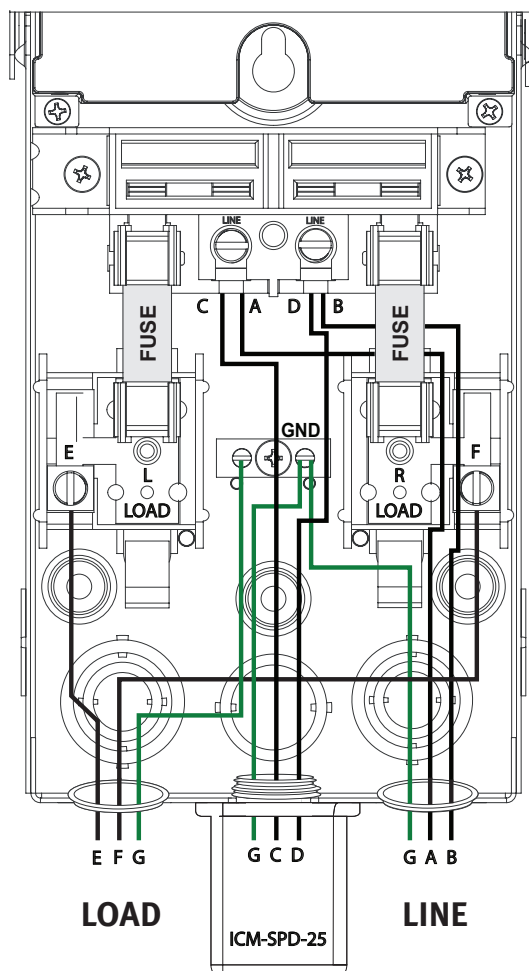
Operating Altitude: Less than 2000 meters

MOUNTING DIAGRAM

1. Install the ICM-SPD-25 nipple through the middle knockout of the disconnect box.
2. Install the rubber washer over the nipple on the inside of the disconnect box.
3. Install the lock nut on the nipple and tighten down until the assembly is secure.



ICM496-30A (FUSED)

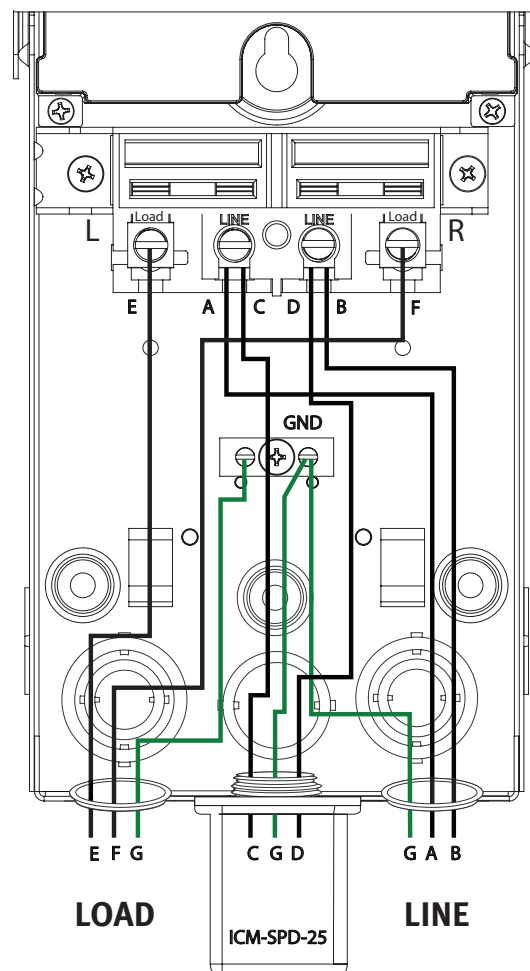


Use 8 - 14 awg wire for ground and 2-14 awg wire for LINE and LOAD. Replace fuses with 30 amp fuses rated at the appropriate voltage being used. Use wiring suitable for 75/90°C (Utiliser un câblage convenant à 75/90°C). Torque all connectors to 37.5 in.-lbs.

1. Make sure all power to the fused disconnect is off.
2. Connect the ground wire (G) of the SPD to the ground terminal block (GND). Also connect the ground wires from the line and load to the GND terminal block.
3. Connect the line wires (A & B) to the line terminals on the terminal block of the disconnect labeled LINE.
4. Connect the SPD wires (C & D) to the line terminals of the disconnect box adjacent to line wires A & B on the terminal block.
5. Connect the Load wires (E & F) to the load side of the fuse left (L) and right (R) terminals of the fused disconnect box.

NOTE: To meet the NEMA 3R rating, the disconnect box needs to be installed vertically with the cover facing forward and the drain hole in the bottom facing down.

ICM496-60A (NON-FUSED)



Use 8 - 14 awg wire for ground and 2-14 awg wire for LINE and LOAD. Use wiring suitable for 75/90°C (Utiliser un câblage convenant à 75/90°C). Torque all connectors to 37.5 in.-lbs.

1. Make sure all power to the disconnect is off and the pull out shunt is removed.
2. Connect the ground wire (G) of the SPD to the ground terminal block (GND). Also connect the ground wires from the line and load to the GND terminal block.
3. Connect the line wires (A & B) to the line terminals on the terminal block of the disconnect labeled LINE.
4. Connect the SPD wires (C & D) to the line terminals of the disconnect box adjacent to line wires A & B on the terminal block.
5. Connect the load wires (E & F) to the left (L) and right (R) load terminals of the disconnect box.

NOTE: To meet the NEMA 3R rating, the disconnect box needs to be installed vertically with the cover facing forward and the drain hole in the bottom facing down.



LIMITED LIFETIME PROTECTION WARRANTY

For warranty registration, please go to www.icmcontrols.com and click on **Warranty Registration**

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