



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).

FEATURES

- UL Listed Electrical Disconnect including both enclosure & surge protector
- 120VAC single-phase, 240VAC split-phase
- Features an internal surge protective device (SPD)
- Maximum Surge Current Rating of 100kA
- Highest UL rating for nominal discharge current (In 20kA), for increased longevity & durability of the SPD
- Constructed with 2 high-quality thermally protected MOV's (TMOV)
- Completely factory 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
- Braided strap thoroughly grounding both the enclosure and cover
- LED indicator light showing when Surge Protection is operational
- 30A Fused & 60A non-fused models available
- Made in the USA
- Limited lifetime product. Up to a 3-year \$10,000 connected equipment warranty.

MODE OF OPERATION

The ICM495 is a UL Listed Electrical Disconnect with an Internal Surge Protective Device built-in. The ICM495 is available in two models 30A Fused and 60A Non-Fused.

The included Type 2 SPD is intended for 240 VAC Split Phase configurations. When a surge occurs, the ICM495 will absorb the surge up to the limits expressed in the specifications section in this guide. The ICM495 incorporates thermal protection on the surge elements (TMOV's) which allows for safe disabling of the surge elements when a surge exceeds the thermal limits of the device. The ICM495 has a status light on the control which identifies operational status when illuminated. The ICM495 can be installed as a Type 2 device 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.).

DIAGNOSTICS AND MAINTENANCE

Periodically check the status on the SPD. If the green light is OFF, the protection is no longer available and the unit needs to be replaced immediately. This device features an internal protection 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 ICM495-60A model does not accommodate fuses.

Please follow all State, Local and National electrical codes when installing this product. Installation should only be done by a licensed HVAC technician for Type 2 devices.

SPECIFICATIONS

Service Voltage: Single Phase 120 / Split Phase 240 VAC; 30A at -40°C min. and 25°C max., 240 VAC; 25A at -40°C min. and 55°C max., 240VAC; 60A at -40°C min. and 55°C max.

Short Circuit Current Rating (SCCR): 10 kA

Maximum Surge Current: 100 kA

Nominal Discharge Current (In): 20 kA

SPD Type: Type 2 applications only

Surge Protection Technology: TMOV

Protection Mode: L1-L2, L1-G, L2-G

Maximum Continuous Operation Voltage (MCOV):

L-L: 300 VAC, L-G: 150 VAC

VPR (Vpk): Mode: L-L = 1200, L-G = 700

Input Power Frequency: 50/60 Hz

Diagnostics: Green LED indicates surge protection present

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

Installation Point: Located within sight of the motor controller/equipment

Dimensions: 9.0" L x 5.25" W x 2.50" D

Operating Temperature: -40°F to 131°F (-40°C to 55°C)

Operating Humidity: Less than 85%, non-condensing

Operating Altitude: Less than 2000 meters

Agency Certification and Approvals: ANSI/UL1449 5th Edition cULus Listed Device

An insulated grounding conductor tied to earth that is identical in size and insulation to the circuit supply conductors, except that it is primarily green is to be installed as part of the circuit that supplies the ICM495 and tied to the service equipment, per Table 250-122 of the NEC.

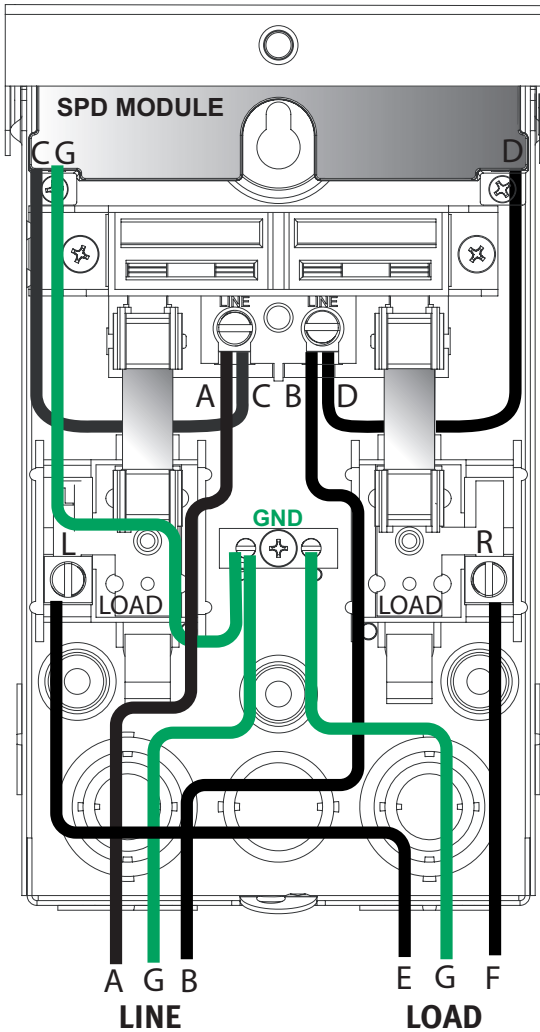
Any receptacles in the vicinity of the ICM495 shall be grounded.

Connectors used in the installation of the ICM495 shall be suitable for the material of the conductors.

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

ICM495-30A (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.

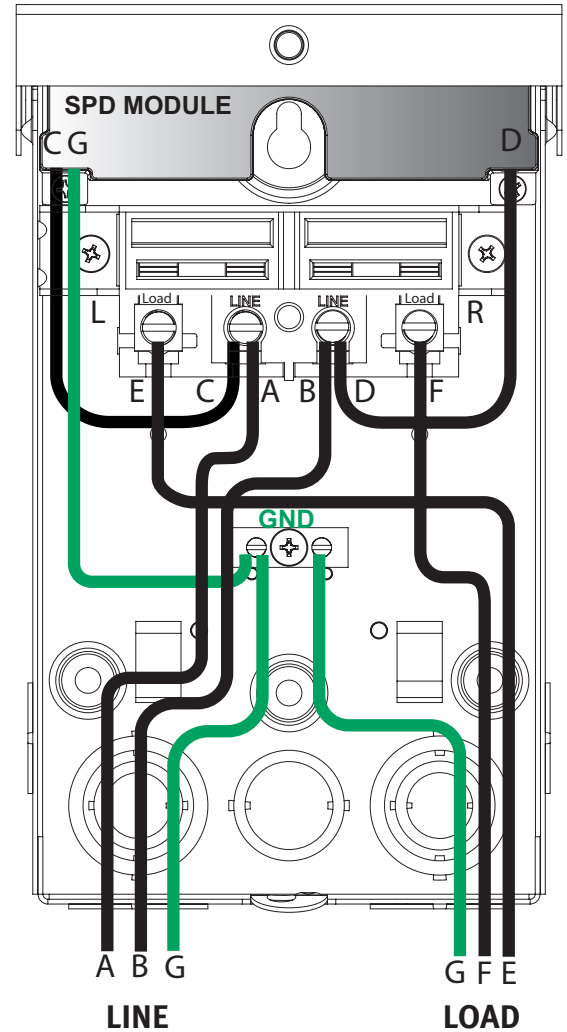
1. Make sure the all power to the fused disconnect is off and the pull out shunt is removed.
2. Connect the ground wire (G) of the SPD to the ground terminal block (GND). Also connect the ground wires from the source and LOAD to the GND terminal block.
3. Connect the line wires (A & B) to the line terminals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

WARNING! FOR FUSED & NON-FUSED DISCONNECTS

ELECTRICAL SHOCK HAZARD – Disconnect all power before servicing or installing. Installation should only be performed by trained and licensed technicians. Always follow all state and national electrical codes upon installation and service.

ICM495-60A (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 the 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 source 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 Left (L) and Right (R) line terminals of the disconnect box.
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 the down.

WARNING! FOR FUSED & NON-FUSED DISCONNECTS

The field replacement of the SPD would require a field evaluation by a UL certified engineer or a competent field evaluation body, to determine compliance of the product and approval of the installation.

LIMITED LIFETIME PROTECTION WARRANTY

Review enclosed warranty information for full details & registration information

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



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