

INSTALLATION, OPERATION & APPLICATION GUIDE

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IMPORTANT SAFETY INFORMATION



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 ICM497 is an electrical disconnect equipped with an externally mounted Surge Protective Device (SPD) and a Ground Fault Circuit Interrupter (GFCI) outlet. The GFCI outlet allows service personnel to power tools or test equipment even when the disconnect switch has been pulled which supports compliance with NEC 210.63. The integrated Type 1 SPD is designed for use with 240 VAC split-phase configurations. When a surge occurs, the ICM497 will suppress transient overvoltages up to the limits expressed in the specifications section in this guide. If the SPD exceeds its thermal limits, it will automatically disable itself while power to the load remains uninterrupted. A status indicator light located on the bottom of the SPD provides visual confirmation of surge protection. When the indicator is illuminated, surge protection is active. The ICM497 is suitable for use on circuits capable of delivering not more than 10kA RMS symmetrical amperes (Convient à des circuits produisant au plus 10kA e.).

FEATURES

- Features a replaceable, external surge protective device (SPD)
- Equipped with GFCI, allowing technicians to safely power tools and service equipment when the disconnect has been pulled
- Incorporates Gas Discharge Tube (GDT) and high quality Thermal Metal Oxide Varistor (TMOV) technology to aid in suppression of fast acting transient surges
- Designed to support compliance with NEC Article 230.67, Surge Protection and NEC Article 440.11, Air-Conditioning and Refrigerating Equipment Disconnecting Means
- NEMA type 3R rated powder coated metal enclosure for indoor/outdoor use
- 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.
- Fully accessible mounting holes, no disassembling required

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.

SPD REPLACEMENT

1. Install the SPD 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 locknut on the nipple and tighten down until the assembly is secure.



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

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, GDT

Protection Mode(s): 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

Pull-Out Disconnect Switch: 60A @ 240VAC Max.

Tamper and Weather Resistant GFCI: 20A @ 125VAC

Diagnostics: Green LED indicates surge protection is operational

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

Installation Point: Located within 25 feet of HVAC/R equipment

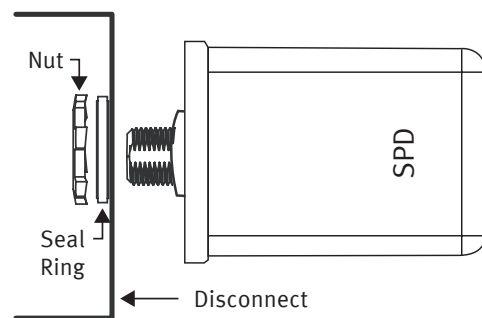
Mounting: Four mounting holes located in the back of the enclosure

Dimensions: 9.12" L x 5.50" W x 4.81" D

REPLACES

- Mars: 83308, 83309, 83345, 83395

MOUNTING DIAGRAM



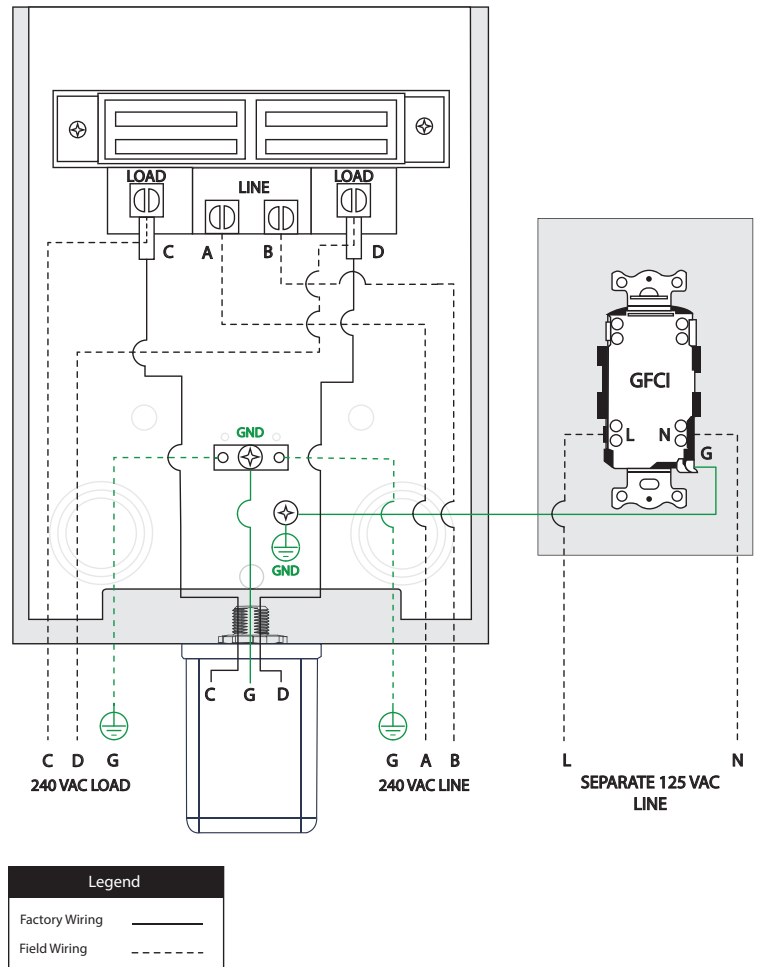
GENERAL INSTALLATION



CAUTION: Remove all power at the main service panel before installing or servicing the ICM497 by switching off the appropriate breaker or removing the appropriate fuse. Also make sure the service disconnect breaker on the ICM497 is in the OFF position.

1. With the ICM497 enclosure in a vertical position, knock out an appropriately sized hole for the raceway you will be using.
2. Mount the appropriate wire raceway to the ICM497 enclosure.
3. Mount unit using four holes in back of the enclosure.
4. Lay the ICM497 against the desired mounting location and using appropriate hardware, fasten the ICM497 to the desired location through the holes in the back.
5. Connect the ground wires from the LINE and LOAD to the GND terminal block.
6. Bring line voltage 125VAC separate power wires (L & N) to the GFCI L (black) and N (white) terminals.
7. Connect the field installed LINE wires to the LINE terminals (A & B) on the terminal block of the disconnect.
8. Connect the LOAD wires to LOAD terminals (C & D) of the disconnect box.

WIRING DIAGRAM



LIMITED LIFETIME PROTECTION WARRANTY

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

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