

INSTALLATION, OPERATION & APPLICATION GUIDE

For more information on our complete range of products – plus wiring diagrams, troubleshooting tips and more, visit us at www.icmcontrols.com

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.

Always shut off internal disconnect before servicing connected equipment.

- This control should be installed by a trained professional
- Incorrect installation can cause personal injury, property damage or even death.
- Follow all local & national codes while installing control.

GENERAL INSTALLATION

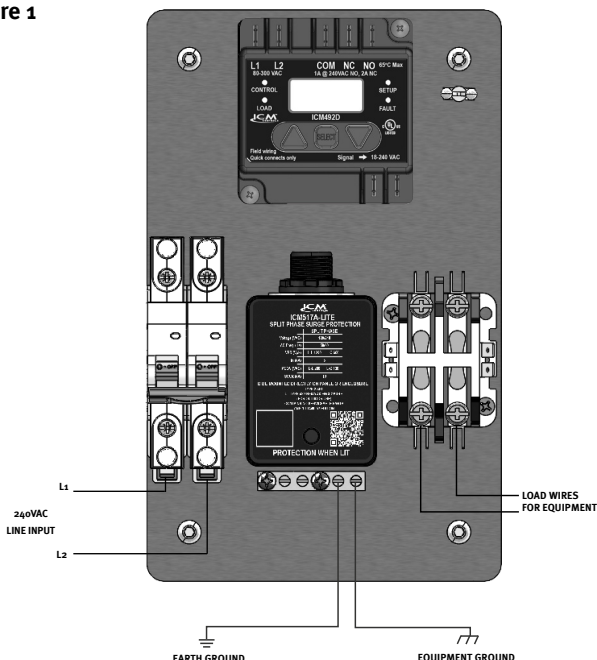


CAUTION: Remove all power at the main service panel before installing or servicing the Sentry 3N1 by switching off the appropriate breaker or removing the appropriate fuse. Also make sure the service disconnect breaker on the Sentry 3N1 is in the OFF position.

1. With the Sentry 3N1 enclosure in a vertical position, drill an appropriately sized hole for the raceway you will be using.
2. Mount the appropriate wire raceway to the Sentry 3N1 enclosure.
3. Mount the four feet which come with the enclosure to the four corner holes in the bottom of the enclosure.
4. Lay the Sentry 3N1 against the desired mounting location and using appropriate hardware, fasten the Sentry 3N1 to the desired location through the holes in the feet.
5. Bring line voltage 208/240VAC power wires to the breaker switch input and wire your equipment load wires to the contactor output as seen in the diagram below (Figure 1).

INSTALLATION WIRING DIAGRAM (208/240 VAC)

Figure 1



GENERAL OPERATIONS

Upon installation and application of power, the Sentry 3N1 from ICM Controls will monitor the incoming line for voltage variation and surges. If the voltage is within the preset limits of the voltage monitor, the Sentry 3N1 will close the onboard contactor and power the load. If there is an over or under voltage condition caused by incoming voltage varying outside the preset limits, the contactor will open and will not close again until the voltage is back within range. The parameters of the ICM492D voltage monitor can be customized for specific operation but it is recommended to leave them at the preset values.



CAUTION: Do not set the voltage set point of the ICM492D above 240VAC and no more than 5% over voltage or potential damage to Sentry 3N1 could occur.

The Sentry 3N1 will constantly monitor voltage surges and suppress surges within the limits of the ICM517A-LITE specifications. Once surge suppression capability is compromised, the LED on the ICM517A-LITE will stop illuminating and the ICM517A-LITE will require replacement.

SENTRY 3N1 PRODUCT SPECIFICATIONS

Input:

- **Frequency:** 50/60 Hz
- **Voltage:** 208/240 VAC (Max. operating capacity 190-260)
- **SCCR:** 10kA
- **Breaker:** 40A at 240VAC (Limited to 10kA)

Surge Protection:

- **Max Surge Protection:** 60,000 amps

Output

- **Contactor:** 40A FLA, 208/240VAC

Dimensions:

11.28" L x 7.48" W x 5.52" D

Enclosure:

- **NEMA Rating:** 4X
- **IP Equivalent:** IP66
- **Flame Rating:** UL94-5VA

Input and Output Wires:

Between 4-14 AWG

TROUBLESHOOTING TIPS

Problem	Trouble shooting tips
Contactor fails to close	<ol style="list-style-type: none"> 1. Check to see if incoming voltage is out of range from the voltage settings on the ICM492D. 2. Check the control mode is turned off in the set-up menu of the ICM492D. 3. Make sure the control is not in a short cycle delay. 4. Check your fault history to see if you are currently in a fault condition. 5. Check contactor coil voltage and contactor operation and replace contactor if defective.
LED fails to illuminate on the ICM517A-LITE	<ol style="list-style-type: none"> 1. Check wiring to make sure no wires are loose or broken 2. Replace the ICM517A-LITE because the surge elements (TMOV'S) are spent

GENERAL SPECIFICATIONS

ICM492D Single-Phase Digital Line Voltage Monitor

Constantly monitors and displays line voltage. Protects against over and under voltage, and rapid short cycling caused by transient faults and power interruptions.

Default Settings:

- **Voltage set point:** 240VAC
(do not set above 240VAC or below 208VAC)
- **Delay on break (ASC):** 15 seconds
- **Over/under voltage setting:** 5%
(do not set above 5%)
- **Delay on fault:** 2 seconds
- **Reset Mode:** 0 (auto)
- **Control mode:** OFF
- **Language:** English



REPLACEMENTS



CAUTION: Remove all power at the main service panel before installing or servicing the Sentry 3N1 by switching off the appropriate breaker or removing the appropriate fuse. Also make sure the service disconnect breaker on the Sentry 3N1 is in the OFF position.

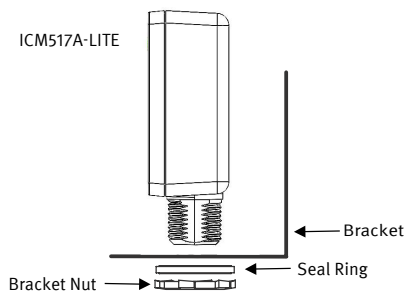
ICM492D Replacement:

- Please refer to System Wiring Diagram (Figure 3) for removal of the ICM492D.
- Disconnect all wiring to the ICM492D and remove the two fastening screws holding the ICM492D in place and set screws aside.
- Re-secure and mount with the two fastening screws from previous step.
- Please refer to System Wiring Diagram (Figure 3) for rewiring of the ICM492D.

ICM517A-LITE Replacement:

- Please refer to the System Wiring Diagram (Figure 3) for removal and replacement wiring of the ICM517A-LITE.
- Disconnect all wiring to the ICM517A-LITE. Loosen and remove the bracket nut and sealing ring (shown in Figure 2 below).

Figure 2



- Remove ICM517A-LITE from bracket. Replace ICM517A-LITE, reusing the bracket nut and sealing ring from the previous step.
- Reassemble as shown in Figure 2. Be sure to tighten down bracket nut.
- Please refer to System Wiring Diagram (Figure 3) for rewiring of the ICM517A-LITE.

ICM517A-LITE Surge Protective Device

The ICM517A -LITE is a NEMA 4X enclosed Type 2 Surge Protective Device (SPD) designed to protect valuable single-phase equipment by dissipating momentary voltage spikes and transient power surges.



- **Service Voltage:** 120/240VAC, split phase
- **Maximum Surge Current:** 60,000 amps
- **Maximum Energy Dissipation:** 612 joules
- **SCCR:** 10kA
- **Diagnostics:** Green light indicates surge suppression present
- **Enclosure:** NEMA 4X ultrasonically welded enclosure
- **AC Protection Modes:** L-L, L-G



ATTENTION: No user serviceable parts.

ATTENTION: Aucune pièce réparable par l'utilisateur.



CAUTION: Risk of Electric Shock – Only intended for installation in accordance with National Electrical Code, ANSI/NFPA-70, Article 398

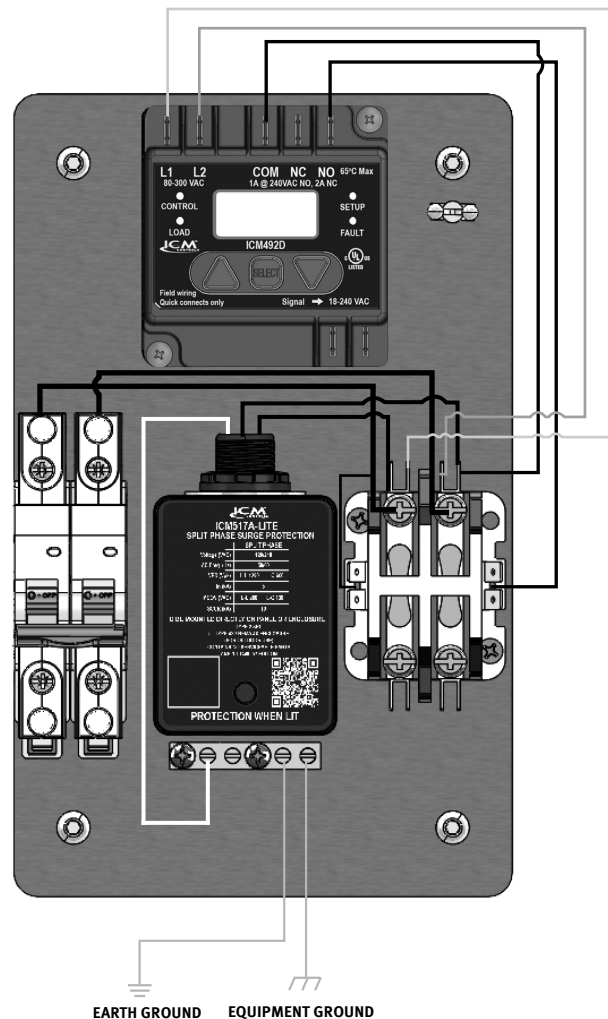


WARNING – SHOCK HAZARD – DO NOT OPEN;
ATTENTION – RISQUE DE CHOC – NE PAS OUVRIR



SYSTEM WIRING DIAGRAM

Figure 3



LIMITED LIFETIME PROTECTION WARRANTY

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



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