

ICM493

Programmable, Single-Phase Voltage Monitor with Surge Protection



Installation, Operation & Application Guide

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

Important Safety Information



HIGH VOLTAGE WARNING! – Turn off power at the main service panel before installing.

Installation

1. Remove cover by extracting the screw from the bottom of the enclosure.
2. Remove desired size knock-outs for conduit from the enclosure (1/2" or 3/4").
3. Mount the enclosure to the desired surface.
4. Attach input and output conduit, apply strain relief.
5. Tilt front panel diagonally and insert the panel into the enclosure, as shown in Figure 1.
6. Lay the front panel horizontally in the enclosure and align the holes on the side, as shown in Figure 2.
7. Using the two larger screws, included in the kit, and a screwdriver, attach the front panel to the enclosure.
8. Wire L1 and L2 directly to the contactor input and output, as shown in Figure 3.
9. Close the hinged plate and secure the upper right corner into the bracket with the small screw provided in kit.
10. Once settings have been configured, attach cover and secure with screw.

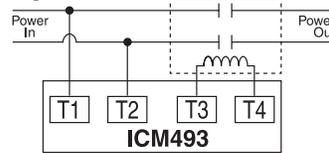
Figure 1



Figure 2



Figure 3



Specifications

Input:

- 180-264 VAC
- 50/60Hz

Contact Ratings:

- Voltage: 240 VAC
- FLA: 40A
- LRA: 240A

Control Operating Temperature:

- Operating Temperature: -40°F to 167°F (-40°C to 75°C)
- Storage Temperature: -40°F to 185°F (-40°C to 80°C)
- LCD Operating Temperature: -4°F to 167°F (-20°C to 75°C)

Mechanical:

- Mounting: Four mounting holes in back of enclosure
- Enclosure: Waterproof, NEMA 3R rated for outdoor installation
- Dimensions: 8"L x 8"W x 4"H

Parameters:

- Line Voltage: 200-240 VAC, adjustable
- Over/under voltage setting: 5%-10%, adjustable
- Anti-short cycle time delay: 0.5-10 minutes
- Number of trials: 1-5, Auto
- Number of movistors: 0-5

Setting the Parameters

1. Press the **SETUP** button to scroll through various user-configurable settings.
2. Use the **▲ ▼** buttons to change the set point.
3. When the last parameter has been set, you will return to the read screen.

Button Functions

SETUP Press to enter setup mode, and to toggle through user-configurable settings.

READ Press at any time to return to the Read screen, which will display any faults, the current line voltage, and the number of remaining MOVs.

FAULT Press to scroll through past recorded faults. Hold for 5 seconds to clear fault memory.

▲ ▼ Press to adjust settings **▲ & ▼**. Hold for 2 seconds to enter line voltage calibration.

SETUP FAULT Hold for 2 secs. to reset unit.

Calibration Feature

The ICM493 can be calibrated to match the reading from a true RMS meter.

1. Measure input voltage from T1 to T2 using a true RMS meter.
2. Hold **▲ ▼** buttons simultaneously until line voltage starts to flash.
3. Adjust voltage using **▲** or **▼** buttons to match measured voltage from step 1.
4. Push **SETUP** button to lock values into memory.

Specifications

Parameter	Description	Range	Default	Recommended
Line Voltage	The expected line voltage	200-240	240	Nameplate Voltage**
Over/Under Voltage	The allowed percentage over and under the set line voltage	5% to 10%	10%	10% Over/Under
Anti-Short Delay	The amount of time delay between the end of a fault, and closing of the contactor	0:30 to 10:00	0:30	4 minutes
Reset Mode Retries	The number of retries after a fault has occurred. Auto has unlimited retries.	1 to 5, Auto	Auto	Auto
Allowed MOV Fail	The number of surge devices allowed to fail while maintaining operation. Setting to "5" will allow operation, even when surge protection has been exhausted.	0 to 5	5	Set to "5" for ensured operation. Set to "4" for max. operation while ensuring surge protection.

** For best recommendations, consult manufacturer of equipment.

ONE-YEAR LIMITED WARRANTY

The Seller warrants its products against defects in material or workmanship for a period of one (1) year from the date of manufacture. The liability of the Seller is limited, at its option, to repair, replace or issue a non-case credit for the purchase prices of the goods which are provided to be defective. The warranty and remedies set forth herein do not apply to any goods or parts thereof which have been subjected to misuse including any use or application in violation of the Seller's instructions, neglect, tampering, improper storage, incorrect installation or servicing not performed by the Seller. In order to permit the Seller to properly administer the warranty, the Buyer shall: 1) Notify the Seller promptly of any claim, submitting date code information or any other pertinent data as requested by the Seller. 2) Permit the Seller to inspect and test the product claimed to be defective. Items claimed to be defective and are determined by Seller to be non-defective are subject to a \$30.00 per hour inspection fee. This warranty constitutes the Seller's sole liability hereunder and is in lieu of any other warranty expressed, implied or statutory. Unless otherwise stated in writing, Seller makes no warranty that the goods depicted or described herein are fit for any particular purpose.



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