# **pr**sense<sup>®</sup>

INSTALLATION INSTRUCTIONS VMR Series Voltage Monitor Relays

901-0000-357

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# DANGER!

Potentially hazardous voltages are present. Electrical shock can cause death or serious injury. Installation should be done by qualified personnel following all National, State & Local Codes.



### BE SURE TO REMOVE ALL POWER SUPPLYING THIS EQUIPMENT BEFORE CONNECTING OR DISCONNECTING WIRING. READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.

#### Installation, Wiring & Setup

Mount the appropriate 8 pin octal socket in a suitable enclosure. NOTE: A 600V-rated socket, such as the Macromatic 70169-D, must be used on the VMR-1C-F-480A, VMR-1C-A-480A and VMR-1C-B-480A products. When making connections to the socket, make sure to match the terminal numbers on the socket to the ones shown on the wiring diagram (the wiring diagram on the relay is the view looking towards the bottom of the relay vs. the top of the socket). Use one or two #12-22 solid or stranded copper or copper-clad aluminum conductors with terminals on Macromatic or Custom Connector sockets - a terminal tightening torque of 12 in-lbs should be used. See **Product Setup** on reverse side. Review Operation and Function table on reverse side.

#### **Troubleshooting**

If the unit fails to operate properly, check that all connections are correct per the appropriate wiring diagram on the product. If problems continue, contact Automation Direct for more information.

## Product Setup

Find the catalog number in the table below and follow the instructions to setup the unit.

Catalog Number	Operation	Function Chart	
VMR-2C-F-12D VMR-2C-F-24D VMR-2C-F-48D VMR-2C-F-110D VMR-2C-F-120A VMR-1C-F-240A VMR-1C-F-240A VMR-1C-F-480A VMR-2C-A-12D VMR-2C-A-12D VMR-2C-A-110D VMR-2C-A-120A VMR-2C-A-120A	Adjust the pick-up voltage setting (Umax) between the full range as shown on the product nameplate. The drop-out voltage setting (Umin) is fixed at 95% of the pick-up setting. The relay energizes (and the LED is Red) when the monitored voltage is above the pick-up setting for a period longer than the fixed pick-up time delay of 0.5 seconds. The relay de-energizes (and the LED is Green) when the monitored voltage is below the drop-out setting for a period longer than the drop-out setting for a period longer than the fixed pick-up time delay of 0.5 seconds. Adjust the pick-up voltage setting (Umax) between the full range as shown on the product nameplate. Then adjust the drop-out voltage setting (Umin) between 75% and 95% of the pick-up setting. The relay energizes (and the LED is Red) when the monitored voltage is above the pick-up setting for a period longer than the fixed pick-up	Monitored Voltage Voltage Umax) Voltage (Umin) Relay On Output Off	-
VMR-1C-A-480A	time delay of 0.5 seconds. The relay de-energizes (and the LED is Green) when the monitored voltage is below the drop-out setting for a period longer than the drop- out time delay (t), which is adjustable between 0.1-10 seconds.		
VMR-2C-B-12D VMR-2C-B-24D VMR-2C-B-48D VMR-2C-B-110D VMR-2C-B-120A VMR-1C-B-240A VMR-1C-B-480A	Adjust the over voltage setting (Umax) between the full range as shown on the product nameplate. Adjust the under voltage setting (Umin) between 75% and 95% of the over voltage setting. The relay energizes (and the LED is Red) when the monitored voltage is between the over and under voltage settings. The relay de-energizes (and the LED is Green) when the monitored voltage falls outside the over or under voltage settings for a period longer than the drop-out time delay (t), which is adjustable from 0.1-10 seconds. The relay re-energizes when the monitored voltage settings to a value between the over and under voltage settings for a period longer than the drop-out time delay (t), which is adjustable from 0.1-10 seconds. The relay re-energizes when the monitored voltage settings for a period longer than the pick-up time delay, which is fixed at 0.5 seconds.	Over Voltage Voltage Hysteresis   Monitored Voltage Under Voltage   Under Voltage Under Voltage   Relay Output On Off	1 1