



**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.**



**IMPORTANT: READ THIS FIRST IF REPLACING AN EXISTING MACROMATIC VOLTAGE MONITOR RELAY**

Macromatic made several product design enhancements on all VxP Series Voltage Monitor Relays in 2015. The changes were effective on all 12-120V products manufactured with Date Code 1541 or later (41st week of 2015), and on all 240V products manufactured with Date Code 1532 or later (32nd week of 2015). As a result, Macromatic has obsoleted the VMPK, VAP, VWP, VAKPU & VWKPU Series products. In addition, while functionality has been maintained, the setup method for all VWKP Series products has been changed. For more detailed information on all these changes, please visit [www.macromatic.com/new-vxp](http://www.macromatic.com/new-vxp).

**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 VMP480A, VAKP480A and VWKP480A 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 Macromatic at 800-238-7474 or e-mail [tech-support@macromatic.com](mailto:tech-support@macromatic.com) for assistance.

**Warranty**

All catalog-listed VMP, VAKP, and VWKP Series Relays manufactured by Macromatic are warranted to be free from defects in workmanship or material under normal service and use for a period of five (5) years from date of manufacture.

**Product Setup**

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

Catalog Number	Operation	Function Chart
<p>VMP012D VMP024D VMP048D VMP110D VMP120A VMP240A VMP480A</p>	<p>Adjust the pick-up voltage setting (<math>U_{max}</math>) between the full range as shown on the product nameplate. The drop-out voltage setting (<math>U_{min}</math>) 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 time delay (<math>t</math>) of 0.5 seconds.</p>	
<p>VAKP012D VAKP024D VAKP048D VAKP110D VAKP120A VAKP240A VAKP480A</p>	<p>Adjust the pick-up voltage setting (<math>U_{max}</math>) between the full range as shown on the product nameplate. Then adjust the drop-out voltage setting (<math>U_{min}</math>) 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 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 (<math>t</math>), which is adjustable between 0.1-10 seconds.</p>	
<p>VWKP012D VWKP024D VWKP048D VWKP110D VWKP120A VWKP240A VWKP480A</p>	<p>Adjust the over voltage setting (<math>U_{max}</math>) between the full range as shown on the product nameplate. Adjust the under voltage setting (<math>U_{min}</math>) 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 (<math>t</math>), which is adjustable from 0.1-10 seconds. The relay re-energizes when the monitored voltage returns to a value between the over and under voltage settings for a period longer than the pick-up time delay, which is fixed at 0.5 seconds.</p>	