



## OPERATING INSTRUCTIONS

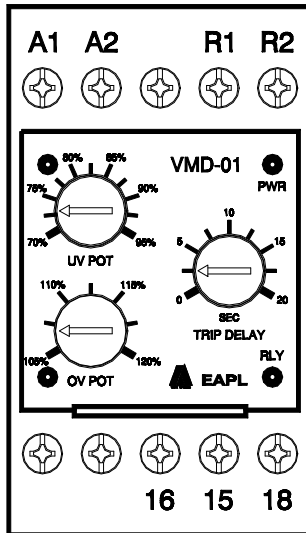
Model : VMD-01

OPI No.: OPI/030

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### Front Panel Layout:



### Terminal Details:

A1, A2 : Single phase supply

15, 16, 18 : C, NC, NO

R1, R2 : Auto/Manual Restart

VMD-01 is an Under voltage and Over voltage monitoring device for single phase supply. The unit monitors the supply voltage and cuts off the load if mains voltage exceeds or drops beyond the preset limit.

The unit is also provided with variable delay facility for the output relay to trip after the fault occurs.

### Features:

**Indication:** The 'PWR' LED indicates the presence of the supply voltage while green 'RLY' LED indicates the status of output relay.

Red LED (for UV) glows if the supply voltage reaches the preset limit. Similarly red LED (for OV) glows if supply voltage reaches the preset limit.

**Under voltage trip setting:** 'UV POT' is used to set the under voltage cut off limit. The setting range is 70% - 95% of 240 V. Eg. Setting the knob at 95% makes the o/p relay to trip if the mains voltage is  $228 \text{ V} \pm 15 \text{ V}$ .

**Over voltage Trip setting:** 'OV POT' is used to set the over voltage cut off limit. The setting range is 105% - 120% of input voltage. Eg. If the voltage is 240 V, Setting the knob at 105% makes the o/p relay to trip if the mains is  $252 \text{ V} \pm 15 \text{ V}$ .

**Delay time setting:** The 'Trip delay' knob is used to set the delay time. The output relay will trip after the set delay time, once the voltage reaches the set limits. Setting range is 0 sec. to 20secs.

**Auto / Manual Restart:** Terminals R1 & R2 provided on the front panel can be used for automatic restart of load by keeping them permanently shorted (potential free shorting).

Alternatively, R1 & R2 can be connected to an external switch which when shorted externally restarts the load, when the fault condition is cleared.

When in manual mode, if both UV and OV fault LEDs are glowing, it indicates that the fault is cleared and the unit is waiting for the external trigger across R1 & R2 to restart the load.

### Caution:

Ⓢ If the source voltage shoots beyond the prescribed rated voltage, the units will be damaged beyond repairs. Suitable protection for incoming voltage is recommended.

Ⓢ EAPL does not take responsibility for any consequential damages.

### How to operate:

Ⓢ Set the under voltage limit and over voltage limit by using the respective POTs. Set trip delay time using 'Trip delay' POT.

Ⓢ Connect single phase supply to terminals A1, A2. Switch ON the single phase supply.

Ⓢ If input voltage is within the set limit, then power ON LED and output relay will be ON.

Ⓢ When voltage reaches the set limit, then after the set delay, the respective fault indication occurs. The o/p relay will trip.

For instance, let the under voltage limit be set at 95%. If the input voltage is  $228 \text{ V} \pm 15 \text{ V}$ ., the under voltage fault will occur. The o/p relay trips consequently, the red LED for UV will glow and 'RLY' LED goes off.

Wiring Details:

