



**HOKKIM**  
Giving You Control

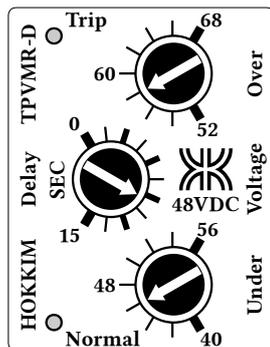
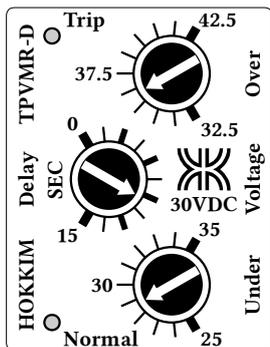
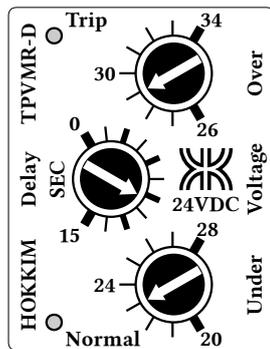
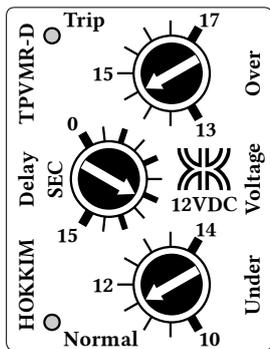
# Control & Protection Relays

**Model** : TPVMR-D

**Function** : Precision DC Voltage Monitoring Relay with Delay

**Utilization** :

The TPVMR-D accurately monitors under and over-voltage DC supplies, for example the voltage of a battery. It has three adjustable settings: one for under, one for over and one for trip delay. The relay trips if the voltage of the monitored value drops below or rises above the respective set points. There are 4 setting ranges, for nominal 2VDC, 24VDC, 30VDC and 48VDC. Refer to the technical data below for under & over set range for each nominal voltage. With these ranges, the TPVMR-D is suitable for monitoring both Lead Acid or Nickel Cadmium batteries. Trip time delay can be set between 0 to 15 seconds. The delay trip time is important to prevent false alarms owing to momentary voltage drops under heavy short term loads such as when cranking the generator. The unit comes with 2 change-over contacts, 1-3-4 and 8-6-5, from the same relay meaning they both operate together during under or over trip conditions. There are also 2 LEDs, green to indicate normal condition and red to indicate trip condition.



### Technical Data:

**Supply Voltage**

- 12VDC     24VDC
- 30VDC     48VDC

**Consumption**

: 1VA

**ON-Trip Hysteresis**

: ±2%

**Accuracy**

: ±0.5%

**Adjustment**

12VDC

: **Under** 10V - 14V

**Over** 13V - 17V

**Delay** 0 - 15 Sec.

24VDC

: **Under** 20V - 28V

**Over** 26V - 34V

**Delay** 0 - 15 Sec.

30VDC

: **Under** 25V - 35V

**Over** 32.5V - 42.5V

**Delay** 0 - 15 Sec.

48VDC

: **Under** 40V - 56V

**Over** 52V - 68V

**Delay** 0 - 15 Sec.

**Indication**

- : Green LED (Normal)
- Red LED (Trip)

**Output Contacts**

: 5A 240V 50Hz AC1

**Relay Normal**

: 1-3 Close 1-4 Open

8-6 Close 8-5 Open

**Relay Trip**

: 1-3 Open 1-4 Close

8-6 Open 8-5 Close

