

PROTIME<sup>®</sup>



## Voltage Relay

VR1 - 1  
VR1 - 2  
VR3 - 3R  
VR3 - 4R  
VR3 - 4R/2S

### Special Features

- ⚙ Available with Pick-up & Trip Time Delay in 3-Phase Voltage Relays
- ⚙ Smart design to fit on any standard mounting channel.
- ⚙ Choice of screwless terminals
- ⚙ Total wireless interiors
- ⚙  $\pm 2\%$  Accuracy
- ⚙ Test & Auto/Manual Reset facility
- ⚙ Signal & Source (Control supply) are separate
- ⚙ Designed for high reliability, as relay energizes only under fault conditions

### Technical Data

- 1) Supply voltage (control supply)-110V /220V /380V /440V AC, 50Hz or 12V DC /24V DC.
- 2) Permissible Supply Variation- $\pm 25\%$
- 3) Output Contacts-Two changeover contacts (Two sets, one for each set points in case of 2s relays)
- 4) switching duty-6A resistive at 24V DC or 240V AC
- 5) Relay Status-De-energised in normal conditions.
- 6) Set Point(Range)-VR1-2/VR3-3/ VR3-4 = U/V:-70%-95% & O/V:-105-120%
- 7) Time delay (optional) - 0-10 sec. Settable
- 8) Mode of operation - Under voltage / Over voltage (User selectable) & u/v-o/v combined
- 9) Reset - Automatic / Manual.
- 10) Setting Accuracy-  $\pm 5\%$  of full scale
- 11) Mounting - Any standard mounting channel.
- 12) dimension - 77mm(W) X 90mm(H) X 110mm(D).\* For 2s models - 155mm(W)

### OPERATION:-

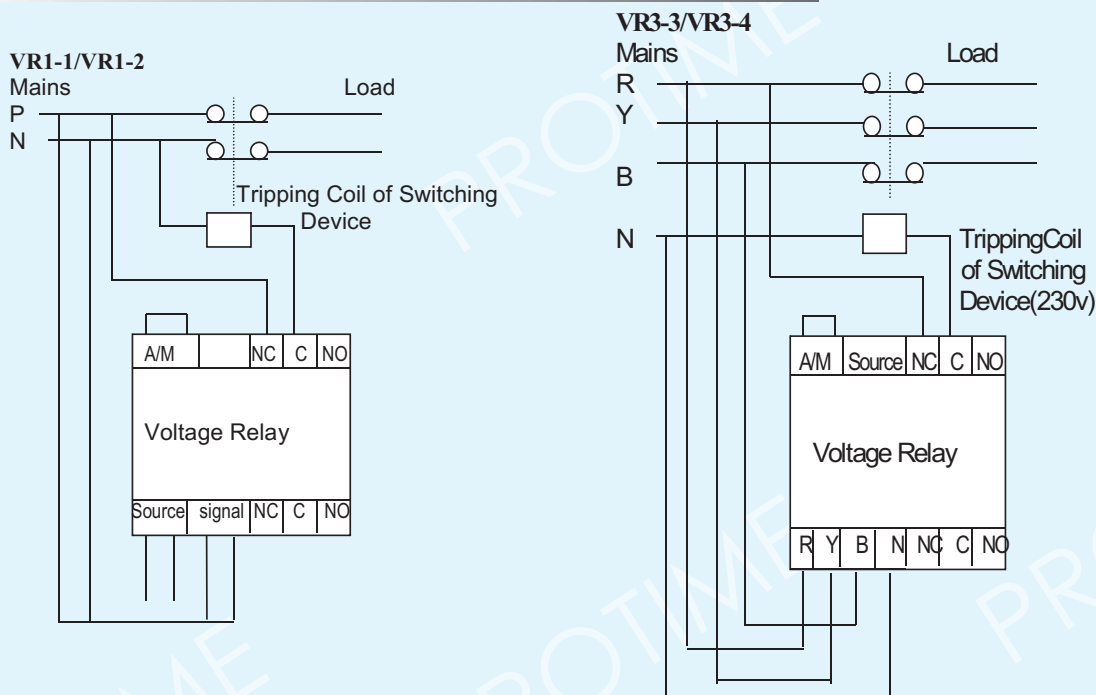
#### VR1-1/ VR1-2:

The 1Ph./2Ph. Voltage relay monitors the voltage signal (to be connected at sensing point) when the signal goes out of the range selected on the dial, the status of relay will change. The relays are available with or without time delay. In case of relays with time delay 'SET' LED will glow when voltage signal goes out of the range selected. The relay will energize after delay & is also indicated by RLY LED.

## Operation:VR3-3R/ VR3-4R:

The 3-Ph. Voltage relays continuously sense the voltage level of each phase individually, thus if any of the phase goes out of the range selected on 'Voltage Set' dial, it will change the status of relay. It will also indicate that voltage of which phase have gone under or over the range by separate LEDs. The HEALTHY LED Glows when voltage level is within the voltage range selected. The relay will de-energise in fault condition after the 'PICK-UP' time delay & will re-energises after 'TRIP' time delay when normal condition resume . \* Relays with Two set point can be used for two separate relay contacts of under & over voltage protection for same source.

### Connection Details



### HOW TO ORDER ?

#### Ordering Pattern (example)-

VR96-D - 3 - B2 - STD - C - 5

#### Modes

- 1 - U/V or O/V User selectable Relays
- 2 - U/V & O/V Relays
- 3R-3 wire U/V & O/V Relays
- 4R-4 wire U/V & O/V Relays
- 4/2S- 4 wire 2 SET (2 O/P) Point Relays

#### Series

- VR1- 1Ph/2Ph Voltage Relays with Time delay
- VR3 -3 Ph Voltage Relays with P-up & Trip Time delay

#### Voltage Range

**VR1-1/VR1-2/VR3-3/4 & VR3-4/2S**  
**VR3/STD-**  
U/V - 70%-95%  
O/V - 105-120%

#### Time Range

STD-  
0-10 Sec.

#### Supply

- 1-110V AC
- 2-230V AC
- 3-380V AC
- 4-415V AC
- 5-12 V DC
- 6-24 V DC

#### Terminals

- S - Screw type terminals
- C - Cage type terminals (Screwless)