OPERATING INSTRUCTIONS
VPR604

FEATURES :

- Monitor under or over voltage trip levels of 3Ø-4wire.
- Detects phase loss,phase reversal.
- Adjustable under and over voltage trip levels
- Selectable trip time delay

SPECIFICATIONS

1. **FUNCTION**
   Monitoring under or over voltage trip levels of 3Ø-4wire
2. **NOMINAL VOLTAGE(Vn)**
   240V AC
3. **FREQUENCY RANGE**
   40 Hz to 70 Hz
4. **AUX. SUPPLY**
   From L1 phase
5. **SUPPLY VARIATION**
   70 to 130% of Vn
6. **TRIP LEVELS**
   Under voltage (Vn-%):-25, 22.5, 20, 17.5, 15,12.5, 10, 7.5, 5,2.5
   Fixed @ 70% of Vn under Trip-2
   Over voltage (Vn+%):-2.5, 5, 7.5, 10, 12.5, 15,17.5,20,22.5,25
7. **TRIP TIME DELAY(t)**
   0.2,0.4,0.6,0.8,1,2,4,6,8,10Sec
8. **MEASURING RANGES**
   Under voltage:- 180 to 234V
   Over voltage:- 246 to 300V
9. **ACCURACY**
   ±0.5 % at constant condition
10. **HYSTERESIS**
    Approx. 2% of trip levels(Factory set)
11. **RESPONSE TIME**
    Approx. 170ms.
12. **DELAY FROM PHASE LOSS(tr)**
    170ms maximum
13. **POWER ON DELAY(td)**
    Approx. 400ms.
14. **RESET**
    Auto reset on removal of fault condition
15. **OUTPUT RATING**
    Fail safe relay
    SPDT: 250V AC 7A
    30V DC 7A
16. **OPERATING TEMPERATURE**
    0 to 50 °C
17. **RELATIVE HUMIDITY**
    95% (non-condensing)
18. **MOUNTING**
    Din rail mounting
19. **Weight**
    183gms

SAFETY SUMMARY

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not handled in a manner specified by the manufacturer it might impair the protection provided by the equipment.

⚠ **CAUTION:** Read complete instructions prior to installation and operation of the unit.

WIRING GUIDELINES

⚠ **CAUTION**

1. To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement.
2. Wiring shall be done strictly according to the terminal layout with shortest connections. Confirm that all connections are correct.

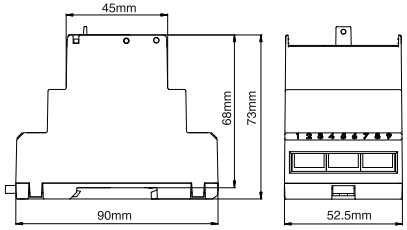
⚠ **CAUTION**

1. To ensure the safe operation of unit, check the wiring and connections.
2. It is recommended to test the unit periodically to satisfy the regulations.

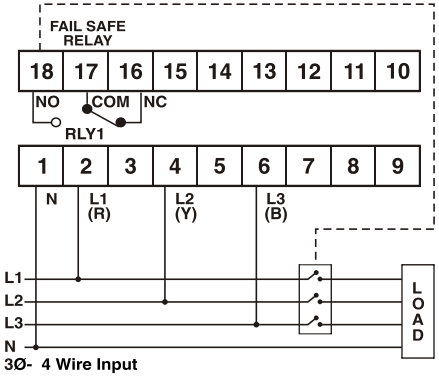
MAINTENANCE

1. The equipment should be cleaned regularly to avoid blockage of ventilating parts.
2. Clean the equipment with a clean soft cloth. Do not use Isopropyl alcohol or any other cleaning agent.

DIMENSIONS (All dimensions in mm)

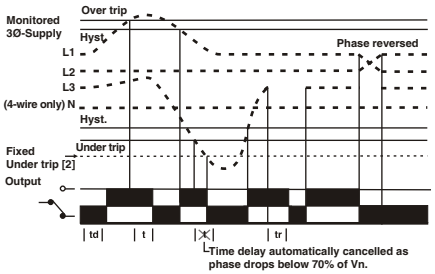


TERMINAL CONNECTIONS



3Ø- 4 Wire Input

TIMING DIAGRAM



LED INDICATION CHART

Supply	Green LED	Red LED	Fail Safe Relay
Normal	ON	OFF	Energised
Phase Reversed	Flashing	OFF	De-Energised
Under or Over voltage (During timing)	Alternate Flashing	Alternate Flashing	Energised
Under or Over voltage (After timing)	ON	Flashing	De-Energised
Phase below 70% of Vn for L2 & L3 phase (phase loss)	Flashing	ON	De-Energised
Phase below 70% of Vn for L1 phase (phase loss)	OFF	OFF	De-Energised

MODES OF OPERATION

1. Turning the unit ON:

a. Set the 'Over %'adjustment to maximum and 'Under %' adjustment to minimum. Set the 'trip time delay' to minimum.

b. Apply power and refer to the LED indication table if the unit fails to operate correctly.

2. Configuring the unit:

a. Set the 'Over %' and ' Under %' adjustment to give the required monitoring range.

b. If large supply variation are anticipated, the adjustment should be set further from the nominal voltage.

c. Set the trip time delay

NOTE: The set delay is only effective should the supply increase above or below the set trip levels. However, if during an under voltage condition the supply drops below the 2nd under voltage trip level, any set time delay is automatically cancelled and the relay de-energises.

(Specifications subject to change as development is a continuous process).

Selec Controls Pvt. Ltd., India,
(Formerly Selectron Process Controls Pvt. Ltd.)
Tel:91-22-28476443, Fax: 91-22-28471733, Tollfree: 1 800 2273227
Website: www.selecindia.com E- mail: sales@selecindia.com