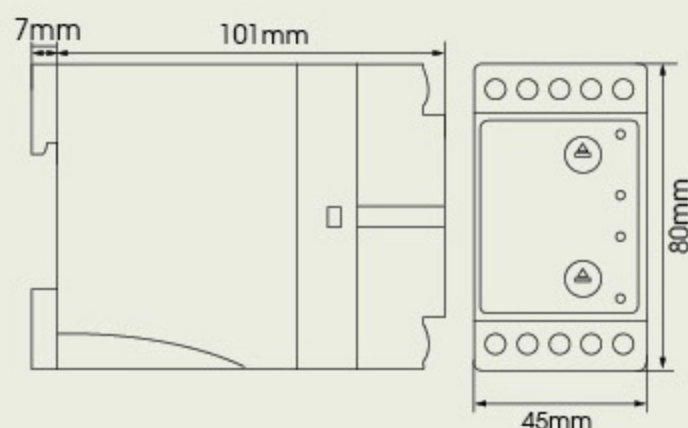
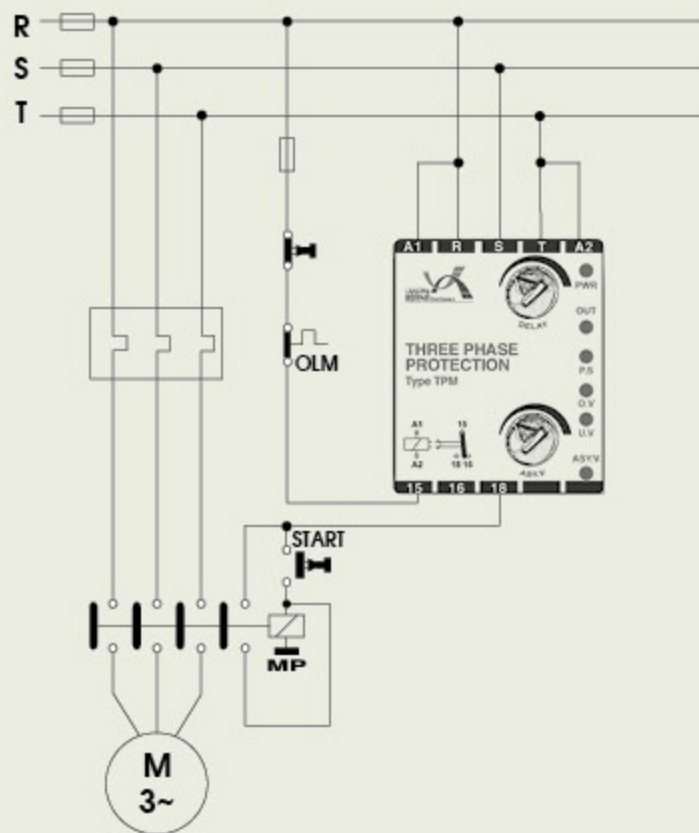




THREE PHASE PROTECTION

Specific for 3 Phase Wire Network



- Recognition of changes in phase sequence
- Recognition of a phase loss
- Recognition of asymmetry in voltage of three phases
- Recognition of network undervoltage
- Recognition of network overvoltage
- Having display signals of input supply, normal status (output energization), phase sequence, asymmetry in voltage of three phases, undervoltage and overvoltage

▾ Principles of Operation

The device starts working after connection of three phases to terminals R, S, T and 380V power supply to terminals A1 and A2. PWR input supply signal gets ON in this situation and the device starts timing. At the end of adjusted time by DELAY potentiometer handle, OUT signal gets ON and the device internal relay opens (internal contact of terminal 15 to 18 is made).

- ▣ **Attention:** Timing does not start where any fault signal is on.

In the case of any fault like undervoltage, overvoltage, a phase loss or phases reversal in network, the related fault signal gets ON, OUT signal gets OFF and internal relay closes simultaneously (internal contact of terminal 15 to 16 is made).

▾ Installation and Start-Up

The network three phases have to be connected to terminals R, S, T and 380 V power supply to terminals A1 and A2.

- ▣ **Attention:** In the case of no separate 380 V voltage, terminals A1 and A2 can be connected to terminals T and R.

Terminals 15 and 18 have to be in series in circuit like a stop button. If P.S (phase sequence) signal is on after device installation, the location of two phases on Three-Phase-Monitor should be reversed (e.g. R, S) for related signal to be off. Once any of the mentioned faults happen, internal relay closes and relay opens at the end of time (adjusted by DELAY potentiometer handle) and OUT signal gets ON right after fault correction. This time ranges from 0.5 to 30 seconds.

Recognition of asymmetry in voltage of three phases gets adjusted by ASY.V potentiometer handle. This value could be set in range of 5 to 15%.

▾ Device Signals

- ▣ PWR: Input power supply connection
- ▣ OUT: Output relay energization
- ▣ P.S: Phase sequence
- ▣ O.V: Network voltage over 15% (about 437 V)
- ▣ U.V: Network voltage under 20% (about 304 V)
- ▣ ASY.V: Phase loss or asymmetry in network voltage (over the limit adjusted by ASY.V potentiometer handle)

▾ Technical Specifications

- ▣ Supply Voltage: 380 VAC \pm %10
- ▣ Network Voltage: 3-wire 380 VAC
- ▣ Network Frequency: 50 \pm 5 Hz
- ▣ Internal Loss: 3 W
- ▣ ON Delay: 0.5 to 30 seconds- adjustable by DELAY potentiometer handle
- ▣ Network Voltage Symmetry: 5 to 15%- adjustable by ASY.V potentiometer handle

- ▣ Output relay: Single-C/O contact
- ▣ Contact Current: 6 A, 220 VAC - 6 A, 28 VDC

