

# XM-52M-M400L - 3-phase monitoring relay, 16 A, 2 C/O

## Manual (phase, phase sequence, phase symmetry and voltage)

### Description

Phase fail, phase sequence, phase asymmetry and voltage monitoring relay, suitable for 3-phase systems. Supplied with 2 C/O contacts and multiple LED indication.

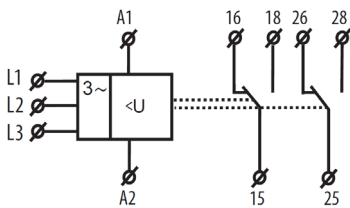
### Layout

See back page.

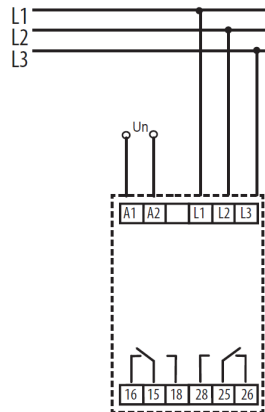
### Technical information

Supply voltage	230 VAC 50-60 Hz
Measuring range	400 VAC
Measuring terminals	L1, L2, L3
Contacts	2 C/O contacts
Rated current	16 A / AC1
Ambient temperature	-20 °C...+55 °C

### Connection diagram



### Connection

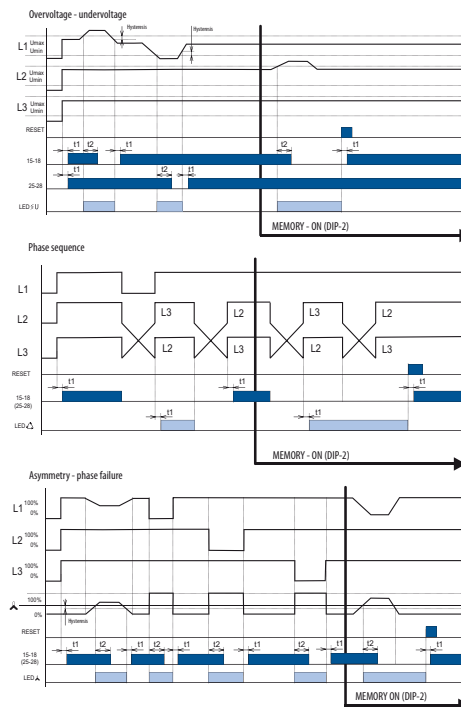


### Function

The relay can monitor voltage in 2 levels (overvoltage/ undervoltage), phase asymmetry, sequence and failure.

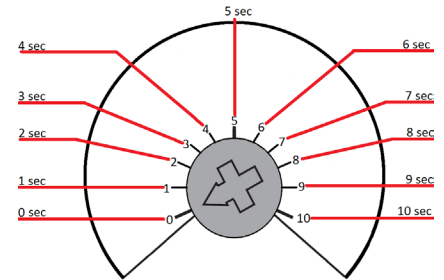
Each faulty state is indicated by individual LED. with DIP switch output it is possible to define the function of the other relay - independent function (1x for overvoltage, 1x for undervoltage) or in parallel. Time delays T1 (fixed) - when changing from faulty to normal state or when de-energized and T2 (adjustable) when changing from normal to faulty state.

These delays prevent incorrect conduct and oscillation of output device during short voltage peaks in the main or during gradual voltage decline into normal.



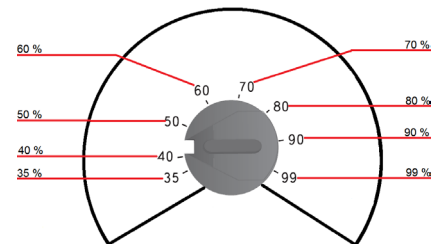
### Time delay setting

The time delay can be set between 0...10 s.



### Undervoltage setting (Umin)

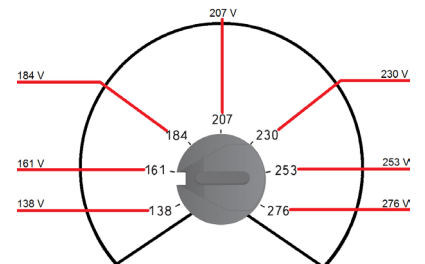
The undervoltage (Umin) can be set within 35...99 % of Umax.



Example: if the range is 230 V, the overvoltage (Umin) can be set between 80.5 V (35 %) and 227.7 V (99 %).

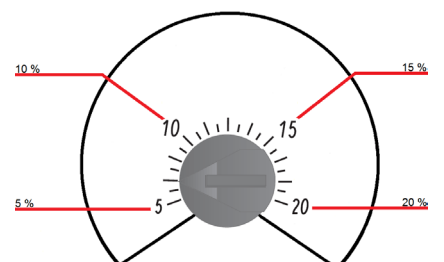
### Overvoltage setting (Umax)

The overvoltage (Umax) can be set between 138 and 276 V.



### Asymmetry setting

The asymmetry can be set between 5 and 20 %.



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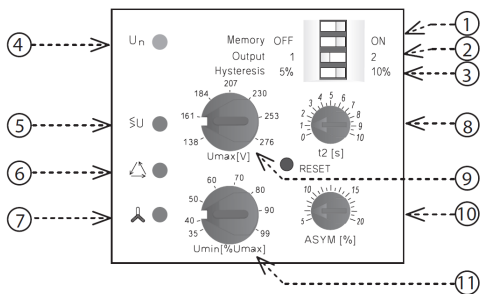
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### Layout



1. Supply terminals
2. Measuring terminal
3. Output contacts



1. Memory function
2. Output indication (red LED)
3. Hysteresis from faulty to OK normal state
4. Supply indication (green LED)
5. Indication overvoltage/undervoltage, failure
6. Sequence indication
7. Asymmetry indication
8. T1 time delay for U<sub>max</sub>
9. Adjusting upper level U<sub>max</sub>
10. T2 time delay for U<sub>min</sub>
11. Adjusting upper level U<sub>min</sub>