

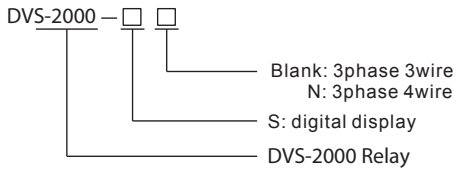
DVS-2000 User manual

Digital 3 phase voltage monitoring relay

Features

- Microprocessor based
- LCD indication for measured voltage and faults
- Overvoltage, undervoltage, phase failure, asymmetry and phase sequence protection
- 45Hz~65Hz wide measuring frequency
- True RMS measurement, measuring accuracy: <1%
- Menu setting for protection parameter
- Auto-reset / manual reset selectable
- N phase failure protection for 3-phase 4-wire system

Model



Technical Data

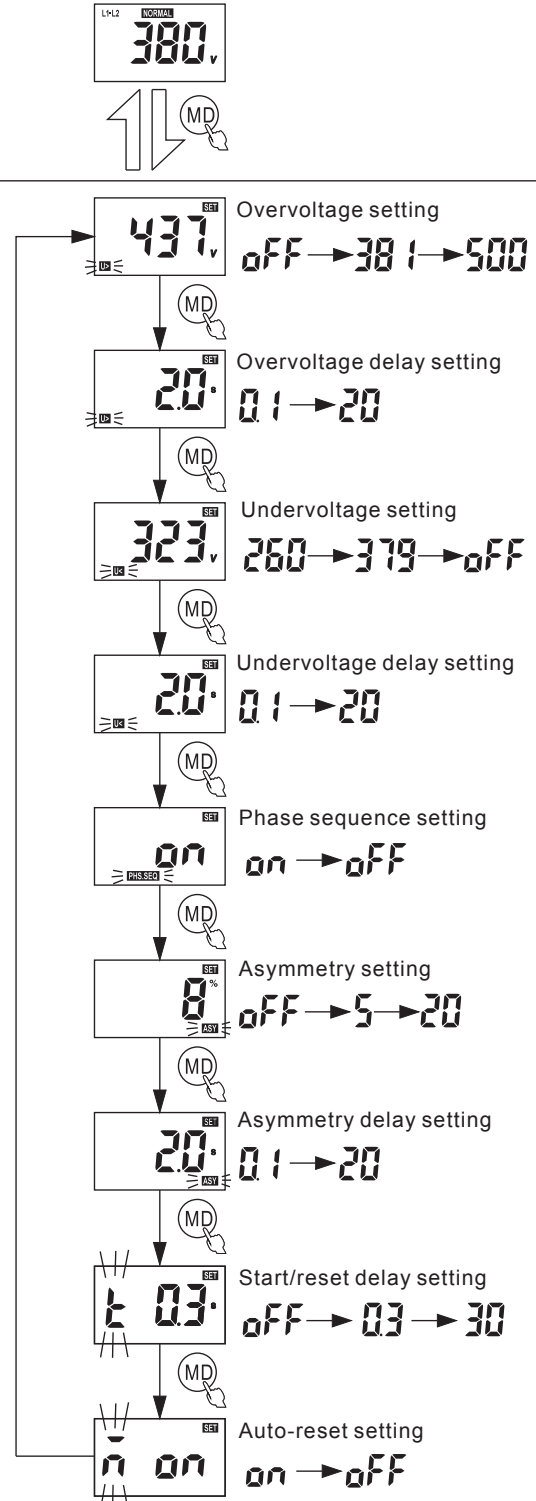
Rated supply voltage	3phase 3wire: AC200V~500V 3phase 4wire: AC125V~300V
Rated frequency	45Hz~65Hz
Hysteresis	3phase 3wire: 6V 3phase 4wire: 5V
Time for phase failure and incorrect phase sequence	≤ 0.2s
Voltage measuring error	<1%(over the whole range)
Time delay error	± 1%+0.1s
Rated insulation voltage	415V
Max.fuse ratings	RT36-00 5A
Contacts capacity	1th:5A; AC-15: AC240V/1.5A AC415V/0.95A
Protection degree	Ip20
Pollution degree	3
Electrical life	10 ⁵
Mechanical life	10 ⁶
Altitude	≤ 2000m
Operating temperature	- 5°~ 40°
Permissible relative humidity	≤50% at 40° (without condensation)
Storage temperature	- 25°~ 55°
Mounting	DIN Rail



Function	Setting range	Step adjustment	Factory setting	Note
Overvoltage	OFF-381V~500V	1V	437V	3phase 3wire
	OFF-221V~300V	1V	253V	3phase 4wire
Overvoltage delay	0.1~20s	0.1s	2s	
Undervoltage	260V~379V-OFF	1V	323V	3phase 3wire
	150V~219V-OFF	1V	187V	3phase 4wire
Undervoltage delay	0.1~20s	0.1s	2s	
Asymmetry	OFF-5%~20%	1%	8%	
Asymmetry delay	0.1~20s	0.1s	2s	
Phase sequence	ON-OFF		ON	
Start/reset delay	0.3~30s	0.1s	0.3s	
Auto-reset	ON-OFF		ON	

ON: the function is on. OFF: the function is off.

Settings

Press key MD for 3s to enter menu:



- Press   to change the parameters, it changes fast if the keys pressed for a long time.
- When setting parameters, the relay will exit the menu if no key is pressed for 60s.

Display	Description
L1-L2	L1-L2 phase, change phase by pressing the key
NORMAL	Indication for normal state, flashes when start/reset delay activated
FAULT	Indication for faults, the output relay is off
SET	Indication for menu setting
U>	Indication for overvoltage fault or overvoltage parameter setting
U<	Indication for undervoltage fault or undervoltage parameter setting
PHS.SEQ	Indication for phase sequence fault or phase sequence parameter setting
PHS.FAILS	Indication for phase failure fault
ASY	Indication for asymmetry fault or asymmetry parameter setting

Test

Press key T/R for 0.5s to test the relay

- the pressing of the key can work only with normal supply.
- When testing, other keys will not be available.

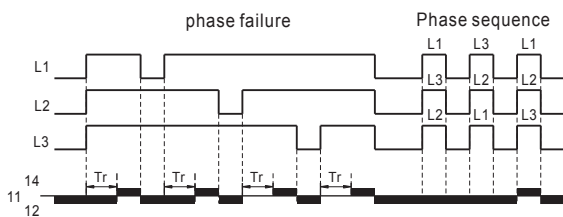
Three phase voltage readable

Press key MD to read the three phase voltage

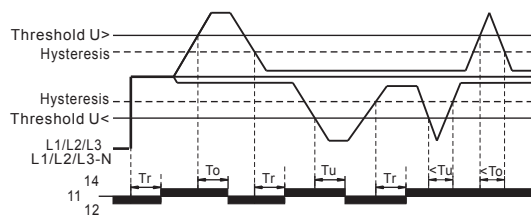
U> setting (take 450V for example)

Function diagrams

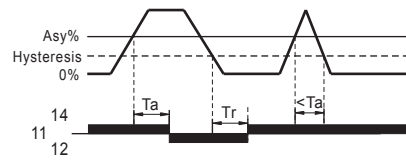
Phase failure and phase sequence monitoring



Overvoltage and undervoltage monitoring



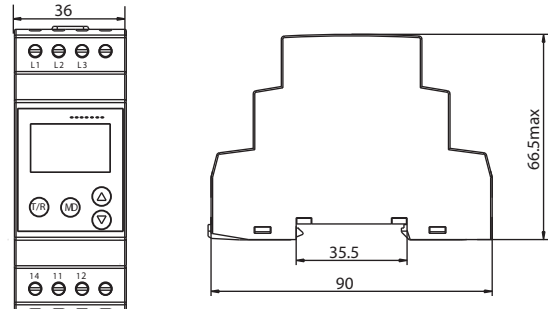
Asymmetry monitoring



Tr: Start/reset time delay
 To: overvoltage time delay
 Tu: undervoltage time delay
 Ta: asymmetry time delay

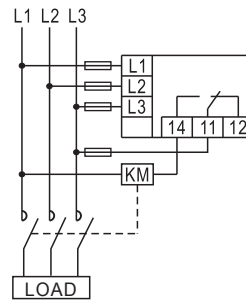
Dimensions

Unit: mm

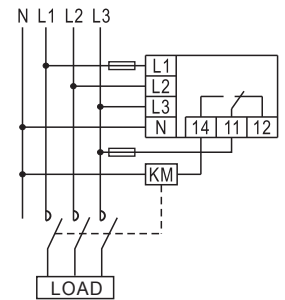


Wiring diagrams

3phase 3wire



3phase 4wire



Notice

- The relay should be installed, operated and maintained by qualified personnel.
- Don't disassemble or repair the product whether it operates normally, or no responsibility is assumed by manufacturer and seller.
- Please refer to the wiring diagram when connection.
- Don't assemble input wire together with strong electric wire in the same pipe. If necessary, please use shielded wire to avoid affecting the operation of the relay.
- Don't use the relay at the site which can be invaded by corrode gas, strong sunshine light and rain
- There is 12 months guarantee on the product.

Warning

- Turn power off before installing, wiring or maintaining
- Confirm that power supply voltage is compatible with rated control voltage

Fail to follow these instruction will result in serious injury or fire disaster