

Voltage Monitoring Relay

DVS-1000

features



technical data

Measurement	True RMS Ampere
Rated voltage supply	AC220V, AC230V, AC240V (3 phase 4 wire) AC380V, AC400V, AC415V (3 phase 3 wire)
Rated frequency	50 ~ 60 Hz
U > threshold range	(1.05 ~ 1.30)*Ue
U < threshold range	(0.70 ~ 0.95)*Ue
Asymmetry threshold	10%
Voltage hysteresis	3 phase 4 wire: 3.5V ; 3 phase 3 wire: 6V
Trip delay	0.1 ~ 10 sec
Asymmetry hysteresis	25% Asymmetry setting value
Phase failure sensitivity	0.5*Ue
Voltage measurement error	<1% (over the whole range)
Time delay error	±10%, + 0.1sec
Knob setting accuracy	1% of the full scale
Rated insulation voltage	420V
Rated fuse rating	RT36-00 5A
Output Contact	1 C/O contact
Pollution degree	3
Electrical life	10 ⁵
Mechanical life	10 ⁶
Conventional thermal current	5A
Usage category	AC-15
Contact capacity	Ue/Ie: 240V/1.5A, 415V/0.95A
Wiring size	0.5mm ² ~ 2.5mm ²
Tightening torque	0.5Nm
Altitude	≤ 2000m
Operating temp.	-5° C ~ +40° C
Relativity humidity	≤50% at 40° C (without condensation)
Storage temp.	-20° C ~ +50° C
Enclosure Protection	IP20
Weight	~ 190g
Mounting	DIN Rail mount or Screw mount
Standard	EN/IEC 60947-5-1

- True RMS Measurement
- Over Voltage Monitoring
- Under Voltage Monitoring
- Phase Asymmetry Monitoring
- Phase Failure Monitoring
- Phase Sequence Monitoring
- Trip LED Indicator
- Adjustable Over / Under Voltage Settings
- Adjustable Trip Delay
- Auto-reset
- Din-railed Mount

parameter setting

Over Voltage Setting :

250 Vac ~ 310 Vac +1%, (3 phase 4 wire)
430 Vac ~ 530 Vac +1%, (3 phase 3 wire)

Under Voltage Setting :

170 Vac ~ 230 Vac +1%, (3 phase 4 wire)
290 Vac ~ 390 Vac +1%, (3 phase 3 wire)

Delay Time Setting :

0.1sec ~ 10.0 sec +1%, (Over/Under Voltage)
2.0 s Fixed, (asymmetry trip)
< 1.0 sec, (phase failure/phase seq. trip)

monitoring characteristics

Over Voltage Indication :

LED "U>" lit up, LED "Normal" unlit.

Under Voltage indication :

LED "U<" lit up, LED "Normal" unlit.

Asymmetry Indication :

Both LED "U>" & LED "U<" will flash,
LED "Normal" unlit.

Phase Failure Indication :

Both LED "U>" & LED "U<" will lit up (Phs.Fail.),
LED "Normal" unlit.

Wrong Phase Sequence Indication :

LED "Phs.Seq" will lit up, LED "Normal" unlit.

auto-reset activation

Over Voltage :

< 6Vac of Ue > (3 phase 3 wire)
< 3.5Vac of Ue > (3 phase 4 wire)

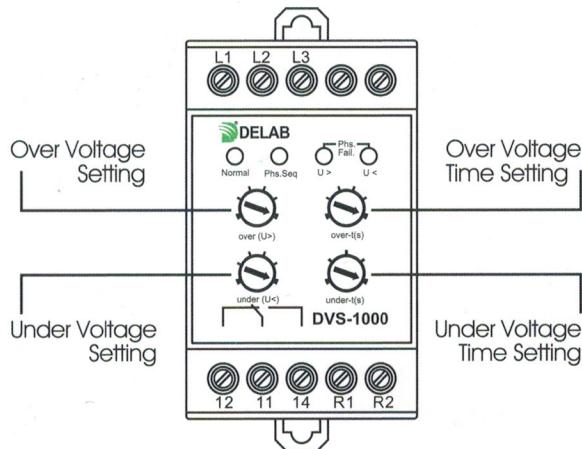
Under Voltage :

> 6Vac of Ue < (3 phase 3 wire)
> 3.5Vac of Ue < (3 phase 4 wire)

Phase Asymmetry :

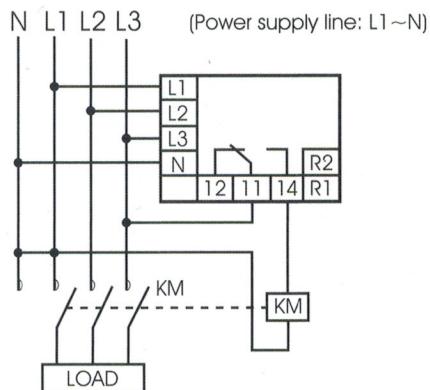
Phase voltage difference must not exceed 10%

Panel description

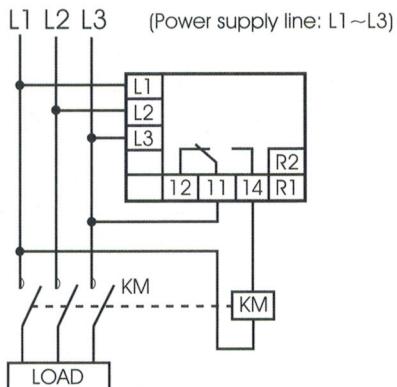


wiring diagram

3 phase 4 wire



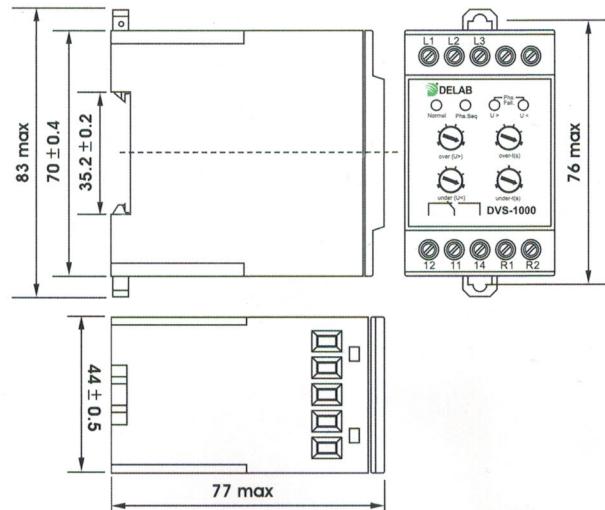
3 phase 3 wire



ordering information

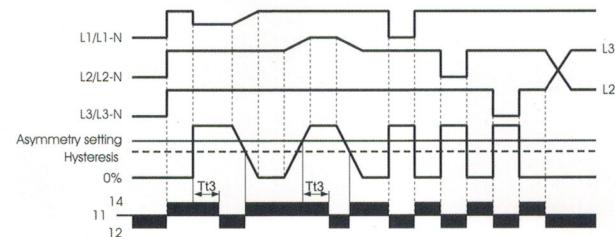
Model	Description
DVS-1000-M220	AC 220V (3 phase 4 wire)
DVS-1000-M240	AC 240V (3 phase 4 wire)
DVS-1000-M380	AC 380V (3 phase 3 wire)
DVS-1000-M415	AC 415V (3 phase 3 wire)

casing dimension

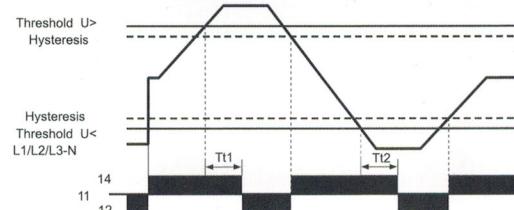


function diagram

Phase asymmetry, phase failure, phase sequence monitoring



Overvoltage and undervoltage monitoring



Tt1: Overvoltage time delay

Tt2: Undervoltage time delay

Tt3: Asymmetry time delay