Voltage Monitoring Relay
DVS-1000

DELAB

features

- 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
- ANSI Code: 27, 59

technical data

Models	M380/415 (3P3W)	M220/240 (3P4W)
Measurement	True RMS Monitoring	
Rated voltage supply (Ue)	AC 380 V, 415 V	AC 220 V , 240 V
Rated frequency	50 / 60 Hz	
U > setting value	(1.05 ~1.30) x Ue	
U < setting value	(0.70 ~0.95) x Ue	
Asymmetry threshold	10%	
U > trip delay	0.1~10 sec	
U < trip delay	0.1~10 sec	
Voltage hysteresis	6 V	5 V
Asymmetry hysteresis	8 %	
Phase failure sensitivity	⩽ 0.5 *Ue	
Trip delay for incorrect phase sequence & phase failure	⩽ 1.0 sec	
Voltage measurement error	± 1%	
Trip delay error	± 10% ; +0.1 sec	
Knob setting error	± 1% x scale value	
Max. power consumption	2 VA	
Rated insulation voltage	420 V	
Rated fuse rating	RT36-00 (5A)	
Output contact	1C / O	
Mechanical life	10^6	
Electrical life	10^5	
Conventional thermal current	5A	
Usage category	AC-15	
Contact capacity (Ie)	0.95A	1.5A
Protection degree	IP20	
Pollution degree	3	
Altitude	⩽ 2000m	
Operating temperature	-5° ~ +40° C	
Relativity humidity	⩽50% at 40° C (without condensation)	
Storage temp.	-20° C ~ +50° C	
Wire size	0.5 ~ 2.5 mm^2	
Torque	0.5Nm	
Weight	~ 190 g	
Mounting	DIN Rail mount / TH35 Rail (EN60715)	
Standard of compliance	IEC 60947-5-1	

parameter setting

Over Voltage Setting :
230 Vac~285 Vac ±1%, (AC 220V, 3 phase 4 wire)
250 Vac~310 Vac ±1%, (AC 240V, 3 phase 4 wire)
400 Vac~495 Vac ±1%, (AC 380V, 3 phase 3 wire)
435 Vac~540 Vac ±1%, (AC 415V, 3 phase 3 wire)

Under Voltage Setting :
155 Vac~210 Vac ±1%, (AC 220V, 3 phase 4 wire)
170 Vac~230 Vac ±1%, (AC 240V, 3 phase 4 wire)
265 Vac~360 Vac ±1%, (AC 380V, 3 phase 3 wire)
290 Vac~395 Vac ±1%, (AC 415V, 3 phase 3 wire)

Trip Delay Setting :
0.1sec~10.0 sec ±1%, (Over / Under Voltage)
2.0 sec Fixed, (asymmetry trip)
⩽ 1.0 sec, (phase failure / phase sequence trip)

monitoring characteristics

Over Voltage Indication :
LED "U>" lit up

Under Voltage indication :
LED "U<" lit up

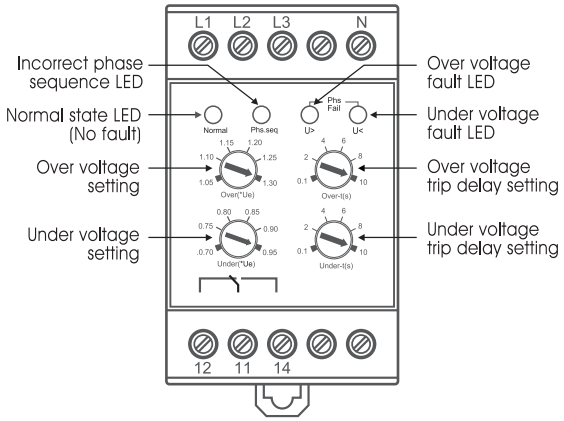
Asymmetry Indication :
Both LED "U>"& LED "U<" will flash

Phase Failure Indication :
Both LED "U>"& LED "U<" will lit up (Phs.Fail.)

Incorrect Phase Sequence Indication :
LED "Phs.Seq" will lit up

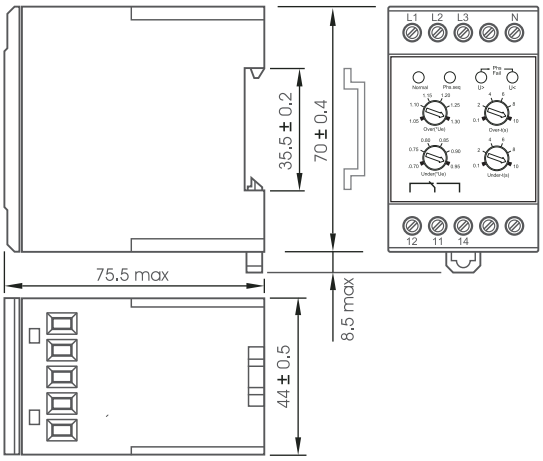
**Specification subject to change without prior notification (please visit www.delab.com.my for latest specification)*

panel description



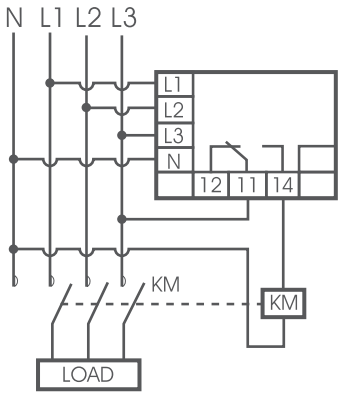
LED 3 & 4 (flash): Indication for asymmetry
LED 3 & 4 (lit): Indication for phase failure (Phs.Fail)

casing dimension

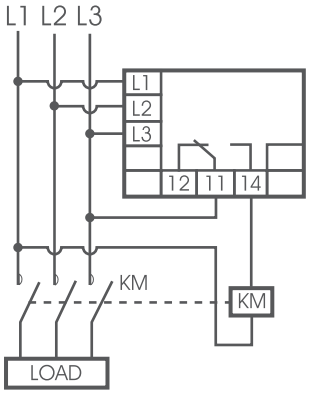


wiring diagram

3 phase 4 wire (Power supply line: L1, N)

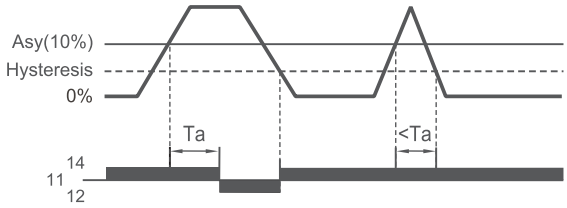


3 phase 3 wire (Power supply line: L1, L2, L3)

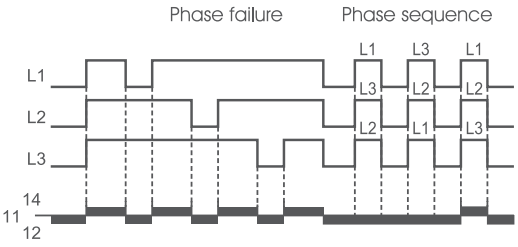


function diagram

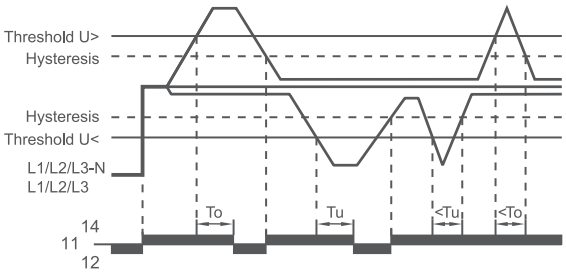
Phase asymmetry monitoring



Phase failure and sequence monitoring



Over voltage and Under voltage monitoring



Ta: Asymmetry trip delay (Fixed at 2.0 sec)
To: Over voltage trip delay
Tu: Under voltage trip delay

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)

Note: All measurement in mm.

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