

Voltage Monitoring Relay

DVS-1000E

features



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

technical data

Models	M380/415 (3P3W)	M220/240 (3P4W)
Measurement	True RMS Monitoring	
Rated voltage supply (Un)	AC 380 V, 415V	AC 220 V, 240 V
Rated frequency	50 / 60 Hz	
U > setting value	(105% ~ 130%) x Un	
U < setting value	(70% ~ 95%) x Un	
U > trip delay	0.1 ~ 10 sec	
U < trip delay	0.1 ~ 10 sec	
Voltage hysteresis	6 V	7 V
Phase failure sensitivity	$\leq 0.5 \times Un$	
Trip delay for phase failure	≤ 0.2 sec	
Voltage measurement error	$\pm 1\%$	
Trip delay error	$\pm 5\%$, +0.1 sec	
Knob setting error	$\pm 1\%$ x scale value	
Max. power consumption	2 VA	
Rated insulation voltage	480 V	
Output contact	1C / O	
Current rating	8A / 250 V AC1	
Mechanical life	10^6	
Electrical life	10^5	
Protection degree	IP20	
Pollution degree	3	
Altitude	≤ 2000 m	
Operating temperature	$-20^\circ \sim +55^\circ$ C	
Relativity humidity	$\leq 50\%$ at 40° C (without condensation)	
Storage temp.	-30° C ~ $+70^\circ$ C	
Wire size	0.5 ~ 2.5 mm ²	
Torque	0.5 Nm	
Weight	~ 95 g	
Mounting	DIN Rail mount / TH35 Rail (EN60715)	
Standard of compliance	IEC 60947-5-1	

parameter setting

Over Voltage Setting :

230 Vac~285 Vac $\pm 1\%$, (AC 220V, 3 phase 4 wire)
 250 Vac~310 Vac $\pm 1\%$, (AC 240V, 3 phase 4 wire)
 400 Vac~495 Vac $\pm 1\%$, (AC 380V, 3 phase 3 wire)
 435 Vac~540 Vac $\pm 1\%$, (AC 415V, 3 phase 3 wire)

Under Voltage Setting :

155 Vac~210 Vac $\pm 1\%$, (AC 220V, 3 phase 4 wire)
 170 Vac~230 Vac $\pm 1\%$, (AC 240V, 3 phase 4 wire)
 265 Vac~360 Vac $\pm 1\%$, (AC 380V, 3 phase 3 wire)
 290 Vac~395 Vac $\pm 1\%$, (AC 415V, 3 phase 3 wire)

Trip Delay Setting :

0.1sec~10.0 sec $\pm 1\%$, (Over / Under Voltage)
 ≤ 0.2 sec, (phase failure trip)

monitoring characteristics

Over Voltage Indication :

LED ">U" lit up

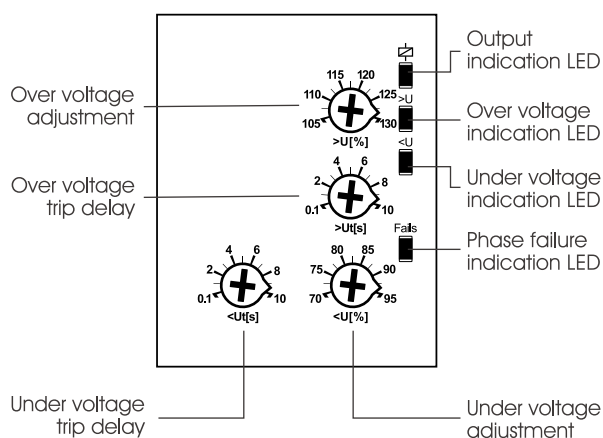
Under Voltage indication :

LED "<U" lit up

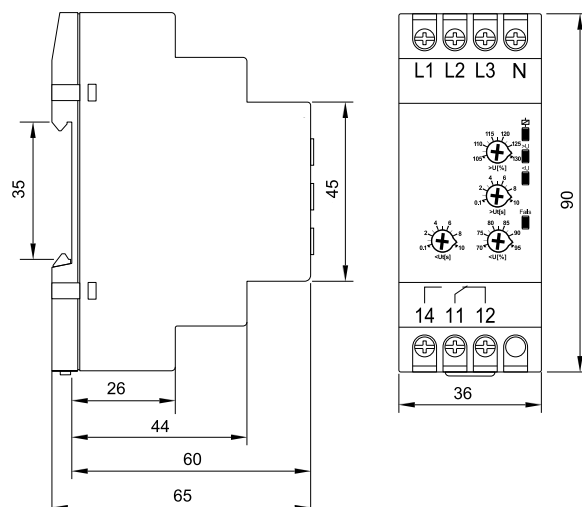
Phase Failure Indication :

LED "Fails" lit up

panel description

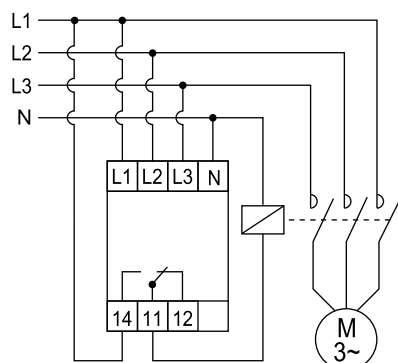


casing dimension

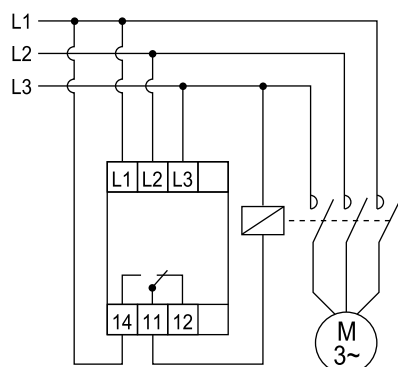


wiring diagram

3 phase 4 wire (Power Supply line: L3, N)

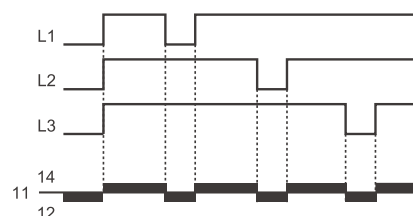


3 phase 3 wire (Power Supply line: L1, L2, L3)

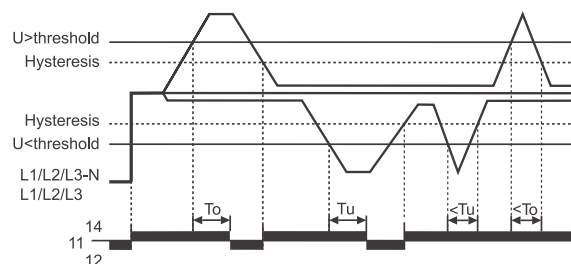


function diagram

Phase failure monitoring



Over voltage and under voltage monitoring



To: Over voltage trip delay
Tu: Under voltage trip delay

ordering information

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

Note: All measurement in mm.