

## FEATURES

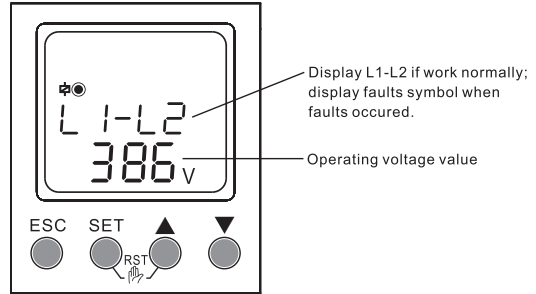
True RMS Measurement  
 Over / Under Voltage Monitoring  
 Phase Asymmetry Monitoring  
 Phase Sequence Monitoring  
 Phase Failure Monitoring  
 Adjustable Over / Under Voltage Setting  
 Adjustable Trip Delay  
 Real Time Voltage & Fault Display  
 LCD Backlit Display  
 Selectable Auto / Manual Reset Function  
 Adjustable Start-up / Reset Time Delay  
 Auto-reset  
 Din-railed Mount

Digital

# Voltage Monitoring Relay DVS-2000



## PANEL DESCRIPTION



### Symbol legend

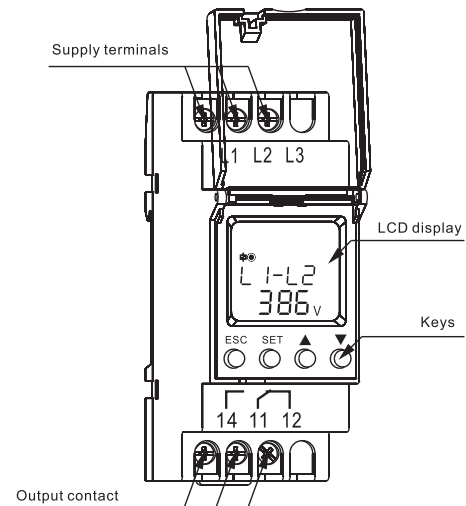
- ☉ — Relay ON
- ☐ — Over voltage
- ☉ — Relay OFF
- ☐ — Under voltage
- SET — Parameters setting
- ASY — Asymmetry
- Error — Fault
- PHSEQ — Phase sequence
- start — Start-up delay
- PHFAIL — Phase failure

### Keys

ESC	○ Exit configuration menu	SET	○ Enter configuration menu
○	○ Back to last menu	○	○ Confirm settings
▲	○ Select menu	▼	○ Select menu
○	○ Digit (+)	○	○ Digit (-)
SET	▲	○	○ Manual reset

## TECHNICAL DATA

Models	M415 (3P3W)	M240 (3P4W)
Measurement	True RMS Monitoring	
Rated voltage supply	AC 200~500 V / 50Hz	AC 125~300 V / 50Hz
U > setting value	OFF - 381~500 V	OFF - 221~300 V
U < setting value	260~379 V - OFF	150~219 V - OFF
Asymmetry setting	OFF - 5%~20%	
U > trip delay	0.1~20 sec	
U < trip delay	0.1~20 sec	
Asymmetry trip delay	0.1~20 sec	
Start-up delay	0.3~30 sec	
Reset delay	0.3~30 sec	
Voltage hysteresis	6 V	7 V
Asymmetry hysteresis	8 %	
Phase failure sensitivity	≤ 120 V	
Trip delay for phase failure	≤ 0.2 sec	
Voltage measurement error	± 1%	
Trip delay error	± 5%, +0.1 sec	
Max. power consumption	2 VA	
Rated insulation voltage	415 V	
Output contact	1C / O	
Current rating	8A / 250 V AC1	
Mechanical life	10 <sup>6</sup>	
Electrical life	10 <sup>5</sup>	
Protection degree	IP20	
Pollution degree	3	
Altitude	≤ 2000 m	
Operating temperature	- 20° ~ 55° C	
Relativity humidity	≤ 50% at 40° C (without condensation)	
Storage temp.	-30° C ~ +70° C	
Wire size	0.5 ~ 2.5 mm <sup>2</sup>	
Torque	0.5 Nm	
Weight	~ 95 g	
Mounting	DIN Rail mount / TH35 Rail (EN60715)	
Standard of compliance	IEC 60947-5-1	

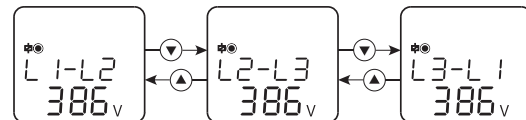


## DEFAULT PARAMETER SETTING

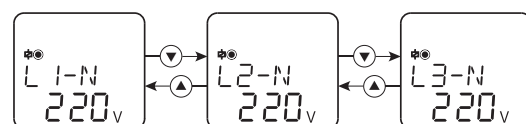
Models	M415 (3P3W)	M240 (3P4W)
Over voltage trip value	437 V	253 V
Over voltage trip delay	2 sec	
Under voltage trip value	323 V	187 V
Under voltage trip delay	2 sec	
Asymmetry trip value	8%	
Asymmetry trip delay	2 sec	
Phase sequence protective function	ON	
Start-up delay	0.3 sec	
Reset delay	0.3 sec	
Auto-reset	ON	

## INQUIRY OF PHASE VOLTAGE VALUE

### DVS-2000 3P 3W



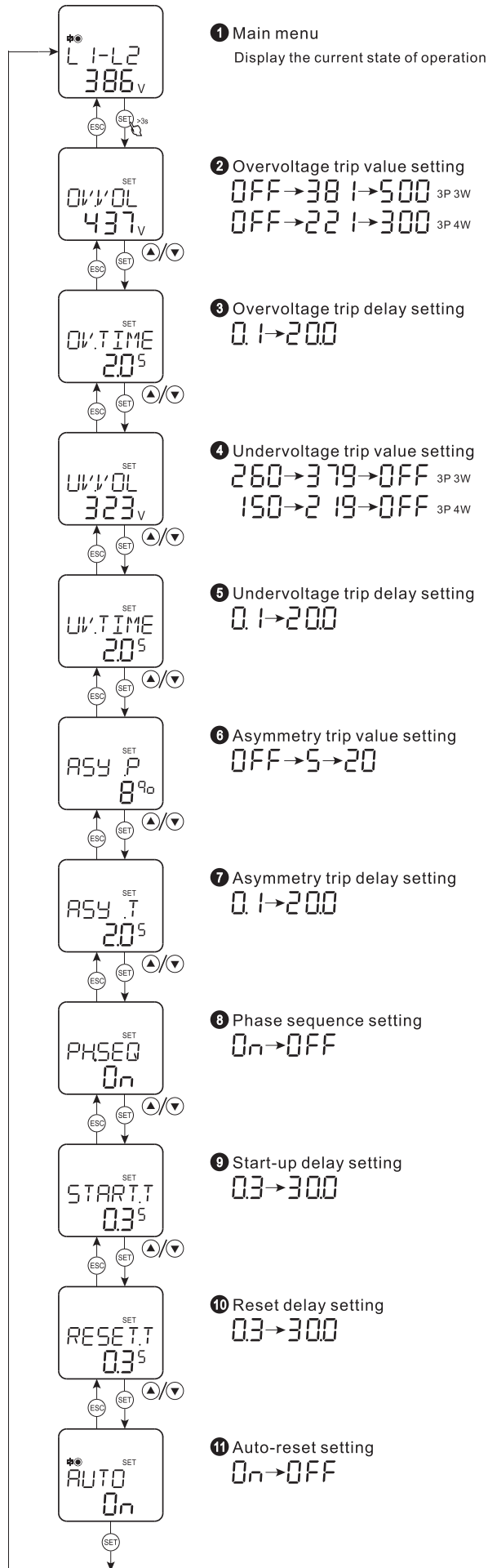
### DVS-2000 3P 4W



- Faults symbol is displayed if no keys pressed for 30 seconds after tripped for voltage faults

Specification subject to change without prior notification.  
 (Please visit [www.delab.com.my](http://www.delab.com.my) for latest specification)

## MENU SETTING

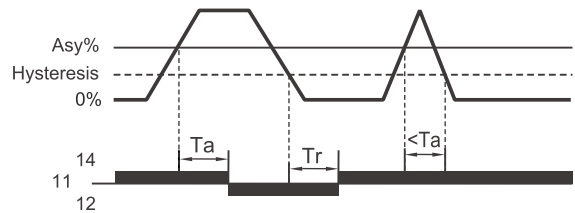


## MANUAL RESET

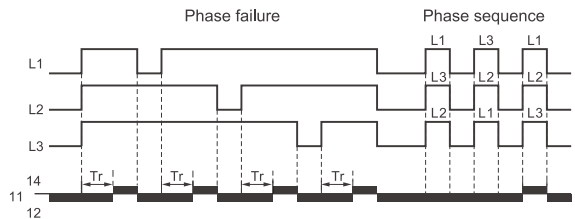
SET ▲ Under the situation that auto-reset was switch off, press "SET" and "▲" keys simultaneously, the relay will be reset manually.

## FUNCTION DIAGRAMS

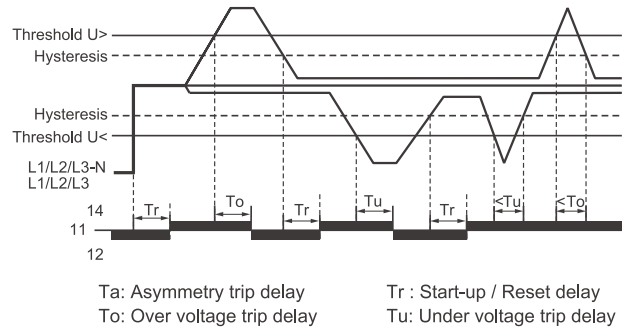
### ● Phase asymmetry monitoring



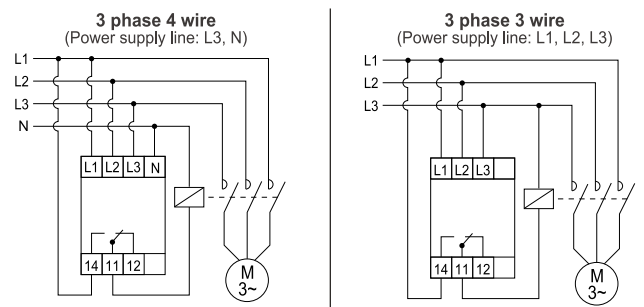
### ● Phase failure and phase sequence monitoring



### ● Over voltage and under voltage monitoring



## WIRING DIAGRAMS



## CASING DIMENSIONS

