



Product designation

Product type designation

Voltage  
monitoring relays  
PMV50

**General characteristics**

Description

Minimum and  
maximum AC  
voltage, phase  
loss and incorrect  
phase sequence  
relay

Type of system

Three-phase  
without neutral

**Power supply**

Auxiliary supply voltage  $U_s$

Self powered

Operating voltage range

0.7...1.2  $U_e$

Rated frequency

Hz 50/60  $\pm 5\%$

Power consumption Max

VA 19

Power dissipation Max

W 2.5

**Control circuit**

Rated voltage to control ( $U_e$ )

min VAC 600

Voltage set-point ( $\%U_e$ )

min % 80...95

Max % 105...115

Tripping delay

s 0.1...20

Resetting time

s 0.1...20 (0.5 at  
power up)

Resetting hysteresis

% 3

Instantaneous tripping for  $U_e$

Voltage  $< 70\% U_e$

Type of reset

Automatic

Repeat accuracy

%  $\leq \pm 0.1$

Tripping time for phase loss

ms 60

**Relay outputs**

Number of relays

Nr. 1

Relay state

Normally  
energised De-  
energises at  
tripping

Contact arrangement

1 changeover  
SPDT

Rated operational voltage AC (IEC)

VAC 250

Maximum switching voltage

VAC 400

IEC Conventional free air thermal current  $I_{th}$

A 8

UL/CSA and IEC/EN 60947-5-1 designation

B300

Electrical life (with rated load)

cycles 100000

Mechanical life

cycles 30000000

### Functions

|                          |     |
|--------------------------|-----|
| Modular version          | 2U  |
| Minimum AC voltage       | Yes |
| Maximum AC voltage       | Yes |
| Phase loss               | Yes |
| Incorrect phase sequence | Yes |
| Asymmetry                | No  |

### Indications

|            |   |
|------------|---|
| Indication | 1 green LED for power on and tripping and 2 red LEDs for tripping |
|------------|---|

### Connections

|                                 |  |
|---------------------------------|--|
| Terminals type                  | Screw  |
| Tightening torque for terminals | max Nm 0.8<br>max lbin 7                         |
| Conductor cross section         |  |
| AWG/Kcmil                       | min AWG 24<br>Max AWG 12                         |
| IEC                             | min mm <sup>2</sup> 0.2<br>Max mm <sup>2</sup> 4 |

### Insulations

|                                       |       |
|---------------------------------------|-------|
| Rated insulation voltage Ui           | V 600 |
| Rated impulse withstand voltage Uimp  | kV 6  |
| Operating frequency withstand voltage | kV 4  |

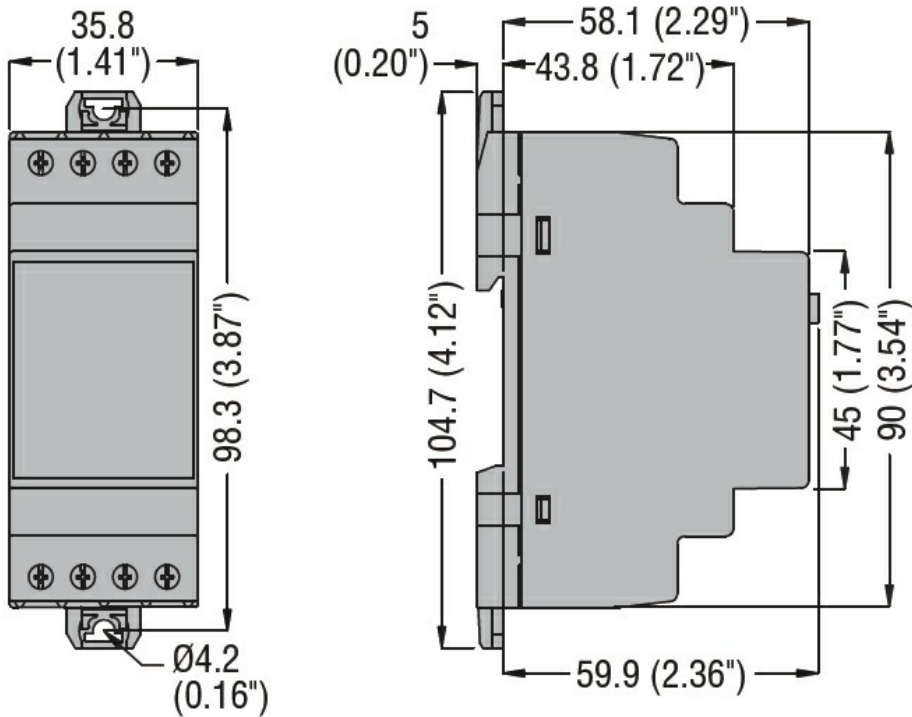
### Ambient conditions

|                       |                          |
|-----------------------|--------------------------|
| Temperature           |                          |
| Operating temperature | min °C -20<br>max °C +60 |
| Storage temperature   | min °C -30<br>max °C +80 |

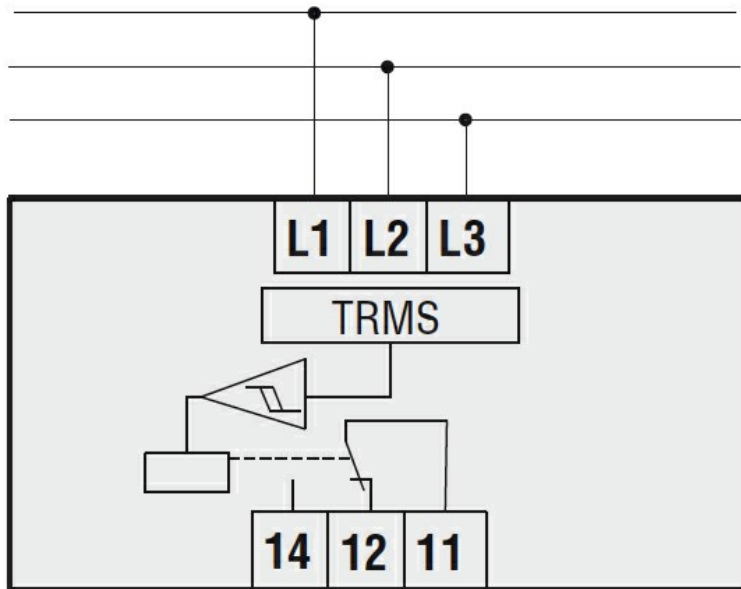
### Housing

|                           |                                     |
|---------------------------|-------------------------------------|
| Execution (n° of modules) | 2                                   |
| Material                  | Self-extinguishing polyamide        |
| Mounting                  | 35mm DIN rail (IEC/EN 60715)        |
| IEC degree of protection  | IP40 on front;<br>IP20 at terminals |
| Dimensions (W x H x D)    | mm 35.8 x 104.7 x 64.9              |
| Weight                    | g 130                               |

### Dimensions [mm (in)]



### Wiring diagrams



### Certifications and compliance

#### Compliance

CSA C22.2 n° 14

IEC/EN 60255-5

IEC/EN 61000-6-2

IEC/EN 61000-6-3

UL 508

#### Certificates

cULus

EAC

ETIM classification

ETIM 8.0

EC001438 -  
Voltage  
monitoring relay