



Product designation

Product type designation

General characteristics

Voltage  
monitoring relays  
PMV50

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 30

Power dissipation Max

W 2.5

Control circuit

Rated voltage to control ( $U_e$ )

|     |     |     |
|-----|-----|-----|
| min | VAC | 380 |
| Max | VAC | 575 |

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

%  $< \pm 0.1$

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

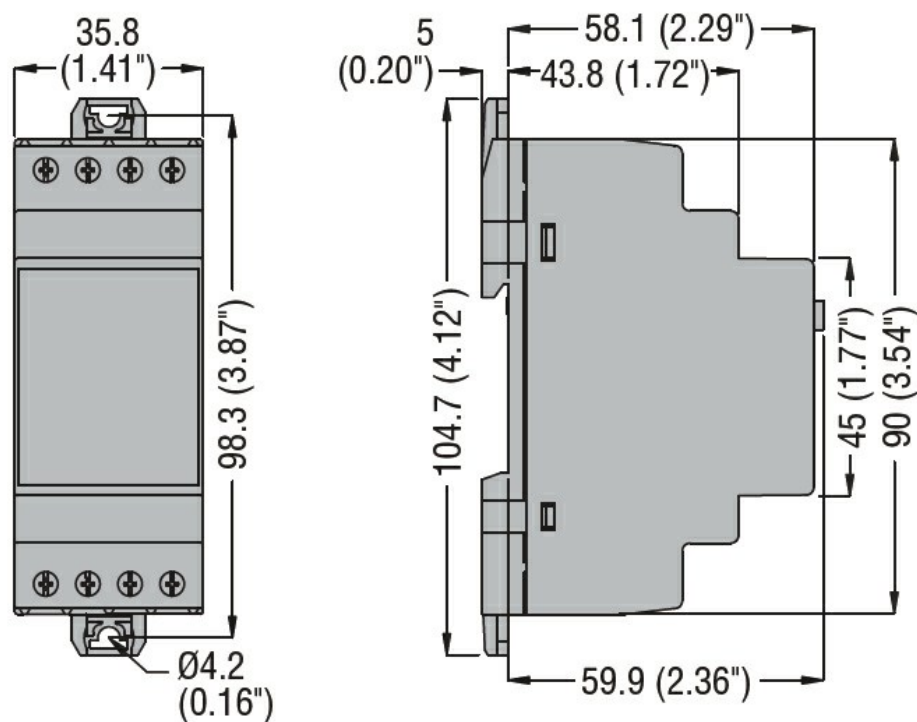
UL/CSA and IEC/EN 60947-5-1 designation

B300

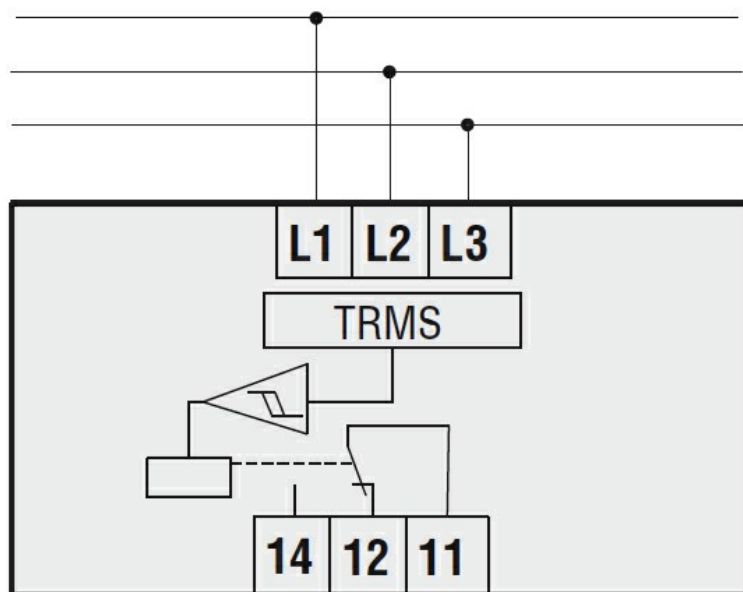
Electrical life (with rated load)

cycles 100000

|                                       |                       |  |  |  |        |   |
|---------------------------------------|-----------------------|--|--|--|--------|---|
| Mechanical life                       |                       |  |  |  | cycles | 30000000  |
| <b>Functions</b>                      |                       |  |  |  |        |   |
| Modular version                       |                       |  |  |  |        | 2U  |
| Minimum AC voltage                    |                       |  |  |  |        | Yes   |
| Maximum AC voltage                    |                       |  |  |  |        | Yes   |
| Phase loss                            |                       |  |  |  |        | Yes   |
| Incorrect phase sequence              |                       |  |  |  |        | Yes   |
| Asymmetry                             |                       |  |  |  |        | No  |
| <b>Indications</b>                    |                       |  |  |  |        |   |
| Indication                            |                       |  |  |  |        | 1 green LED for power on and tripping and 2 red LEDs for tripping |
| <b>Connections</b>                    |                       |  |  |  |        |   |
| Terminals type                        |                       |  |  |  |        | Screw   |
| Tightening torque for terminals       |                       |  |  |  |        |   |
|                                       |                       |  |  |  | max    | Nm  |
|                                       |                       |  |  |  | max    | Ibin  |
|                                       |                       |  |  |  |        | 0.8   |
|                                       |                       |  |  |  |        | 7   |
| Conductor cross section               |                       |  |  |  |        |   |
|                                       | AWG/Kcmil             |  |  |  |        |   |
|                                       |                       |  |  |  | min    | AWG   |
|                                       |                       |  |  |  | Max    | AWG   |
|                                       |                       |  |  |  |        | 24  |
|                                       |                       |  |  |  |        | 12  |
|                                       | IEC                   |  |  |  |        |   |
|                                       |                       |  |  |  | min    | mm <sup>2</sup>   |
|                                       |                       |  |  |  | Max    | mm <sup>2</sup>   |
|                                       |                       |  |  |  |        | 0.2   |
|                                       |                       |  |  |  |        | 4   |
| <b>Insulations</b>                    |                       |  |  |  |        |   |
| Rated insulation voltage Ui           |                       |  |  |  | V      | 600   |
| Rated impulse withstand voltage Uimp  |                       |  |  |  | kV     | 6   |
| Operating frequency withstand voltage |                       |  |  |  | kV     | 4   |
| <b>Ambient conditions</b>             |                       |  |  |  |        |   |
| Temperature                           |                       |  |  |  |        |   |
|                                       | Operating temperature |  |  |  |        |   |
|                                       |                       |  |  |  | min    | °C  |
|                                       |                       |  |  |  | max    | °C  |
|                                       |                       |  |  |  |        | -20   |
|                                       |                       |  |  |  |        | +60   |
|                                       | Storage temperature   |  |  |  |        |   |
|                                       |                       |  |  |  | min    | °C  |
|                                       |                       |  |  |  | max    | °C  |
|                                       |                       |  |  |  |        | -30   |
|                                       |                       |  |  |  |        | +80   |
| <b>Housing</b>                        |                       |  |  |  |        |   |
| Execution (n° of modules)             |                       |  |  |  |        | 2   |
| Material                              |                       |  |  |  |        | Self-extinguishing polyamide                                      |
| Mounting                              |                       |  |  |  |        | 35mm DIN rail (IEC/EN 60715)                                      |
| IEC degree of protection              |                       |  |  |  |        | IP40 on front; IP20 at terminals                                  |
| Dimensions (W x H x D)                |                       |  |  |  | mm     | 35.8 x 104.7 x 64.9   |
| Weight                                |                       |  |  |  | g      | 130   |
| <b>Dimensions</b>                     |                       |  |  |  |        |   |



#### 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