



Product designation

Product type designation

Voltage  
monitoring relays  
PMV20

### General characteristics

Description

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

0.85...1.1  $U_e$

Rated frequency

Hz 50/60  $\pm 5\%$

Power consumption Max

VA 28

Power dissipation Max

W 2.5

### Control circuit

Rated voltage to control ( $U_e$ )

|     |     |     |
|-----|-----|-----|
| min | VAC | 208 |
| Max | VAC | 575 |

Tripping delay

s 0.06

Resetting time

s 0.5

Resetting hysteresis

% 5

Instantaneous tripping for  $U_e$

Voltage  $< 70\% U_e$

Type of reset

Automatic

Repeat accuracy

%  $\leq \pm 1$

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  $I_{th} \leq 40^\circ\text{C}$

A 8

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

B300

Electrical life (with rated load)

cycles 100000

Mechanical life

cycles 3000000

### Functions

Modular version

2U

Minimum AC voltage

No

Maximum AC voltage

No

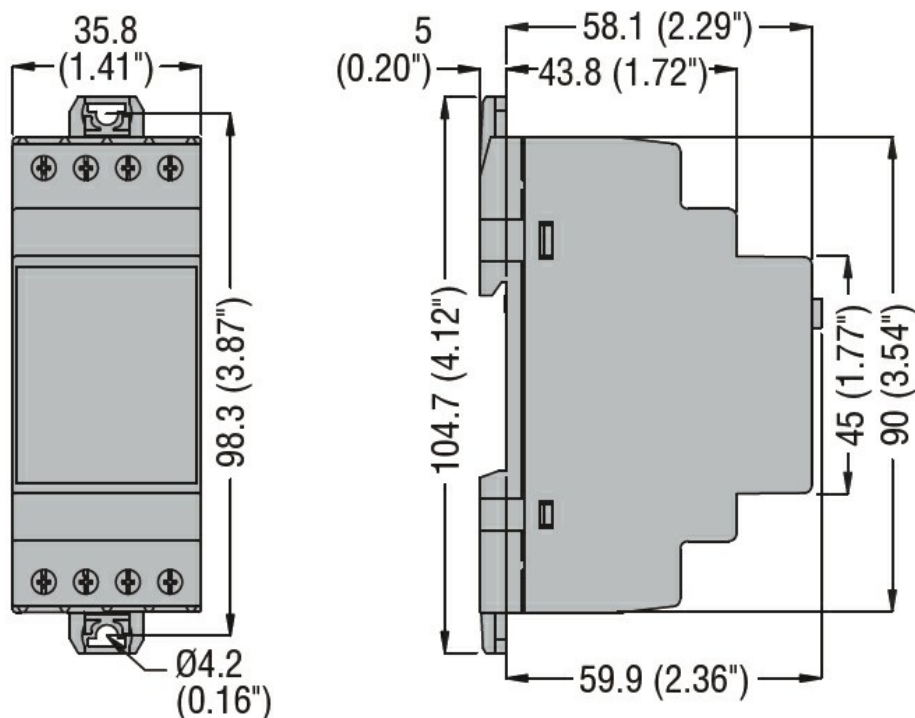
Phase loss

Yes

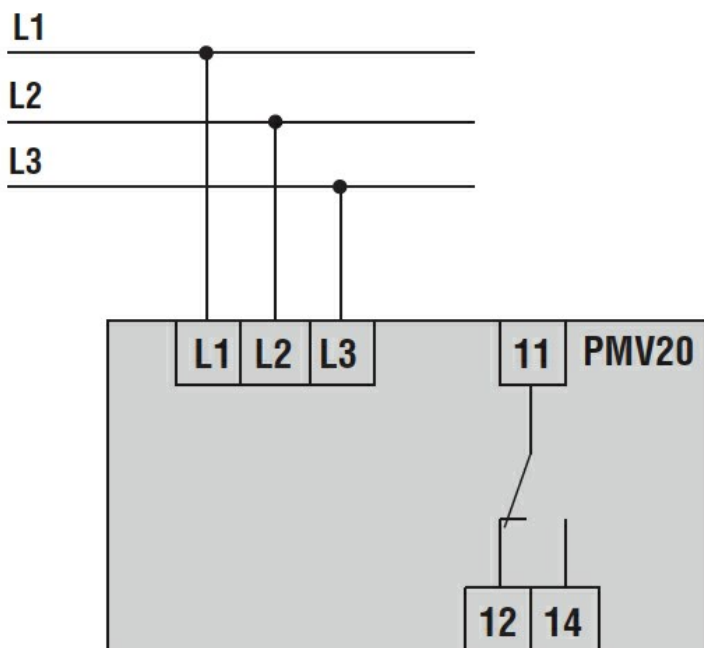
Incorrect phase sequence

Yes

|                                       |  |  |                                       |                     |     |
|---------------------------------------|--|--|---------------------------------------|---------------------|-----|
| Asymmetry                             |  |  | No                                    |                     |     |
| Indications                           |  |  |                                       |                     |     |
| Indication                            |  |  | 1 green LED for power on and tripping |                     |     |
| Connections                           |  |  |                                       |                     |     |
| Terminals type                        |  |  | Screw                                 |                     |     |
| Tightening torque for terminals       |  |  | max                                   | Nm                  | 0.8 |
|                                       |  |  | max                                   | lbin                | 7   |
| Conductor cross section               |  |  |                                       |                     |     |
| AWG/Kcmil                             |  |  | min                                   | AWG                 | 24  |
|                                       |  |  | Max                                   | AWG                 | 12  |
| IEC                                   |  |  | min                                   | mm²                 | 0.2 |
|                                       |  |  | Max                                   | mm²                 | 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 |
|                                       |  |  | max                                   | °C                  | +60 |
| Storage temperature                   |  |  | min                                   | °C                  | -30 |
|                                       |  |  | 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; IP20 at terminals      |                     |     |
| Dimensions (W x H x D)                |  |  | mm                                    | 35.8 x 104.7 x 64.9 |     |
| Weight                                |  |  | g                                     | 120                 |     |
| Dimensions                            |  |  |                                       |                     |     |



#### Wiring diagrams



#### Certifications and compliance

##### Compliance

CSA C22.2 n° 14

IEC/EN 60255-5

IEC/EN 60335-2-89

IEC/EN 61000-6-2

IEC/EN 61000-6-3

UL 508

##### Certificates

CSA C22.2 n. 60335-2-40:22 LZGH A2L

VOLTAGE MONITORING REALY FOR THREE-PHASE SYSTEM, WITHOUT NEUTRAL, PHASE  
LOSS AND INCORRECT PHASE SEQUENCE, 208...575VAC 50/60HZ

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CSA C22.2 No. 60335-2-89:21 LZGH A2L

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cULus

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EAC

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UL 60335-2-40 LZGH A2L

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UL 60335-2-89 LZGH A2L

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#### ETIM classification

ETIM 8.0

EC001438 -  
Voltage  
monitoring relay