



### General characteristics

|                                                                    |                                                                               |                 |                            |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------|----------------------------|
| Description                                                        | Minimum and maximum AC voltage, phase loss and incorrect phase sequence relay |                 |                            |
| Type of system                                                     | Three-phase without neutral                                                   |                 |                            |
| <b>Power supply</b>                                                |                                                                               |                 |                            |
| 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             |                            |
| <b>Control circuit</b>                                             |                                                                               |                 |                            |
| 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                                                    |                                                                               | %               | $\pm 0.1$                  |
| Tripping time for phase loss                                       |                                                                               | ms              | 60                         |
| <b>Relay outputs</b>                                               |                                                                               |                 |                            |
| Number of relays                                                   |                                                                               | Nr.             | 1                          |
| Relay state                                                        | Normally energised<br>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 $I_{th} \leq 40^\circ C$ | 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  |

**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 |
|                                 | max | lbin | 7   |

**Conductor cross section**

|           |     |     |    |
|-----------|-----|-----|----|
| AWG/Kcmil | min | AWG | 24 |
|           | Max | AWG | 12 |

|     |     |                 |     |
|-----|-----|-----------------|-----|
| IEC | min | mm <sup>2</sup> | 0.2 |
|     | 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 |
|                       | max | °C | +60 |

|                     |     |    |     |
|---------------------|-----|----|-----|
| Storage temperature | min | °C | -30 |
|                     | max | °C | +80 |

**Housing**

|                           |   |
|---------------------------|---|
| Execution (n° of modules) | 2 |
|---------------------------|---|

|          |                              |
|----------|------------------------------|
| Material | Self-extinguishing polyamide |
|----------|------------------------------|

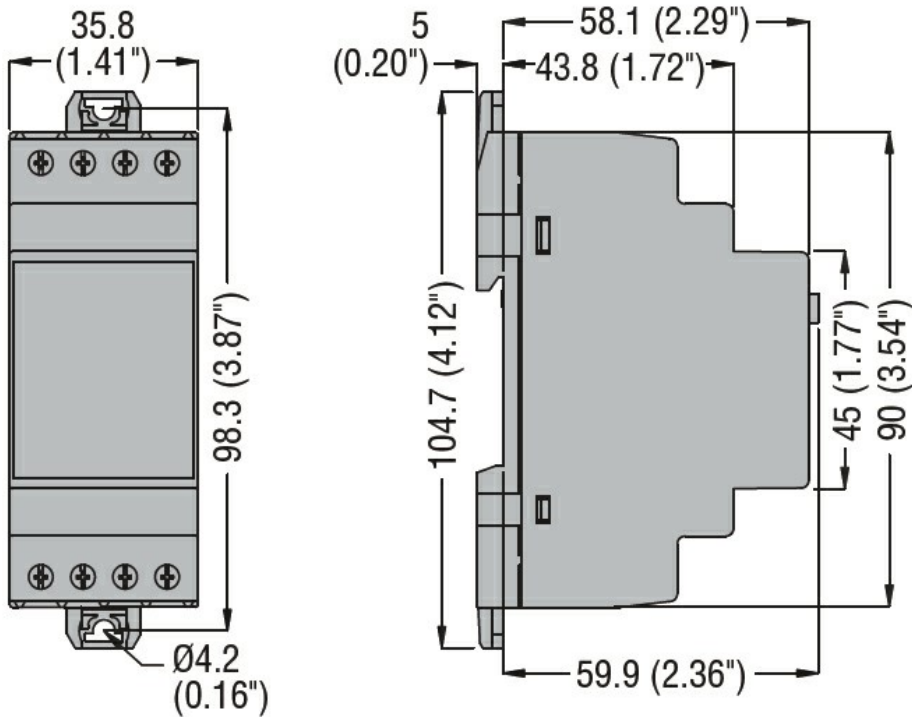
|          |                              |
|----------|------------------------------|
| Mounting | 35mm DIN rail (IEC/EN 60715) |
|----------|------------------------------|

|                          |                                  |
|--------------------------|----------------------------------|
| IEC degree of protection | IP40 on front; IP20 at terminals |
|--------------------------|----------------------------------|

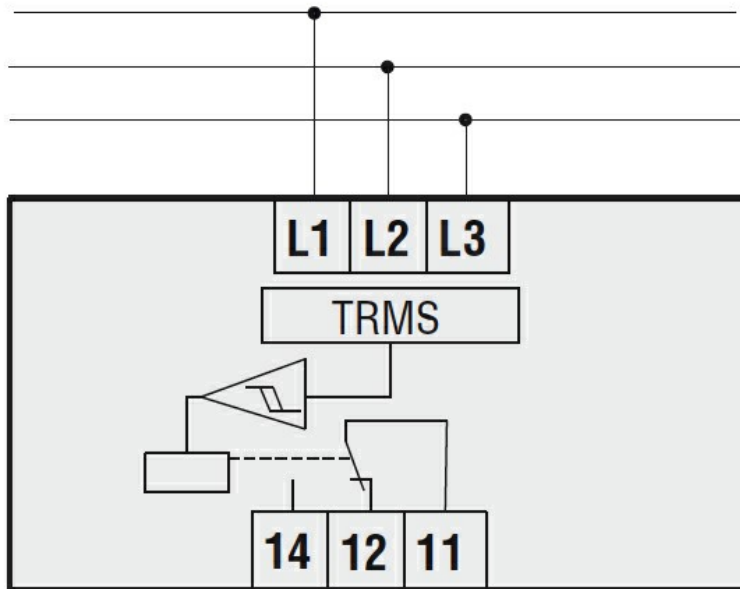
|                        |    |                     |
|------------------------|----|---------------------|
| Dimensions (W x H x D) | mm | 35.8 x 104.7 x 64.9 |
|------------------------|----|---------------------|

|        |   |     |
|--------|---|-----|
| Weight | g | 130 |
|--------|---|-----|

**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

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

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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

**ETIM classification**

ETIM 8.0

EC001438 -  
Voltage  
monitoring relay