

MACX-MR-3V-690-PT - Monitoring relay



1336412

<https://www.phoenixcontact.com/us/products/1336412>

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3-phase voltage monitoring relay, with overvoltage, undervoltage, window monitoring as well as phase sequence, phase loss failure, asymmetry (adjustable asymmetry) and neutral monitoring functions. 24 V AC/DC ... 240 V AC/DC wide range power supply, with adjustable threshold values, response delay, and supporting failure record storage and NFC communication. True RMS value test. Plug-in connection.

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1336412 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C443 |
| Product key | DK6611 |
| GTIN | 4063151636777 |
| Weight per piece (including packing) | 198.55 g |
| Weight per piece (excluding packing) | 195 g |
| Customs tariff number | 85364900 |
| Country of origin | CN |

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Technical data

Product properties

| | |
|-------------------------|--------------------------------|
| Product type | Voltage monitoring relay |
| Operating mode | Closed circuit or wire break |
| Mechanical service life | Approx. 1×10^7 cycles |

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree | 3 |

Electrical properties

| | |
|---|--|
| Rated impulse withstand voltage | 6 kV (Between the measuring circuit and other circuits) |
| Service life electrical | approx. 1×10^5 cycles, resistive load 2000 V A |
| Maximum power dissipation for nominal condition | 15 W |
| Mains type | 3-phase |
| Rated insulation voltage | 690 V (Between the measuring circuit and other circuits) |
| | 600 V (Between other circuits) |

Electrical isolation

| | |
|----------------------|-------|
| Electrical isolation | 300 V |
|----------------------|-------|

Supply

| | |
|---------------------------|---|
| Supply voltage range | 24 V AC ... 240 V AC -15 % ... +10 % |
| | 24 V DC ... 240 V DC -25 % ... +30 % |
| | 24 V ... 240 V AC -10 % ... +10 % (Railway application) |
| | 48 V ... 110 V DC (Railway application) |
| Nominal power consumption | 15 VA (1.5 W) |
| Frequency range | 48 Hz ... 400 Hz |

Input data

| | |
|---|---------------------------|
| Input name | Measuring input |
| Measured value | AC sine (48 Hz ... 63 Hz) |
| Input resistance of voltage input | 1 M Ω |
| Maximum temperature coefficient | 0.05 %/K |
| Setting range for response delay | 0 s ... 99.9 s |
| Min setting range of the voltage threshold value | 160 V |
| Max. setting range of the voltage threshold value | 690 V |
| Function | Undervoltage |
| | Overvoltage |
| | Window |
| | Asymmetry |
| | Phase sequence |
| | Phase failure |
| | Neutral conductor break |

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| | |
|-----------------|--------------------|
| Basic accuracy | 1 % |
| Repeat accuracy | 0.5 % |
| Asymmetry | 2 % ... 30 % / OFF |
| Recovery time | 200 ms |

Output data

Switching

| | |
|---------------------------------------|--------------------------------|
| Contact switching type | 2 floating changeover contacts |
| Contact material | AgSnO |
| Maximum switching voltage | 250 V AC |
| Interrupting rating (ohmic load) max. | 2000 VA (8 A/250 V AC) |
| Output fuse | 8 A (fast-blow) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Push-in connection |
| Stripping length | 10 mm |
| Conductor cross-section rigid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 14 |

Dimensions

| | |
|--------|---------|
| Width | 22.5 mm |
| Height | 109 mm |
| Depth | 114 mm |

Material specifications

| | |
|--|-----|
| Flammability rating according to UL 94 | V0 |
| Housing insulation material | PBT |

Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP40 (Housing) IP20 (Connection terminal blocks) |
| Ambient temperature (operation) | -25 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 10 % ... 95 % |

Approvals

CE

| | |
|----------------|--------------|
| Identification | CE-compliant |
|----------------|--------------|

UL, USA/Canada

| | |
|----------------|-----------------------|
| Identification | UL/C-UL Listed UL 508 |
|----------------|-----------------------|

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CCC

| | |
|----------------|--------------|
| Identification | GB/T 14048.5 |
|----------------|--------------|

EMC data

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive |
| Low Voltage Directive | Conformance with Low Voltage Directive |
| Noise immunity | EN 61000-6-2 |

Noise emission

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-6-4 |
|-----------------------|--------------|

Standards and regulations

| | |
|----------------------|----------------------|
| Standard designation | EN 50155, GB/T 25119 |
|----------------------|----------------------|

Mounting

| | |
|-------------------|--|
| Mounting type | DIN rail mounting |
| Assembly note | on standard DIN rail NS 35 in accordance with EN 60715 |
| Mounting position | any |

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Drawings

Schematic diagram



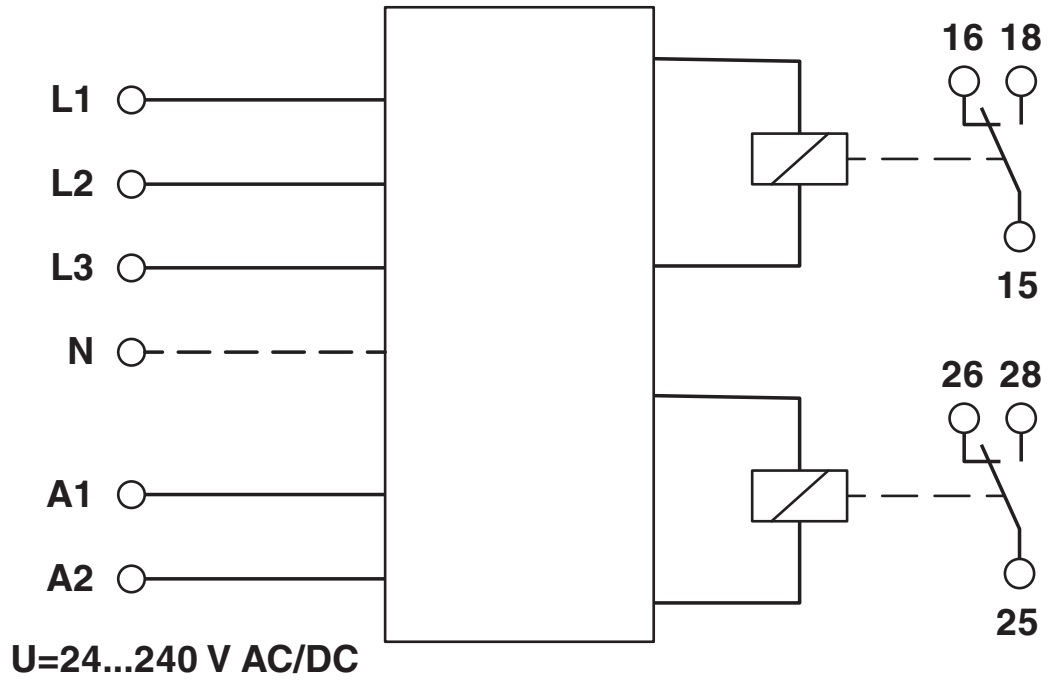
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Block diagram



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Approvals

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CCC

Approval ID: 2024010303656845



cULus Listed

Approval ID: E172140V4S1

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27371801 |
| ECLASS-15.0 | 27371801 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001438 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 41113600 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | dc43ab57-14e0-4484-918d-f518853ddcd0 |

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