

# MACX-MR-PH-690 - Monitoring relay



1336404

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3-phase voltage monitoring relay, 24 V AC/DC ... 240 V AC/DC wide range power supply, monitoring for phase sequence, phase failure and asymmetry (with adjustable asymmetry and response delay). It can be configured using smart phone app via NFC wireless communication function, 1x2 PDT dry contact outputs, closed circuit principle, auto reset, optional screw connection and plug-in connection.

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1336404       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C443          |
| Product key                          | CK4711        |
| GTIN                                 | 4063151636623 |
| Weight per piece (including packing) | 198.5 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            | Phase monitoring relay         |
| Operating mode          | Closed circuit                 |
| Mechanical service life | Approx. $3 \times 10^7$ cycles |

### Insulation characteristics

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

### Electrical properties

|   |   |
|---|---|
| Service life electrical                         | approx. $1 \times 10^5$ cycles, resistive load 2000 V A |
| Maximum power dissipation for nominal condition | 15 W  |
| Mains type                                      | 3-phase   |
| Rated insulation voltage                        | 690 V   |

### Electrical isolation

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

### Supply

|                           |                                      |
|---------------------------|--------------------------------------|
| Supply voltage range      | 24 V DC ... 240 V DC -25 % ... +30 % |
| Nominal power consumption | 15 VA (1.5 W)                        |

### Input data

|   |                           |
|---|---------------------------|
| Input name  | Measuring input           |
| Measured value                                    | AC sine (48 Hz ... 63 Hz) |
| Input resistance of voltage input                 | 1 M $\Omega$              |
| Frequency range                                   | 48 Hz ... 400 Hz          |
| 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  | Asymmetry                 |
|   | Phase sequence            |
|   | Phase failure             |
| Basic accuracy                                    | 1 %                       |
| Repeat accuracy                                   | 0.5 %                     |
| Voltage influence                                 | 0.5 %                     |
| Recovery time                                     | 200 ms                    |

### Output data

#### Switching

|                        |                                |
|------------------------|--------------------------------|
| Contact switching type | 2 floating changeover contacts |
|------------------------|--------------------------------|

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|                                       |                        |
|---------------------------------------|------------------------|
| Maximum switching voltage             | 250 V AC               |
| Interrupting rating (ohmic load) max. | 2000 VA (8 A/250 V AC) |
| Output fuse                           | 10 A (fast-blow)       |

## Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| Stripping length                 | 10 mm                                       |
| Conductor cross section rigid    | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 14                                   |
| Tightening torque                | 0.5 Nm ... 0.6 Nm (5 lb in ... 7 lb in)     |

## 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)<br>IP20 (Connection terminal blocks) |
| Ambient temperature (operation)         | -25 °C ... 70 °C                                    |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C                                    |
| Altitude                                | 2000 m  |
| Permissible humidity (operation)        | 10 % ... 95 %                                       |

## Approvals

### CE

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

### UL, USA/Canada

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

### CCC

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

## EMC data

|                               |  |
|-------------------------------|--|
| Low Voltage Directive         | Conformance with Low Voltage Directive |
| Noise immunity                | EN 61000-6-2                           |
| Electromagnetic compatibility | Conformance with EMC directive         |
| Noise emission                | EN 61000-6-4                           |

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## Mounting

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

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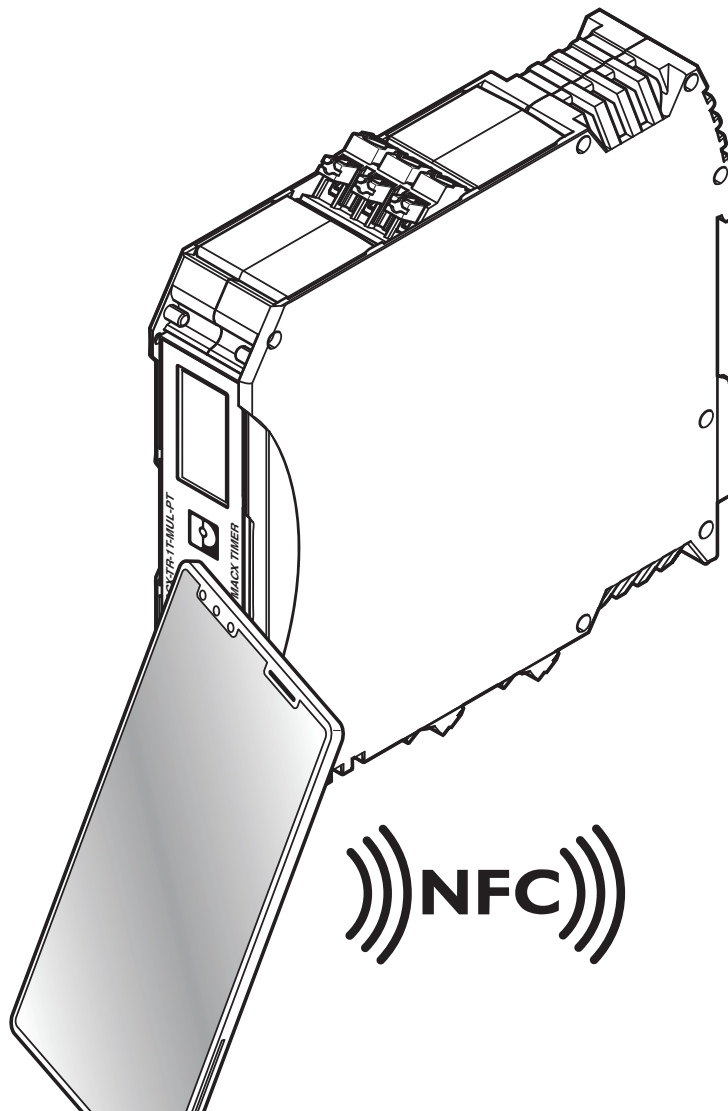
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## Drawings

Schematic diagram



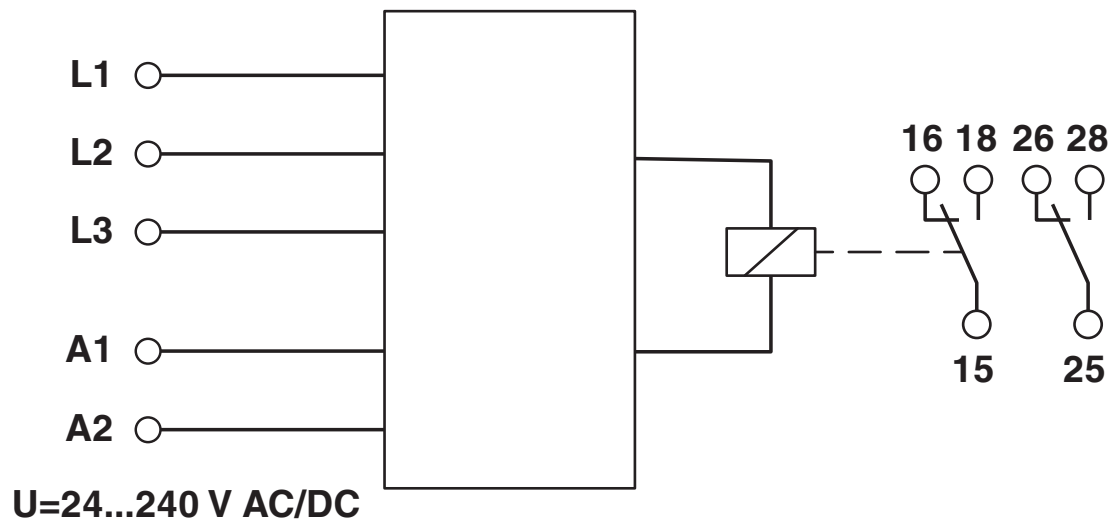
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Block diagram



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1336404>



**CCC**

Approval ID: 2022000303000014

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27371803 |
| ECLASS-13.0 | 27371803 |
| ECLASS-12.0 | 27371803 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001441 |
|----------|----------|



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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)  |

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## Accessories

### MACX-BLUETOOTH-NFC - Adapter

1142259

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Bluetooth NFC adapter

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