

# EMG 90-REL/MR-G220/6X 1/SO115 - Relay module



2301888

<https://www.phoenixcontact.com/us/products/2301888>

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Customer-specific relay module, 6 N/O contacts, 220 V DC input voltage

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2301888       |
| Packing unit                         | 5 pc          |
| Minimum order quantity               | 25 pc         |
| Product key                          | DK61Y1        |
| GTIN                                 | 4017918960933 |
| Weight per piece (including packing) | 200.07 g      |
| Weight per piece (excluding packing) | 200.07 g      |
| Country of origin                    | DE            |

## Technical data

### Product properties

|                         |                           |
|-------------------------|---------------------------|
| Product type            | Relay Module              |
| Mechanical service life | 3x 10 <sup>7</sup> cycles |

#### Insulation characteristics: Air clearances and creepage distances, input/output

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Overvoltage category | III              |
| Pollution degree     | 2                |

#### Insulation characteristics: Air and creepage distances, output/output

|                      |                       |
|----------------------|-----------------------|
| Insulation           | Functional insulation |
| Overvoltage category | III                   |
| Pollution degree     | 2                     |

#### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 12.09.2025 |
|------------------------------|------------|

### Electrical properties

#### Air clearances and creepage distances, input/output

|                          |                    |
|--------------------------|--------------------|
| Rated insulation voltage | 260 V              |
| Rated surge voltage      | 2.3 kV (1.2/50 µs) |

#### Air and creepage distances, output/output

|                          |                    |
|--------------------------|--------------------|
| Rated insulation voltage | 260 V              |
| Rated surge voltage      | 2.3 kV (1.2/50 µs) |

### Input data

#### Coil side

|                                |  |
|--------------------------------|--|
| Nominal input voltage $U_N$    | 220 V DC   |
| Input voltage range            | 176 V DC ... 242 V DC (20 °C)                            |
| Typical input current at $U_N$ | 4 mA   |
| Typical response time          | 9 ms   |
| Typical release time           | 10 ms  |
| Protective circuit             | Free-wheeling diode, polarity protection diode, resistor |

### Output data

#### Switching

|                             |                                |
|-----------------------------|--------------------------------|
| Contact switching type      | Single contact, 6 N/O contacts |
| Contact material            | AgNi                           |
| Maximum switching voltage   | 250 V AC/DC                    |
| Limiting continuous current | 6 A                            |
|                             | 140 W (at 24 V DC)             |

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|                                       |                        |
|---------------------------------------|------------------------|
| Interrupting rating (ohmic load) max. | 85 W (at 48 V DC)      |
|                                       | 60 W (at 60 V DC)      |
|                                       | 44 W (at 110 V DC)     |
|                                       | 57 W (at 220 V DC)     |
|                                       | 1500 VA (for 250 V AC) |

## Connection data

### Coil side

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| Conductor cross-section rigid    | 0.2 mm <sup>2</sup> ... 4 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 ... 12                                   |

### Contact side

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| Conductor cross-section rigid    | 0.2 mm <sup>2</sup> ... 4 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 ... 12                                   |

## Dimensions

|        |       |
|--------|-------|
| Width  | 90 mm |
| Height | 75 mm |
| Depth  | 55 mm |

## Material specifications

|       |                  |
|-------|------------------|
| Color | green (RAL 6021) |
|-------|------------------|

## Environmental and real-life conditions

### Ambient conditions

|  |                                |
|--|--------------------------------|
| Degree of protection                         | IP20                           |
| Degree of protection (Installation location) | ≥ IP54 (Installation location) |
| Ambient temperature (operation)              | -20 °C ... 50 °C               |
| Altitude                                     | ≤ 2000 m                       |

## Standards and regulations

### Air clearances and creepage distances, input/output

|                       |                       |
|-----------------------|-----------------------|
| Standards/regulations | DIN EN 50178: 1998-04 |
|-----------------------|-----------------------|

### Air and creepage distances, output/output

|                       |                       |
|-----------------------|-----------------------|
| Standards/regulations | DIN EN 50178: 1998-04 |
|-----------------------|-----------------------|

## Mounting

|                   |                   |
|-------------------|-------------------|
| Mounting type     | DIN rail mounting |
| Mounting position | any               |

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## Classifications

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39122300 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

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

### 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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