

## Load relay - ELR 3/ 9-400 - 2941701

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Electronic load relay, for direct driving of equipment in the 3-phase network, with light indicator and protection circuit, output: 110-440 V AC/3 x 9 A

### Product Features

- High switching frequency
- Noise and wear-free switching up to 500 V AC/9 A
- Protective circuit in input and output
- Operating indicator



### Key Commercial Data

|                                      |                 |
|--------------------------------------|-----------------|
| Packing unit                         | 1 pc            |
| GTIN                                 | 4 017918 101046 |
| Weight per Piece (excluding packing) | 748.9 g         |
| Custom tariff number                 | 85364900        |
| Country of origin                    | Germany         |

### Technical data

#### Input data

|                             |   |
|-----------------------------|---|
| Input name                  | Device supply   |
| Protective circuit          | Reverse polarity protection Polarity protection diode |
|                             | Surge protection                                      |
| Status display              | Yellow LED  |
| Input name                  | Control input right/left                              |
| Nominal input voltage $U_N$ | 24 V DC   |

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## Technical data

### Input data

|   |                              |
|---|------------------------------|
| Input voltage range in reference to $U_N$ | 0.8 ... 1.2                  |
| Typical input current at $U_N$            | 16 mA                        |
| Reaction time in normal load operation    | 20 ms                        |
| Transmission frequency                    | 1 Hz (At $\cos \phi = 0.5$ ) |

### Output data load output

|                              |                                  |
|------------------------------|----------------------------------|
| Nominal output voltage       | 400 V AC                         |
| Nominal output voltage range | 110 V AC ... 440 V AC            |
| Load current range           | 150 mA ... 9 A (see to derating) |
| Leakage current              | typ. 7 mA                        |
| Residual voltage             | typ. 1.5 V                       |
| Surge current                | 230 A ( $t_p = 10$ ms, at 25 °C) |
| Protective circuit           | RC element RC element            |

### Connection data, control circuit

|                                  |   |
|----------------------------------|---|
| Connection name                  | Control circuits                          |
| Connection method                | Screw connection                          |
| Stripping length                 | 8 mm                                      |
| Screw thread                     | M3  |
| Conductor cross section solid    | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 10                                 |

### Connection data load circuit

|                                  |   |
|----------------------------------|---|
| Connection name                  | Load circuit                              |
| Connection method                | Screw connection                          |
| Stripping length                 | 8 mm                                      |
| Screw thread                     | M3  |
| Conductor cross section solid    | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 10                                 |

### General

|                           |  |
|---------------------------|--|
| Test voltage input/output | 2.5 kV   |
| Switching frequency       | max. 10 Hz (At $\cos \phi = 0.5$ )                               |
| Mounting position         | Vertical (horizontal DIN rail)                                   |
| Assembly instructions     | Can be aligned with > 20 mm spacing                              |
| Operating mode            | 100% operating factor  |
| Designation               | Air clearances and creepage distances between the power circuits |

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## Technical data

### General

|                       |                            |
|-----------------------|----------------------------|
| Standards/regulations | EN 50178                   |
| Insulation            | Basic insulation           |
| Designation           | Power station requirements |
|                       | EMC regulations            |
| Standards/regulations | EN 61000-6-2               |
|                       | EN 61000-6-4               |

### Dimensions

|        |        |
|--------|--------|
| Width  | 62 mm  |
| Height | 84 mm  |
| Depth  | 110 mm |

### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |
| Degree of protection                    | IP20             |

### Standards and Regulations

|                       |  |
|-----------------------|--|
| Designation           | Air clearances and creepage distances between the power circuits |
| Standards/regulations | EN 50178   |
| Insulation            | Basic insulation   |
| Designation           | Power station requirements                                       |
|                       | EMC regulations  |
| Standards/regulations | EN 61000-6-2   |
|                       | EN 61000-6-4   |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.0 | 27371601 |
| eCl@ss 5.1 | 27371601 |
| eCl@ss 6.0 | 27371601 |
| eCl@ss 7.0 | 27371601 |
| eCl@ss 8.0 | 27371014 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000066 |
|----------|----------|

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC000066 |
| ETIM 4.0 | EC000066 |
| ETIM 5.0 | EC002055 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211915 |
| UNSPSC 7.0901 | 39121514 |
| UNSPSC 11     | 39121514 |
| UNSPSC 12.01  | 39121514 |
| UNSPSC 13.2   | 39121514 |

## Approvals

### Approvals

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Approvals

EAC / EAC

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Ex Approvals

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Approvals submitted

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### Approval details

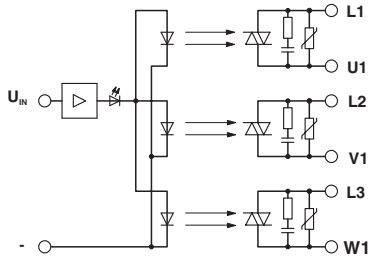
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| EAC |
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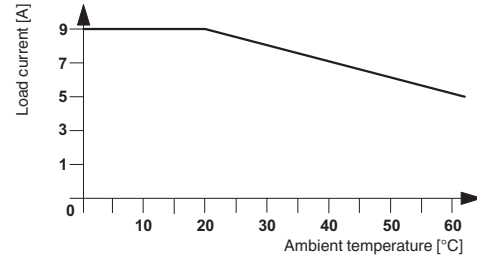
## Drawings

# Load relay - ELR 3/ 9-400 - 2941701

Block diagram



Diagram



Diagram

