

ELR W3/ 9-500 - Reversing load relay

2964186

<https://www.phoenixcontact.com/us/products/2964186>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Electronic reversing load relay, for direct driving of equipment in the 3-phase network, with light indicator and protection circuit, output: 110-550 V AC/3 x 9 A

The figure shows the version ELR W
3/9-400

Your advantages

- High switching frequency
- Noise and wear-free switching up to 500 V AC/9 A
- Protective circuit in input and output
- LEDs for forward and reverse running, operating voltage, and impermissible control

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2964186 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C472 |
| Product key | DK6841 |
| GTIN | 4017918099398 |
| Weight per piece (including packing) | 778.4 g |
| Weight per piece (excluding packing) | 662.22 g |
| Customs tariff number | 85364900 |
| Country of origin | DE |

ELR W3/ 9-500 - Reversing load relay



2964186

<https://www.phoenixcontact.com/us/products/2964186>

Technical data

Notes

Utilization restriction

| | |
|----------|---|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---|

Product properties

| | |
|----------------|-----------------------|
| Product type | Solid-state contactor |
| Operating mode | 100% operating factor |

Electrical properties

| | |
|---|------------------------------------|
| Number of phases | 3 |
| Maximum power dissipation for nominal condition | 13.5 W |
| Mains type | 3-phase |
| Test voltage (Input/output) | 2.5 kV (50 Hz, 60 s) |
| Reversing frequency | ≤ 10 Hz (at $\cos \varphi = 0.5$) |

Input data

Control

| | |
|--|--|
| Input name | Control input right/left |
| Quiescent current | 40 mA |
| Rated actuating voltage U_C | 24 V DC |
| Triggering voltage range | 19.2 V DC ... 30 V DC |
| Voltage range with reference to U_C | 0.8 ... 1.25 |
| | 0.8 ... 1.25 |
| Rated actuating current I_C | 7.5 mA |
| Reaction time in normal load operation | 50 ms |
| | 50 ms |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Surge protection |
| Operating voltage display | Green LED |
| Error indication | Red LED |
| Status display | LED (yellow) |
| Switch-over frequency | < 10 Hz (at $\cos \varphi > 0.5$) |
| Switchover time R_L/L_L (turn-on time) | 20 ms |

Output data

AC output

| | |
|-------------------------------|-----------------------|
| Rated operating voltage U_e | 500 V AC |
| Operating voltage range | 110 V AC ... 550 V AC |
| Peak offstate voltage | 1200 V |

ELR W3/ 9-500 - Reversing load relay



2964186

<https://www.phoenixcontact.com/us/products/2964186>

| | |
|--------------------------|----------------------------------|
| Mains frequency | 50 Hz |
| | 60 Hz |
| 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 (tp = 10 ms, at 25 °C) |
| Max. load value | 265 A ² s |
| Protective circuit | RC element; RC element |
| | Surge protection |
| Surge voltage protection | > 910 V |

Connection data

Control circuits

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 0.2 mm ² ... 6 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 4 mm ² |
| Conductor cross-section AWG | 24 ... 10 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Load circuit

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 0.2 mm ² ... 6 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 4 mm ² |
| Conductor cross-section AWG | 24 ... 10 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Dimensions

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

Material specifications

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

Environmental and real-life conditions

Ambient conditions

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

ELR W3/ 9-500 - Reversing load relay



2964186

<https://www.phoenixcontact.com/us/products/2964186>

Standards and regulations

Air clearances and creepage distances between the power circuits

| | |
|-----------------------|----------|
| Standards/regulations | EN 50178 |
|-----------------------|----------|

EMC regulations

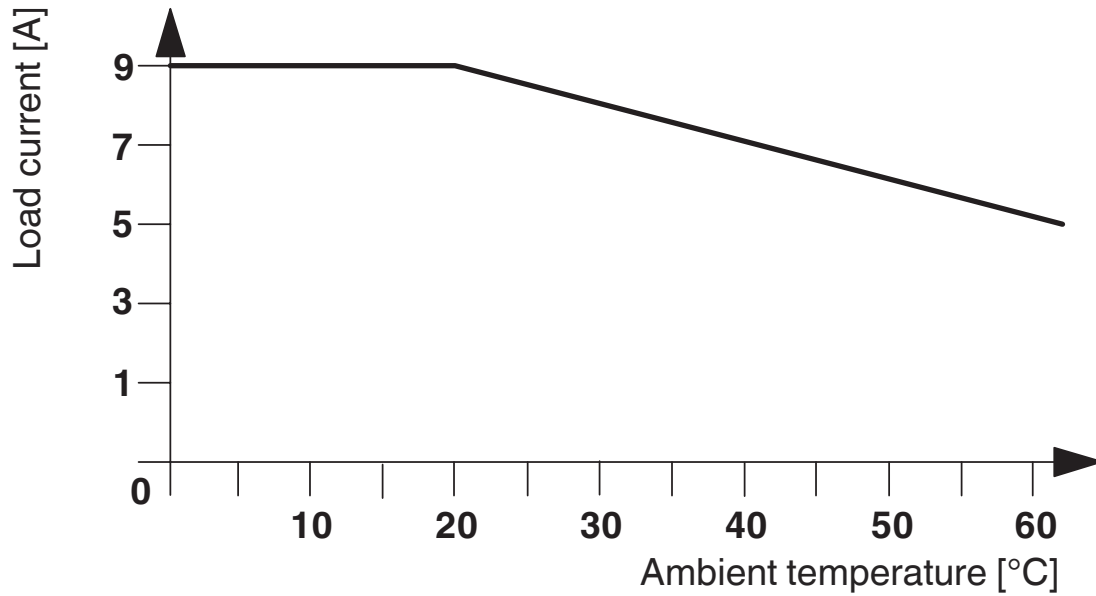
| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-6-2 |
| | EN 61000-6-4 |

Mounting

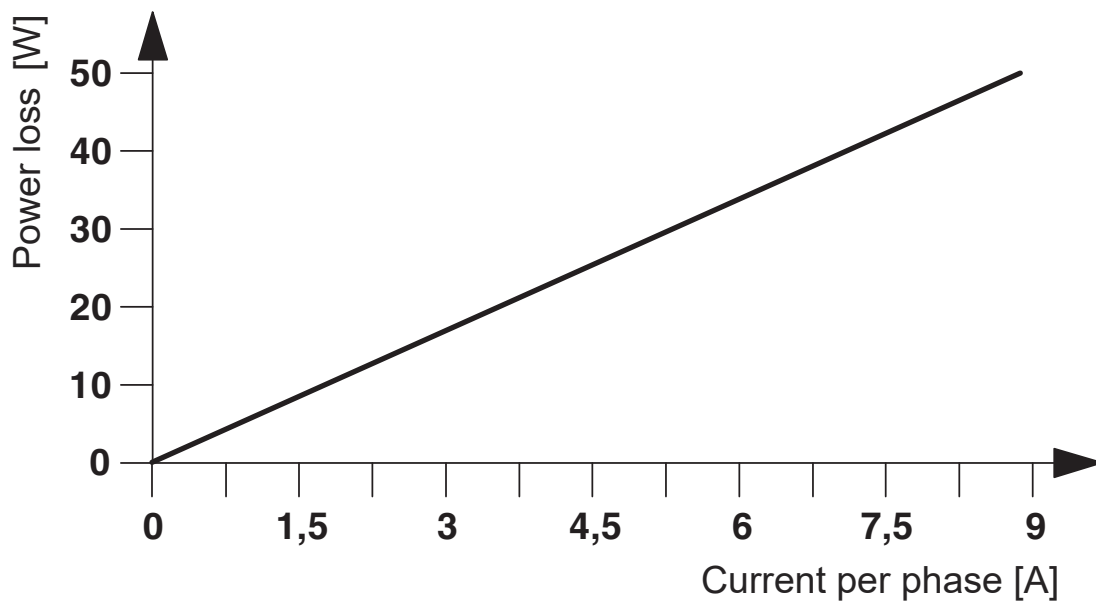
| | |
|-------------------|-------------------------------------|
| Mounting type | DIN rail mounting |
| Assembly note | can be aligned with spacing > 20 mm |
| Mounting position | Vertical (horizontal DIN rail) |

Drawings

Diagram



Diagram

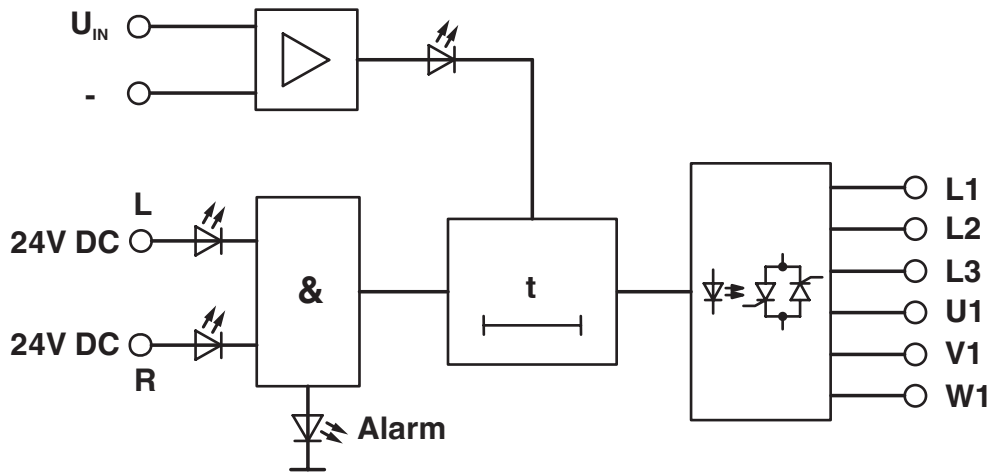


ELR W3/ 9-500 - Reversing load relay

2964186

<https://www.phoenixcontact.com/us/products/2964186>

Block diagram



ELR W3/ 9-500 - Reversing load relay



2964186

<https://www.phoenixcontact.com/us/products/2964186>

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27371003 |
| ECLASS-15.0 | 27371003 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC000066 |
|-----------|----------|

UNSPSC

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

ELR W3/ 9-500 - Reversing load relay



2964186

<https://www.phoenixcontact.com/us/products/2964186>

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 | 8e03b027-f4a9-4108-8486-0785cf68b14e |

Phoenix Contact 2026 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com