

ELR W1/ 2-24DC - Reversing load relay



2963598

<https://www.phoenixcontact.com/us/products/2963598>

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Electronic reversing load relay, for driving DC motors, with light indicator and protection circuit, output: 10-30 V DC/2 A

Commercial data

| | |
|--------------------------------------|--------------------|
| Item number | 2963598 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C476 |
| Product key | CK7621 |
| Catalog page | Page 46 (C-5-2019) |
| GTIN | 4017918943592 |
| Weight per piece (including packing) | 113.8 g |
| Weight per piece (excluding packing) | 107 g |
| Customs tariff number | 85371098 |
| Country of origin | DE |

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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 |
| Product family | CONTACTRON |
| Operating mode | 100% operating factor |

Insulation characteristics

| | |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

Insulation characteristics: Air clearances and creepage distances between the power circuits

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

Electrical properties

| | |
|-----------------------------|-------------------------------------|
| Number of phases | 1 |
| Test voltage (Input/output) | 2.5 kV _{rms} (50 Hz, 60 s) |

Supply

| | |
|--|---------------------|
| Input name | Device supply |
| Rated control circuit supply voltage U_S | 24 V DC |
| Control supply voltage range | 10 V DC ... 30 V DC |
| Rated control supply current I_S | 7 mA |
| Protective circuit | Surge protection |

Input data

Control

| | |
|--|-----------------------------|
| Input name | Control input right/left |
| Current consumption | 3 mA |
| Rated actuating voltage U_C | 24 V DC |
| Triggering voltage range | 19.2 V DC ... 28.8 V DC |
| Rated actuating current I_C | 3 mA |
| Typical response time | 200 μ s |
| Protective circuit | Reverse polarity protection |
| | Surge protection |
| Surge voltage protection | > 33 V DC |
| Switchover time R_L/L_L (turn-on time) | 80 ms |

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Output data

DC output

| | |
|---------------------------------------|---|
| Rated operating voltage U_e | 24 V DC |
| Operating voltage range | 10 V DC ... 30 V DC |
| Rated operating current (Load output) | 2 A |
| Load current | 2 A (Mounted in rows with zero spacing) |
| Quiescent current | approx. 7 mA (When switched off) |
| Protective circuit | Reverse polarity protection |
| | Surge protection |
| Surge voltage protection | > 33 V DC |
| Current limitation at short-circuits | 15 A |

Connection data

Control circuits

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross section rigid | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 26 ... 14 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |
| | 5 lb _F -in. ... 7 lb _F -in. |

Load circuit

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross section rigid | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 26 ... 14 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |
| | 5 lb _F -in. ... 7 lb _F -in. |

Signaling

| | |
|---------------------------|------------|
| Status display | Yellow LED |
| Operating voltage display | Green LED |

Dimensions

| | |
|--------|----------|
| Width | 12.5 mm |
| Height | 99 mm |
| Depth | 114.5 mm |

Material specifications

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| | |
|-------|-----------------|
| Color | gray (RAL 7042) |
|-------|-----------------|

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 80 °C |

Approvals

UKCA

| | |
|-------------|----------------|
| Certificate | UKCA-compliant |
|-------------|----------------|

UL approval

| | |
|-------------|--------------|
| Certificate | NLDX.E228652 |
|-------------|--------------|

Standards and regulations

Air clearances and creepage distances between the power circuits

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

Mounting

| | |
|-----------------------|--|
| Mounting type | DIN rail mounting |
| Assembly instructions | alignable, for spacing see derating |
| Mounting position | vertical (horizontal DIN rail, motor output below) |

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