

ELR W3- 24DC/500AC- 2 - Solid-state reversing contactor

2297293
<https://www.phoenixcontact.com/us/products/2297293>

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Three-phase solid-state reversing contactor with 24 V DC input, 2 A output current, zero voltage switch, optionally with thermal fuse

Your advantages

- Optional thermal fuse
- Stable and short switching times
- Noise and wear-free switching
- Long service life
- Integrated protection circuit
- Integrated locking and load wiring
- High switching frequency

Commercial data

Item number	2297293
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C472
Product key	DK6841
GTIN	4046356175654
Weight per piece (including packing)	425.89 g
Weight per piece (excluding packing)	419.8 g
Customs tariff number	85364900
Country of origin	DE

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Technical data

Product properties

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

Electrical properties

Number of phases	3
Switching frequency	max. 5 Hz
Test voltage (Input/output)	5 kV _{rms} (50 Hz, 60 s)
Switching frequency	max. 5 Hz
Reversing frequency	≤ 10 Hz

Insulation characteristics

Rated insulation voltage	500 V
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	2
Insulation characteristics between the control input voltage to the main circuit	Basic insulation

Input data

Control

Input name	Control input right/left
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	12.7 mA
Switching threshold	9.6 V ("0" signal)
	19.2 V ("1" signal)
Protective circuit	Reverse polarity protection; Suppressor diode
	Surge protection
Error indication	Red LED
Status display	LED (yellow)

Output data

AC output

Rated operating voltage U_e	500 V AC
Operating voltage range	48 V AC ... 575 V AC
Rated operating current at AC-51	2 A
Rated operating current at AC-53a	2 A
Peak offstate voltage	1200 V

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Mains frequency	40 Hz ... 100 Hz
Load current range	100 mA ... 2 A (see to derating)
Leakage current	6 mA
Residual voltage	< 1.5 V
Surge current	200 A (t = 10 ms)
Max. load value	250 A ² s
Protective circuit	RCV circuit
Surge voltage protection	> 575 V AC

Connection data

Control circuits

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 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	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 14
Tightening torque	0.5 Nm ... 0.6 Nm 5 lb _f -in. ... 7 lb _f -in.

Signaling

Status display	LED (yellow)
Error indication	Red LED

Dimensions

Width	40 mm
Height	99 mm
Depth	114.5 mm

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C

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Approvals

UKCA

Certificate	UKCA-compliant
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UL approval

Certificate	NMFT.E323771
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UL data

SCCR	5 kA (20 A RK5 (standard fault) fuse)
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Standards and regulations

Standards/regulations

Standards/regulations	DIN EN 50178
	EN 60947

Mounting

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

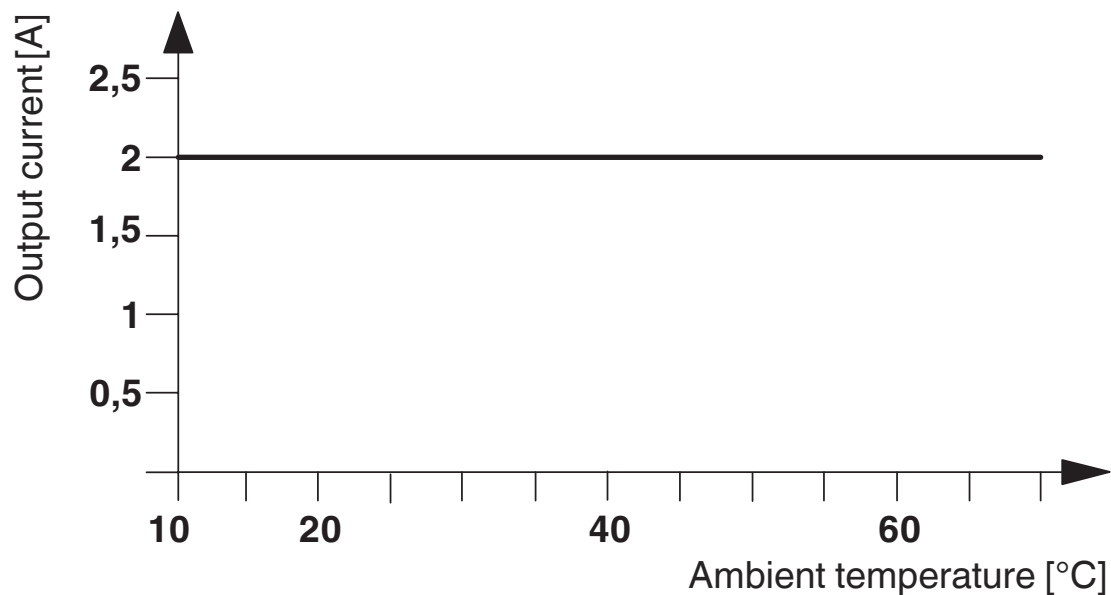
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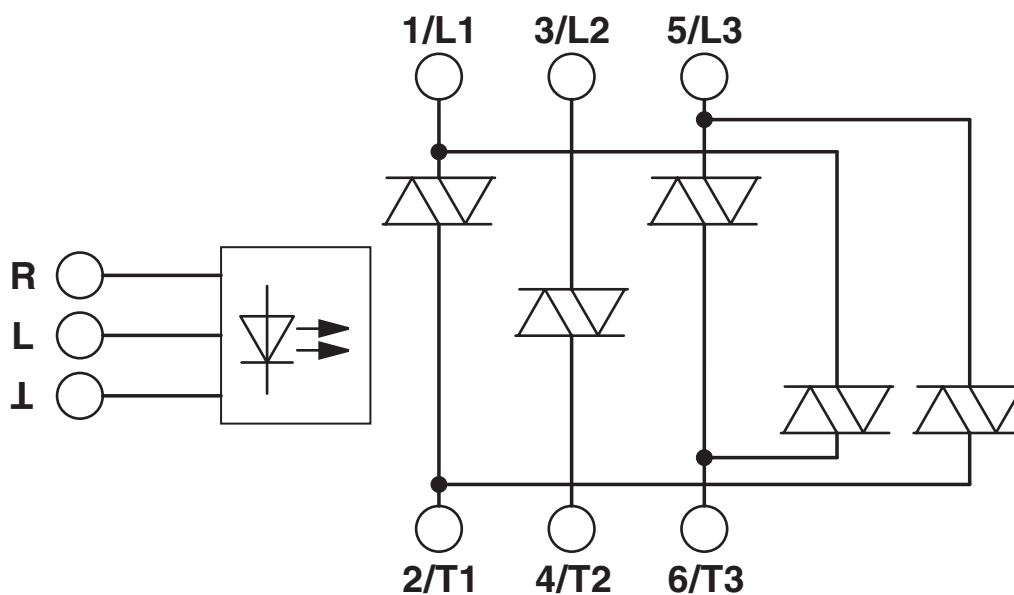
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Drawings

Diagram



Block diagram



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Approvals

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EAC

Approval ID: RU*C-DE.*08.B.00520*



UL Listed

Approval ID: FILE E 323771



cUL Listed

Approval ID: FILE E 323771

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Classifications

ECLASS

ECLASS-13.0	27371003
ECLASS-15.0	27371003

ETIM

ETIM 9.0	EC000066
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UNSPSC

UNSPSC 21.0	39122300
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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)
SCIP	e4962307-e1be-4652-9465-02ec85beb2b6

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Accessories

US-EMLP (15X5) - Plastic label

0828790

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Plastic label, Card, white, unmarked, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, THERMOMARK PRIME 2.0, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm

UC-EMLP (15X5) - Plastic label

0819301

<https://www.phoenixcontact.com/us/products/0819301>



Plastic label, Sheet, white, unmarked, can be labeled with: BLUEMARK E. CARD, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, Number of individual labels: 10, text field height: 5 mm, text field width: 15 mm

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THERMAL FUSE TF104 - Fuse

2900796

<https://www.phoenixcontact.com/us/products/2900796>



The thermal fuse monitors overtemperature on the heatsink of electronic load relays (ELR ...3-.../500AC-...).

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