

# ELR W2+1- 24DC/500AC-37 - Solid-state reversing contactor



2297374

<https://www.phoenixcontact.com/in/products/2297374>

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Three-phase solid-state reversing contactor with 24 V DC input, 37 A output current, zero voltage switch, optionally with thermal fuse

## Your advantages

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

## Commercial Data

Item number	2297374
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CK7
Product Key	CK7225
Catalog Page	Page 41 (C-5-2019)
GTIN	4046356175739
Weight per Piece (including packing)	1,834 g
Weight per Piece (excluding packing)	1,791 g
Customs tariff number	85364190
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
Test voltage (Input/output)	5 kV <sub>rms</sub> (50 Hz, 1 min., input/output)
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	Yellow LED

### 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	37 A
Rated operating current at AC-53a	25 A
Peak offstate voltage	1200 V
Mains frequency	40 Hz ... 100 Hz

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Load current range	200 mA ... 37 A (see to derating)
Leakage current	6 mA
Residual voltage	< 1.5 V
Surge current	1300 A (t = 10 ms)
Max. load value	9000 A <sup>2</sup> 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 <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
Tightening torque	0.5 Nm ... 0.6 Nm 5 lb <sub>f</sub> -in. ... 7 lb <sub>f</sub> -in.

### Load circuit

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M4
Conductor cross section rigid	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section AWG	20 ... 6
Tightening torque	15 lb <sub>f</sub> -in.

## Signaling

Status display	Yellow LED
Error indication	Red LED

## Dimensions

Width	147.5 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

## Approvals

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## UL approval

Certificate	NMFT.E323771
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## UL data

SCCR	5 kA (50 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 instructions	Can be aligned with spacing = 40 mm
Mounting position	Vertical (horizontal DIN rail)

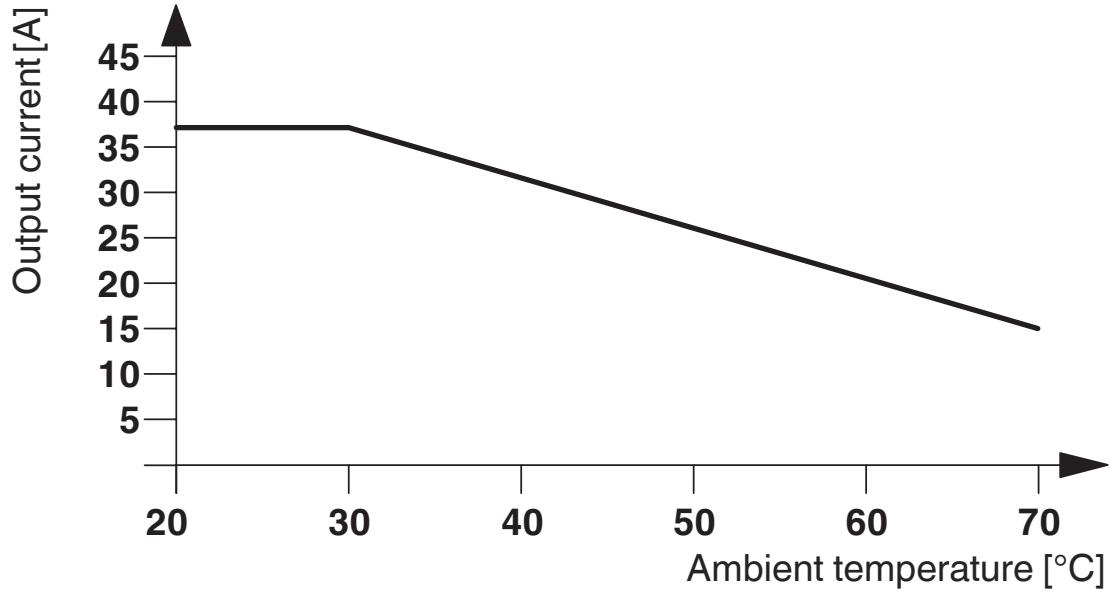
# ELR W2+1- 24DC/500AC-37 - Solid-state reversing contactor

2297374

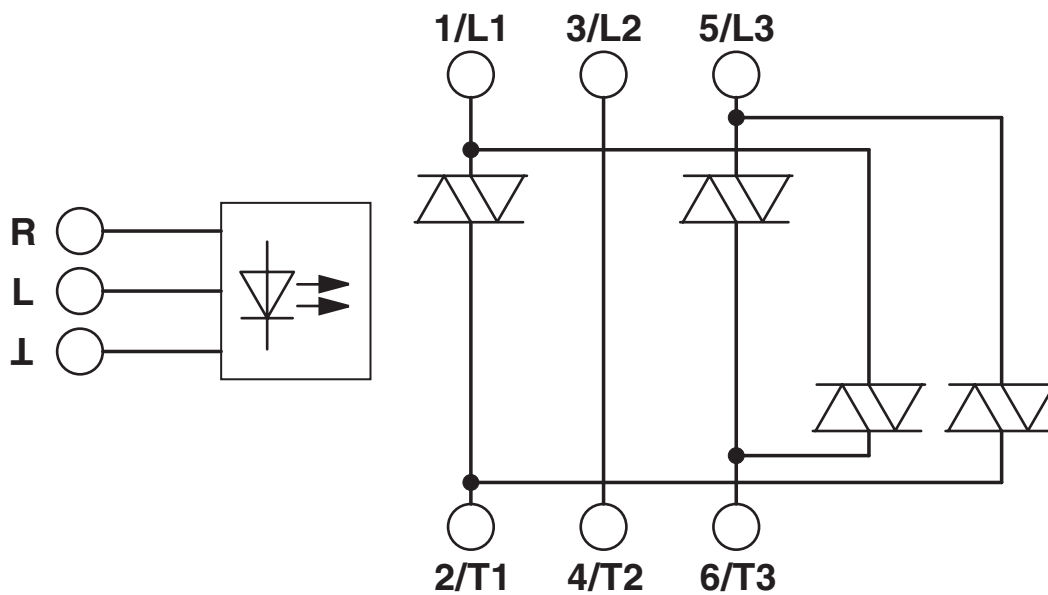
<https://www.phoenixcontact.com/in/products/2297374>

## Drawings

Diagram



Block diagram



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## Approvals



**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-11.0	27371003
ECLASS-13.0	27371003
ECLASS-12.0	27371003

### ETIM

ETIM 8.0	EC002055
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"



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## Accessories

### THERMAL FUSE TF104 - Fuse

2900796

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



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

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