

ELR 3- 24DC/500AC- 2 - Solid-state contactor



2297196

<https://www.phoenixcontact.com/pc/products/2297196>

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Three-phase solid-state 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
- High switching frequency

Commercial data

Item number	2297196
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CK7211
Catalog page	Page 42 (C-5-2019)
GTIN	4046356172851
Weight per piece (including packing)	420.1 g
Weight per piece (excluding packing)	420.1 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 _{rms} (50 Hz, 60 s)
Switching 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	8.3 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	2 A
Rated operating current at AC-53a	2 A
Peak offstate voltage	1200 V
Mains frequency	40 Hz ... 100 Hz
Load current range	100 mA ... 2 A (see to derating)

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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 lbf-in. ... 7 lbf-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 lbf-in. ... 7 lbf-in.

Signaling

Status display	Yellow LED
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

Approvals

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UL approval

Certificate	NMFT.E323771
	NRNT.E172140

UL data

SCCR	5 kA (20 A RK5 (standard fault) fuse)
FLA	2 A (at 500 V, AC Resistance)
	2 A (at 500 V, AC General USE)
	2 A (at 500 V, AC Resistance Air Heating)

Standards and regulations

Standards/regulations

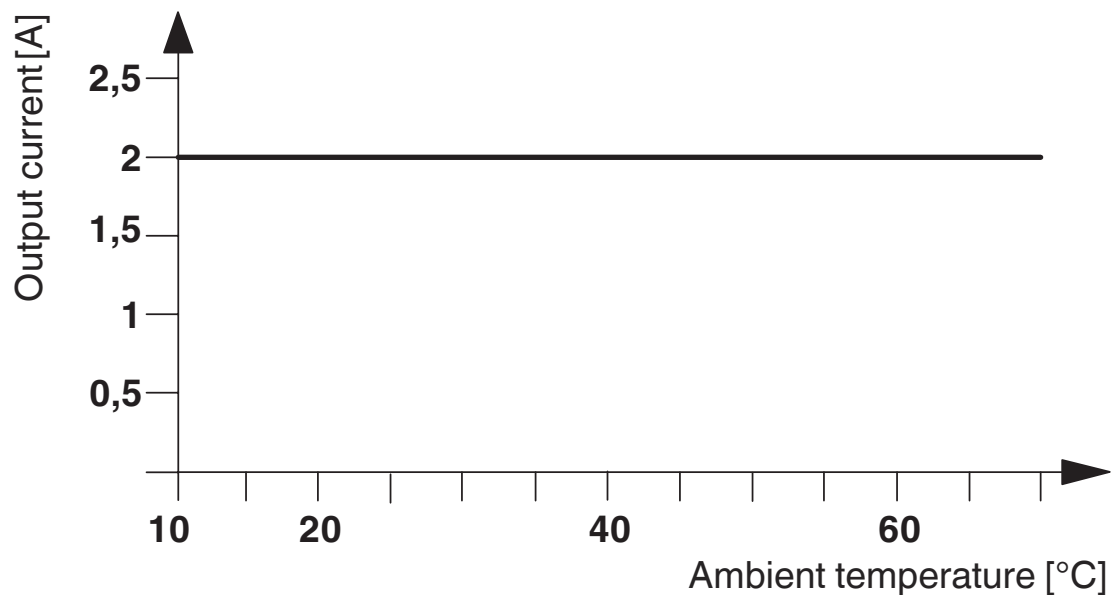
Standards/regulations	DIN EN 50178
	EN 60947

Mounting

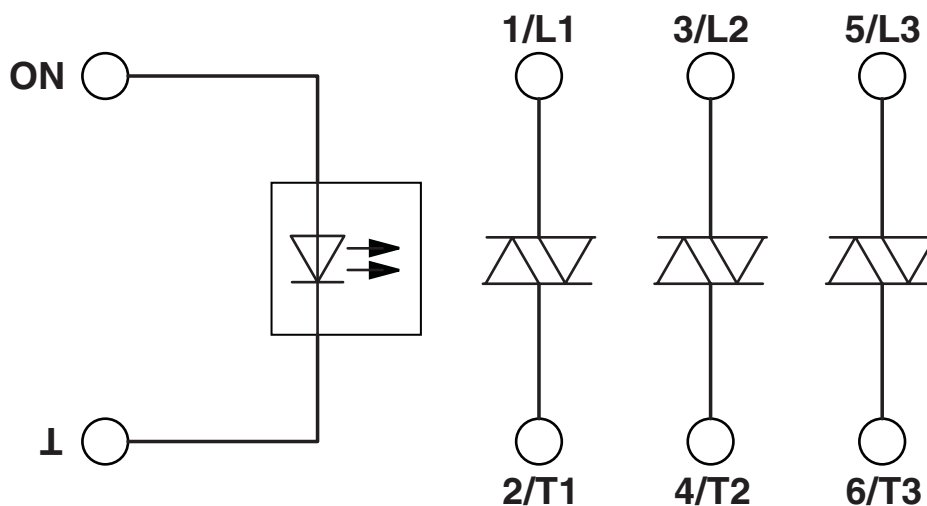
Mounting type	DIN rail mounting
Assembly instructions	Can be aligned with spacing = 20 mm
Mounting position	Vertical (horizontal DIN rail)

Drawings

Diagram



Block diagram



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Classifications

ECLASS

ECLASS-11.0	27371014
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UNSPSC

UNSPSC 21.0	39122333
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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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