

# ELR 1- 24DC/600AC-20 - Solid-state contactor



2297138

<https://www.phoenixcontact.com/us/products/2297138>

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Single-phase solid-state contactor, input voltage: 24 V DC, output current: 20 A, zero voltage switch

## Your advantages

- High switching frequency
- Wear and bounce-free
- 24 V DC and 230 V AC input voltage versions

## Commercial data

Item number	2297138
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C471
Product key	DK7122
GTIN	4046356132022
Weight per piece (including packing)	256.1 g
Weight per piece (excluding packing)	256.1 g
Customs tariff number	85362010
Country of origin	MT

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## Technical data

### Product properties

Product type	Solid-state contactor
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### Electrical properties

Number of phases	1
Maximum power dissipation for nominal condition	32 W
Mains type	1-phase
Test voltage (Input/output)	4 kV <sub>rms</sub> (50 Hz, 60 s)

### Input data

#### Control

Input name	Control input
Rated actuating voltage $U_C$	24 V DC
Triggering voltage range	4 V DC ... 32 V DC
Rated actuating current $I_C$	approx. 12 mA
Switching threshold	$\leq 1$ V DC ("0" signal) $\geq 4$ V DC ("1" signal)
Operating voltage display	Green LED
Transmission frequency	25 Hz

### Output data

#### Load output

Operating voltage range	42 V AC ... 660 V AC
Rated operating current at AC-51	20 A
Rated operating current at AC-53a	5 A
Peak offstate voltage	1200 V
Mains frequency	45 Hz 65 Hz
Load current range	350 mA ... 20 A (see to derating)
Leakage current	< 3 mA (In off state)
Residual voltage	< 1.6 V
Surge current	250 A (t = 10 ms)
Max. load value	525 A <sup>2</sup> s
Protective circuit	RCV circuit
Phase angle cos phi min	0.5

### Connection data

#### Control circuits

Connection method	Screw connection
Stripping length	8 mm

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Screw thread	M4
Conductor cross-section rigid	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	20 ... 14

## Load circuit

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M4
Conductor cross-section rigid	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section flexible	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section AWG	20 ... 12

## Signaling

Operating voltage display	Green LED
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## Dimensions

Width	22.5 mm
Height	103 mm
Depth	103 mm

## Material specifications

Color	green (RAL 6021)
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## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-30 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C

## Standards and regulations

### Standards/regulations

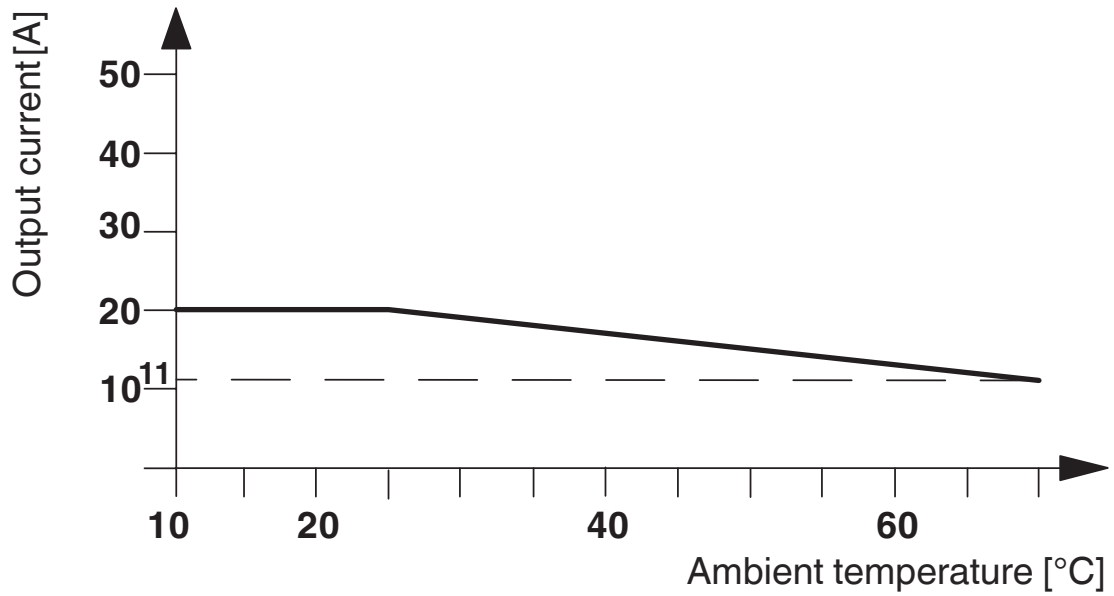
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
	EN 55011

## Mounting

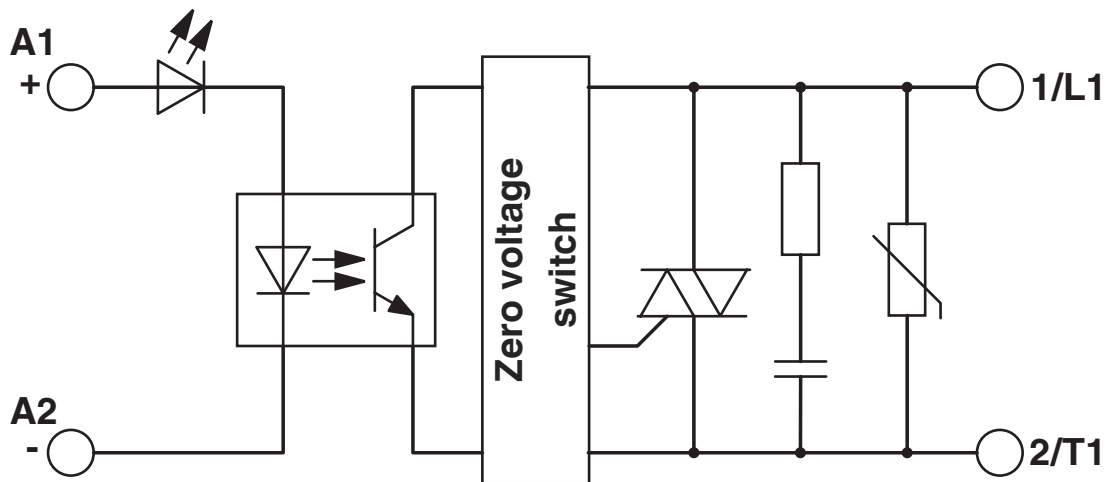
Mounting type	DIN rail mounting
Assembly note	can be aligned with $\geq 22.5$ mm spacing
Mounting position	Vertical (horizontal DIN rail)

## Drawings

Diagram



Block diagram



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## Environmental product compliance

### 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.)	No substance above 0.1 wt%
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