

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



2297138

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

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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

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



2297138

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

## Technical data

### Product properties

Product type	Solid-state contactor
--------------	-----------------------

### 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

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



2297138

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

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
---------------------------	-----------

## Dimensions

Width	22.5 mm
Height	103 mm
Depth	103 mm

## Material specifications

Color	green (RAL 6021)
-------	------------------

## 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

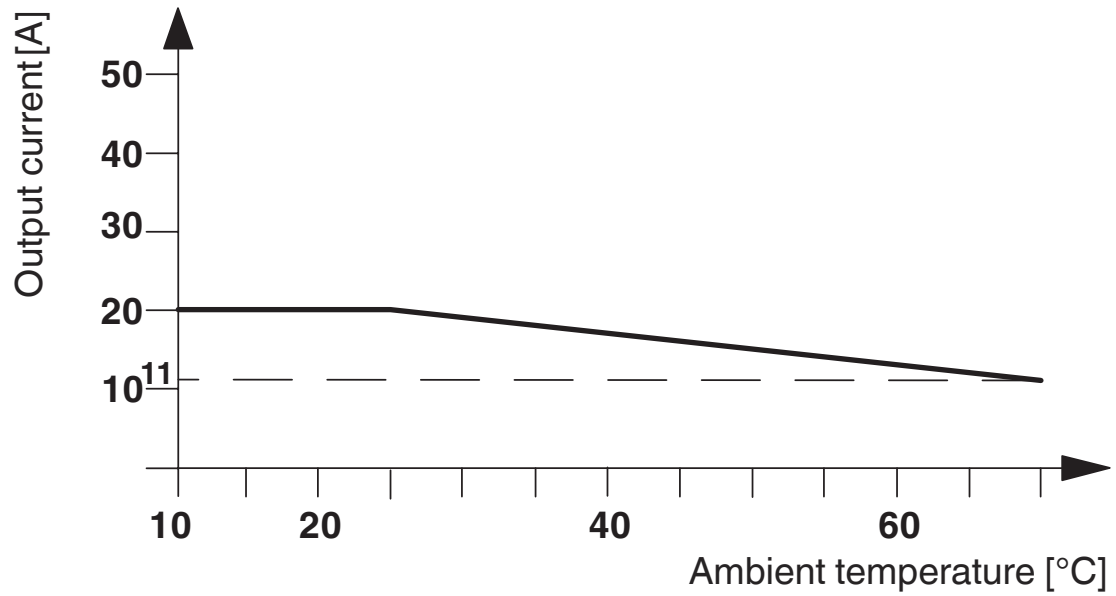
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
	EN 55011

## Mounting

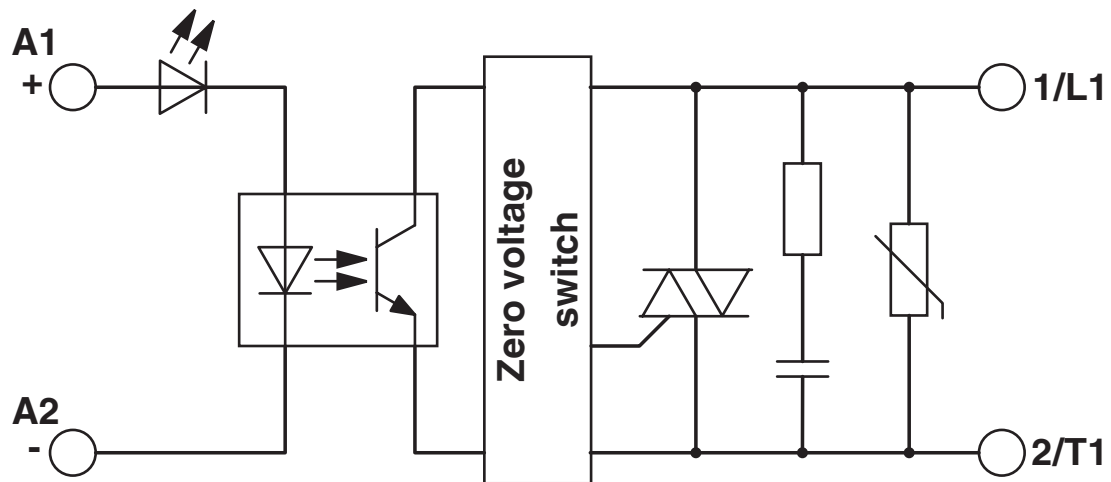
Mounting type	DIN rail mounting
Assembly note	can be aligned with $\geq 22.5$ mm spacing
Mounting position	Vertical (horizontal DIN rail)

## Drawings

Diagram



Block diagram



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



2297138

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

## 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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved

<https://www.phoenixcontact.com>

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