

# ELR 3- 24DC/500AC-16 - Solid-state contactor



2297235

<https://www.phoenixcontact.com/us/products/2297235>

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.



Three-phase solid-state contactor with 24 V DC input, 16 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

## Commercial data

Item number	2297235
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C472
Product key	DK7213
GTIN	4046356175593
Weight per piece (including packing)	1,801.7 g
Weight per piece (excluding packing)	1,801.7 g
Customs tariff number	85364900
Country of origin	DE

# ELR 3- 24DC/500AC-16 - Solid-state contactor



2297235

<https://www.phoenixcontact.com/us/products/2297235>

## Technical data

### Product properties

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

### Electrical properties

Number of phases	3
Switching frequency	$\leq 10$ Hz
Test voltage (Input/output)	5 kV <sub>rms</sub> (50 Hz, 60 s)
Switching frequency	$\leq 10$ Hz

### Insulation characteristics

Rated insulation voltage	500 V
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	2

### 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	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	16 A
Rated operating current at AC-53a	12 A
Peak offstate voltage	1200 V
Mains frequency	40 Hz ... 100 Hz
Load current range	100 mA ... 16 A (see to derating)
Leakage current	6 mA

# ELR 3- 24DC/500AC-16 - Solid-state contactor



2297235

<https://www.phoenixcontact.com/us/products/2297235>

Residual voltage	< 1.5 V
Surge current	300 A (t = 10 ms)
Max. load value	580 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

### 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

## Signaling

Status display	LED (yellow)
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

### UL approval

Certificate	NMFT.E323771
	NRNT.E172140

### UL data

# ELR 3- 24DC/500AC-16 - Solid-state contactor



2297235

<https://www.phoenixcontact.com/us/products/2297235>

SCCR	5 kA (50 A RK5 (standard fault) fuse)
FLA	16 A (at 500 V, AC Resistance)
	16 A (at 500 V, AC General USE)
	16 A (at 500 V, AC Resistance Air Heating)

## Standards and regulations

### Standards/regulations

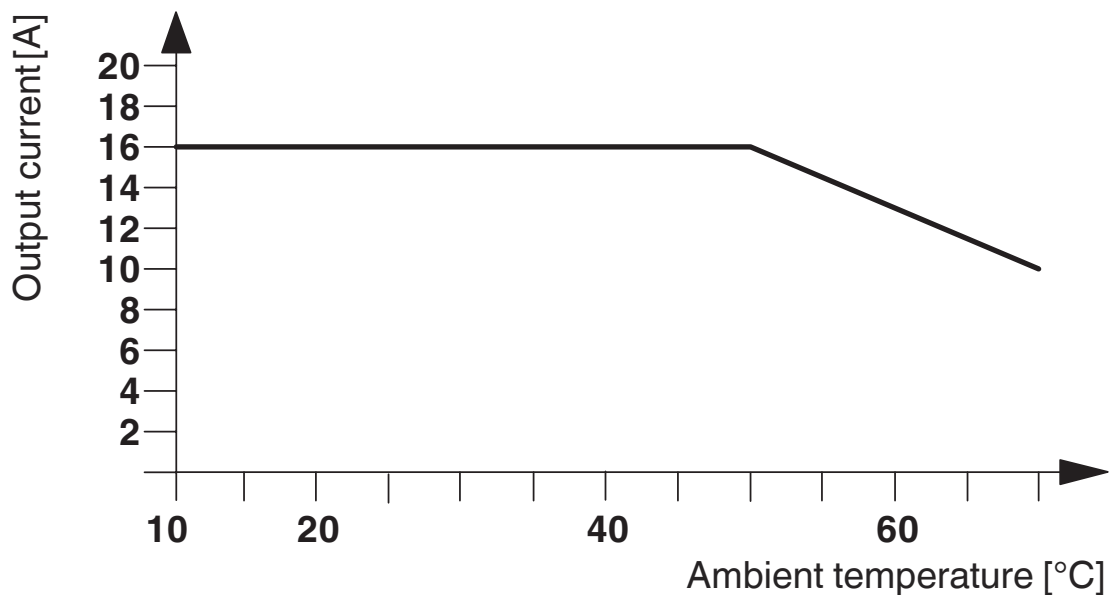
Standards/regulations	DIN EN 50178
	EN 60947

## Mounting

Mounting type	DIN rail mounting
Assembly note	can be aligned with spacing = 40 mm
Mounting position	Vertical (horizontal DIN rail)

## Drawings

Diagram



Block diagram

