

# ELR 3-230AC/500AC-16 - Solid-state contactor



2297248

<https://www.phoenixcontact.com/us/products/2297248>

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Three-phase solid-state contactor with 230 V AC input, 16 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
- High switching frequency
- Integrated protection circuit

## Commercial data

Item number	2297248
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C472
Product key	DK7213
GTIN	4046356175609
Weight per piece (including packing)	1,830 g
Weight per piece (excluding packing)	1,781.3 g
Customs tariff number	85364900
Country of origin	DE

## Technical data

### Product properties

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

### Electrical properties

Number of phases	3
Switching frequency	≤ 1 Hz
Test voltage (Input/output)	5 kV <sub>rms</sub> (50 Hz, 60 s)
Switching frequency	≤ 1 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
Mains frequency	50 Hz 60 Hz
Rated actuating voltage $U_C$	230 V AC
Triggering voltage range	92 V AC ... 253 V AC
Voltage range with reference to $U_C$	0.4 ... 1.1 0.4 ... 1.1
Rated actuating current $I_C$	12.5 mA
Switching threshold	48 V AC ("0" signal) 96 V AC ("1" signal)
Protective circuit	Surge protection; Varistor
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)

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Leakage current	6 mA
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

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## UL data

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

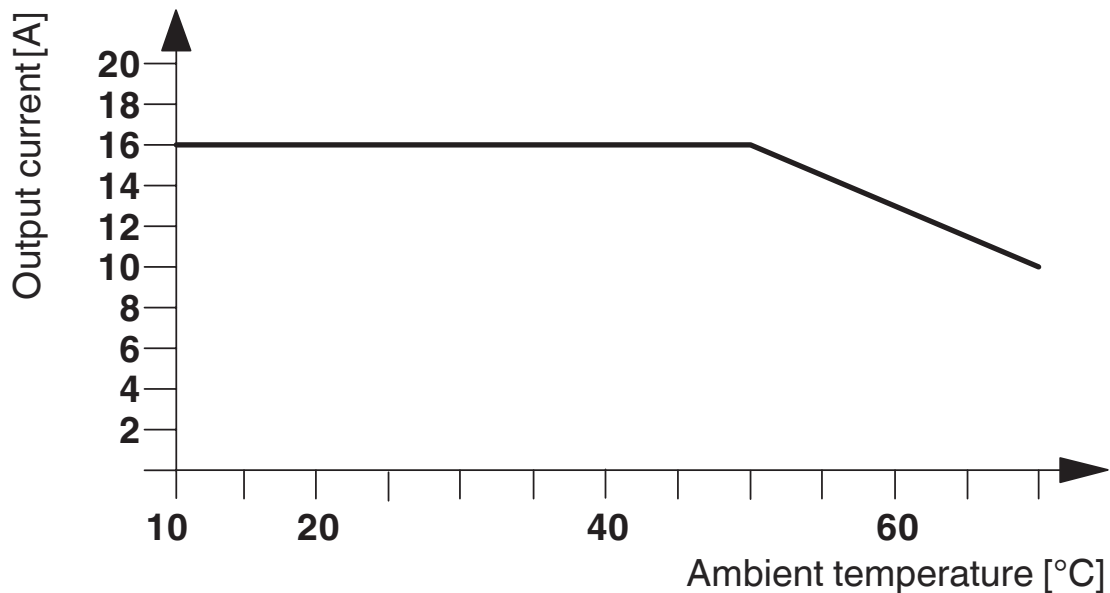
Standards/regulations	DIN EN 50178
	EN 60947

## 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

