

ELR 1-230AC/600AC-20 - Solid-state contactor



2297141

<https://www.phoenixcontact.com/us/products/2297141>

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Single-phase solid-state contactor, input voltage: 230 V AC, output current: 20 A, zero voltage switch

Your advantages

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

Commercial Data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2297141 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to Order (non-returnable) |
| Sales Key | C471 |
| Product Key | CK7122 |
| Catalog Page | Page 48 (C-5-2017) |
| GTIN | 4046356132015 |
| Weight per Piece (including packing) | 258.8 g |
| Weight per Piece (excluding packing) | 254.7 g |
| Customs tariff number | 85362010 |
| Country of origin | MT |

Technical Data

Product properties

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

Electrical properties

| | |
|-----------------------------|---|
| Number of phases | 1 |
| Mains type | 1-phase |
| Test voltage (Input/output) | 4 kV _{rms} (50 Hz, 1 min., input/output) |

Input data

Control

| | |
|-------------------------------|---|
| Input name | Control input |
| Rated actuating voltage U_C | 230 V AC |
| Triggering voltage range | 24 V AC ... 275 V AC |
| Rated actuating current I_C | approx. 17 mA |
| Switching threshold | ≤ 6 V AC ("0" signal) ≥ 22 V AC ("1" signal) |
| Operating voltage display | Green LED |
| Transmission frequency | 6 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 ² s |
| Protective circuit | RCV circuit |
| Phase angle cos phi min | 0.5 |

Connection data

Control circuits

| | |
|-------------------|------------------|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M4 |

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| | |
|----------------------------------|---|
| Conductor cross section solid | 0.5 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.5 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 20 ... 14 |

Load circuit

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M4 |
| Conductor cross section solid | 0.5 mm ² ... 4 mm ² |
| Conductor cross section flexible | 0.5 mm ² ... 4 mm ² |
| Conductor cross section AWG | 20 ... 12 |

LED signaling

| | |
|---------------------------|-----------|
| Operating voltage display | Green LED |
|---------------------------|-----------|

Dimensions

| | |
|--------|---------|
| Width | 22.5 mm |
| Height | 103 mm |
| Depth | 103 mm |

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

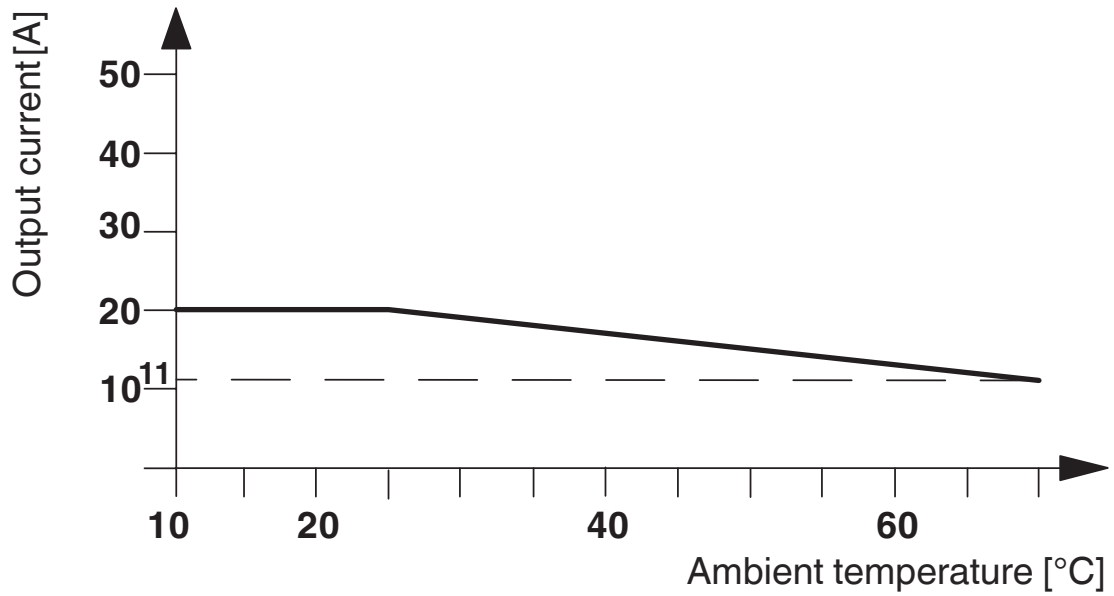
| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
| | EN 61000-4-3 |
| | EN 61000-4-4 |
| | EN 61000-4-5 |
| | EN 61000-4-6 |
| | EN 55011 |

Mounting

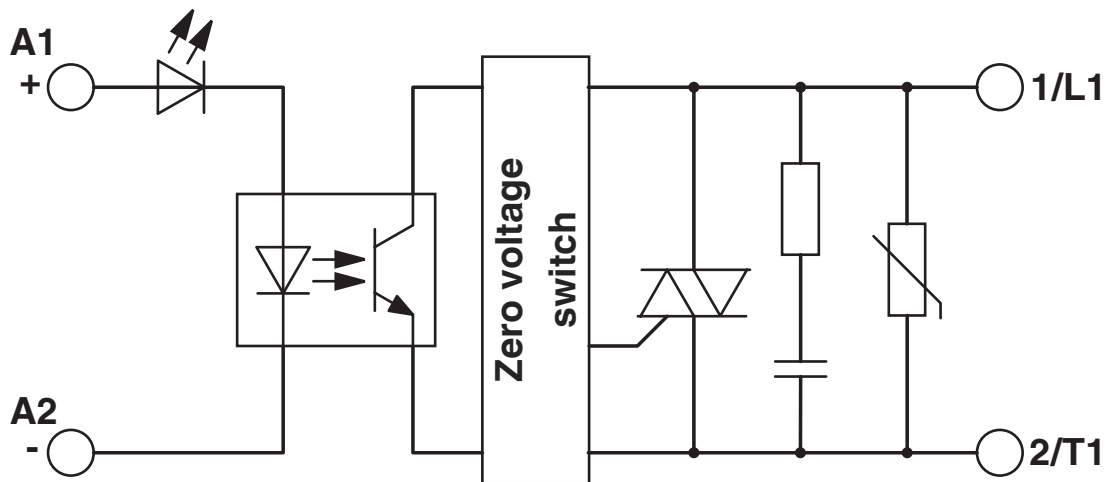
| | |
|-----------------------|--|
| Mounting type | DIN rail mounting |
| Assembly instructions | Can be aligned with ≥ 22.5 mm spacing |
| Mounting position | Vertical (horizontal DIN rail) |

Drawings

Diagram



Block diagram



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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-10.0.1 | 27371014 |
| ECLASS-11.0 | 27371014 |

ETIM

| | |
|----------|----------|
| ETIM 7.0 | EC002055 |
|----------|----------|

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Environmental Product Compliance

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