

# PLC-OPT-230AC/300DC/1 - Solid-state relay module



2900389

<https://www.phoenixcontact.com/us/products/2900389>

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PLC-INTERFACE, integrated solid-state relay, with push-in connection, for mounting on NS 35/7,5 DIN rails, input: 230 V AC, output: 12 - 300 V DC/1 A

## Your advantages

- Wear-free switching with no contact bounce
- Resistant to vibrations and shocks
- Protective circuit in input and output
- Status indicator
- DC voltage outputs up to 300 V DC/1 A
- Option of bridging adjacent modules

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2900389                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 10 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C461                           |
| Product key                          | DK62A3                         |
| GTIN                                 | 4046356506922                  |
| Weight per piece (including packing) | 32.28 g                        |
| Weight per piece (excluding packing) | 34.09 g                        |
| Customs tariff number                | 85364900                       |
| Country of origin                    | DE                             |

## Technical data

### Product properties

|                |                                   |
|----------------|-----------------------------------|
| Product type   | Solid-state relay module          |
| Product family | PLC-INTERFACE                     |
| Application    | With integrated solid-state relay |
| Operating mode | 100% operating factor             |

### Insulation characteristics: Standards/regulations

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Overvoltage category | III              |
| Pollution degree     | 2                |

### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 01.04.2026 |
|------------------------------|------------|

### Electrical properties

|   |        |
|---|--------|
| Maximum power dissipation for nominal condition | 1.93 W |
|---|--------|

### Standards/regulations

|                          |        |
|--------------------------|--------|
| Rated insulation voltage | 300 V  |
| Rated surge voltage      | 2.5 kV |

### Input data

|  |                                    |
|--|------------------------------------|
| Nominal input voltage $U_N$                          | 230 V AC                           |
| Input voltage range in reference to $U_N$            | 0.8 ... 1.1                        |
| Input voltage range                                  | 184 V AC ... 253 V AC              |
| Switching threshold "0" signal in reference to $U_N$ | $\leq 0.4$                         |
| Switching threshold "1" signal in reference to $U_N$ | $\geq 0.8$                         |
| Typical input current at $U_N$                       | 8.4 mA                             |
| Typical response time                                | 19 ms                              |
| Typical turn-off time                                | 6 ms                               |
| Operating voltage display                            | Yellow LED                         |
| Protective circuit                                   | Bridge rectifier; Bridge rectifier |
| Transmission frequency                               | 10 Hz                              |

### Output data

|  |   |
|--|---|
| Designation                                      | Output data   |
| Contact switching type                           | 1 N/O contact   |
| Design of digital output                         | electronic  |
| Output voltage range                             | 12 V DC ... 300 V DC (Partition plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal points in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...) |
| Limiting continuous current                      | 1 A (see derating curve)  |
| Voltage drop at max. limiting continuous current | < 500 mV  |

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|                    |  |
|--------------------|--|
| Protective circuit | Reverse polarity protection; Polarity protection diode |
|                    | Surge protection; Varistor                             |

## Connection data

|                                  |  |
|----------------------------------|--|
| Connection method                | Push-in connection   |
| Stripping length                 | 10 mm  |
| Conductor cross-section rigid    | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                 |
| Conductor cross-section flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                 |
|                                  | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule) |
|                                  | 2x 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule)  |
| Conductor cross-section AWG      | 26 ... 14  |

## Dimensions

### Item dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 80 mm  |
| Depth  | 94 mm  |

## Material specifications

|  |                 |
|--|-----------------|
| Color  | gray (RAL 7042) |
| Flammability rating according to UL 94 (Housing) | V0 (Housing)    |

## Environmental and real-life conditions

### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

## Approvals

### CE

|             |              |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

### UKCA

|             |                |
|-------------|----------------|
| Certificate | UKCA-compliant |
|-------------|----------------|

### Shipbuilding approval

|             |            |
|-------------|------------|
| Certificate | TAE0000196 |
|-------------|------------|

### Corrosive gas test

|                |                            |
|----------------|----------------------------|
| Identification | ISA-S71.04. G3 Harsh Group |
|                | EN 60068-2-60              |

### Shipbuilding data

|             |     |
|-------------|-----|
| Temperature | D   |
| Humidity    | A   |
| Vibration   | B/C |

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|           |   |
|-----------|---|
| EMC       | B   |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

## EMC data

|                               |  |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive         |
| Low Voltage Directive         | Conformance with Low Voltage Directive |

## Standards and regulations

### Standards/regulations

|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

## Mounting

|                   |                           |
|-------------------|---------------------------|
| Mounting type     | DIN rail mounting         |
| Assembly note     | in rows with zero spacing |
| Mounting position | any                       |

## Drawings

Diagram



① Input voltages 220 V DC/230 V AC

The figure shows the derating curve for PLC-...300DC/1

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2900389>



**EAC**

Approval ID: RU\*C-DE.\*08.B.00010



**DNV GL**

Approval ID: TAE0000196



**cULus Listed**

Approval ID: E140324



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Approval ID: E140324

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371604 |
| ECLASS-15.0 | 27371604 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001504 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39122300 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|   |              |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes          |
| Exemption                               | 7(a), 7(c)-I |

### 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.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | 1bb90ab3-7e5a-438c-80dc-ec93af091f40 |

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 2.492 kg CO2e |
|---------|---------------|

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