

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



2980720

<https://www.phoenixcontact.com/gb/products/2980720>

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PLC-INTERFACE, integrated solid-state relay, with screw 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                          | 2980720                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | CK6213                         |
| Product key                          | CK6213                         |
| Catalog page                         | Page 408 (C-5-2019)            |
| GTIN                                 | 4046356051460                  |
| Weight per piece (including packing) | 37.72 g                        |
| Weight per piece (excluding packing) | 35.88 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

|            |                  |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

### Insulation characteristics: Standards/regulations

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

### 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                                                                                                                                                                                                                                        |

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

## Connection data

|                                  |                                                                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection method                | Screw connection                                                                                                                               |
| Stripping length                 | 8 mm                                                                                                                                           |
| Screw thread                     | M3                                                                                                                                             |
| 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> ... 1.5 mm <sup>2</sup> (TWIN ferrule)                                                                                  |
| Conductor cross section AWG      | 26 ... 14                                                                                                                                      |
| Tightening torque                | 0.45 Nm ... 0.55 Nm (Usually these terminal blocks must be supported during conductor connection (held by one hand, supported on the housing)) |

## Dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 80 mm  |
| Depth  | 95 mm  |

## Material specifications

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

### DNV GL data

|             |   |
|-------------|---|
| Temperature | D |
|-------------|---|

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|           |                                                                                         |
|-----------|-----------------------------------------------------------------------------------------|
| Humidity  | A                                                                                       |
| Vibration | B/C                                                                                     |
| EMC       | B                                                                                       |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

## EMC data

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

## Standards and regulations

### Standards/regulations

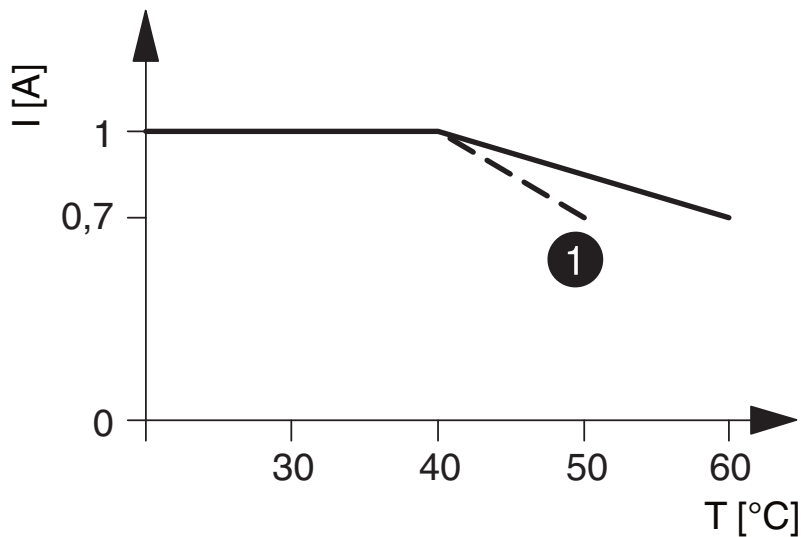
|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

## Mounting

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

## Drawings

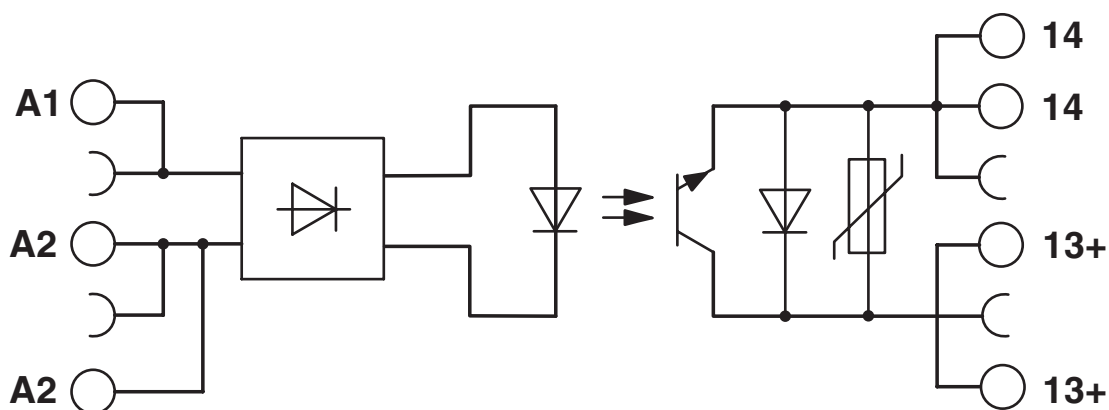
Diagram



### 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/gb/products/2980720>



**cUL Recognized**  
Approval ID: FILE E 238705



**UL Recognized**  
Approval ID: FILE E 238705



**EAC**  
Approval ID: TR\_TS\_D\_00573\_c



**DNV GL**  
Approval ID: TAE0000196



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



**UL Listed**  
Approval ID: FILE E 172140



**cUL Listed**  
Approval ID: FILE E 172140



**cULus Listed**  
Approval ID: E140324

**cULus Recognized**

**cULus Listed**

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27371604 |
| ECLASS-12.0 | 27371604 |
| ECLASS-13.0 | 27371604 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001504 |
|----------|----------|

### UNSPSC

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



Environmental product compliance

|            |                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                               |
| 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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## Accessories

**i** Note: Applying some accessories below might limit this product.

### FBST 500-PLC RD - Continuous plug-in bridge

2966786

<https://www.phoenixcontact.com/gb/products/2966786>



Continuous plug-in bridge, length: 500 mm, color: red

**i** Max. current carrying capacity: 32 A

---

### FBST 500-PLC BU - Continuous plug-in bridge

2966692

<https://www.phoenixcontact.com/gb/products/2966692>



Continuous plug-in bridge, length: 500 mm, color: blue

**i** Max. current carrying capacity: 32 A

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## FBST 500-PLC GY - Continuous plug-in bridge

2966838

<https://www.phoenixcontact.com/gb/products/2966838>



Continuous plug-in bridge, length: 500 mm, color: gray

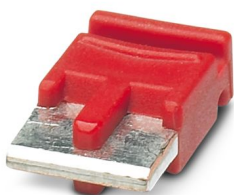
 Max. current carrying capacity: 32 A

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## FBST 6-PLC RD - Single plug-in bridge

2966236

<https://www.phoenixcontact.com/gb/products/2966236>



Single plug-in bridge, number of positions: 2, length: 6 mm, color: red

 Max. current carrying capacity: 6 A

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## FBST 6-PLC BU - Single plug-in bridge

2966812

<https://www.phoenixcontact.com/gb/products/2966812>

Single plug-in bridge, number of positions: 2, length: 6 mm, color: blue



 Max. current carrying capacity: 6 A

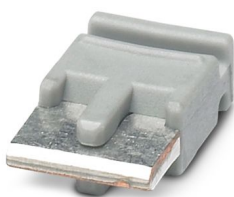
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## FBST 6-PLC GY - Single plug-in bridge

2966825

<https://www.phoenixcontact.com/gb/products/2966825>

Single plug-in bridge, number of positions: 2, length: 6 mm, color: gray



 Max. current carrying capacity: 6 A

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



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## FBST 8-PLC GY - Single plug-in bridge

2967688

<https://www.phoenixcontact.com/gb/products/2967688>

Single plug-in bridge, number of positions: 2, length: 8 mm, color: gray



 Max. current carrying capacity: 6 A

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## FBST 14-PLC BK - Single plug-in bridge

2967691

<https://www.phoenixcontact.com/gb/products/2967691>

Single plug-in bridge, number of positions: 2, length: 14 mm, color: black



 Max. current carrying capacity: 10 A

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



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## NS 35/ 7,5 PERF 2000MM - DIN rail perforated

0801733

<https://www.phoenixcontact.com/gb/products/0801733>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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## NS 35/ 7,5 UNPERF 2000MM - DIN rail, unperforated

0801681

<https://www.phoenixcontact.com/gb/products/0801681>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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



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<https://www.phoenixcontact.com/gb/products/2980720>

## NS 35/ 7,5 WH PERF 2000MM - DIN rail perforated

1204119

<https://www.phoenixcontact.com/gb/products/1204119>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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## NS 35/ 7,5 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204122

<https://www.phoenixcontact.com/gb/products/1204122>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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



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## NS 35/ 7,5 AL UNPERF 2000MM - DIN rail, unperforated

0801704

<https://www.phoenixcontact.com/gb/products/0801704>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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## NS 35/ 7,5 ZN PERF 2000MM - DIN rail perforated

1206421

<https://www.phoenixcontact.com/gb/products/1206421>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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## NS 35/ 7,5 ZN UNPERF 2000MM - DIN rail, unperforated

1206434

<https://www.phoenixcontact.com/gb/products/1206434>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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## NS 35/ 7,5 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

0801762

<https://www.phoenixcontact.com/gb/products/0801762>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

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



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## NS 35/ 7,5 CAP - End cap

1206560

<https://www.phoenixcontact.com/gb/products/1206560>

DIN rail end piece, for DIN rail NS 35/7.5



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## NS 35/15 PERF 2000MM - DIN rail perforated

1201730

<https://www.phoenixcontact.com/gb/products/1201730>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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



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## NS 35/15 UNPERF 2000MM - DIN rail, unperforated

1201714

<https://www.phoenixcontact.com/gb/products/1201714>



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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## NS 35/15 WH PERF 2000MM - DIN rail perforated

0806602

<https://www.phoenixcontact.com/gb/products/0806602>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: white

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



2980720

<https://www.phoenixcontact.com/gb/products/2980720>

## NS 35/15 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204135

<https://www.phoenixcontact.com/gb/products/1204135>



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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## NS 35/15 AL UNPERF 2000MM - DIN rail, unperforated

1201756

<https://www.phoenixcontact.com/gb/products/1201756>



DIN rail, unperforated, similar to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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



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## NS 35/15 ZN PERF 2000MM - DIN rail perforated

1206599

<https://www.phoenixcontact.com/gb/products/1206599>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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## NS 35/15 ZN UNPERF 2000MM - DIN rail, unperforated

1206586

<https://www.phoenixcontact.com/gb/products/1206586>



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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



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## NS 35/15 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201895

<https://www.phoenixcontact.com/gb/products/1201895>



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

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## NS 35/15 CAP - End cap

1206573

<https://www.phoenixcontact.com/gb/products/1206573>



DIN rail end piece, for DIN rail NS 35/15

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



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## NS 35/15-2,3 UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201798

<https://www.phoenixcontact.com/gb/products/1201798>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile 2.3 mm, color: silver

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## PLC-ATP BK - Separating plate

2966841

<https://www.phoenixcontact.com/gb/products/2966841>



Separating plate, 2 mm thick, required at the start and end of a PLC terminal strip. Furthermore, it is used for: visual separation of groups, safe isolation of different voltages of neighboring PLC relays in acc. with DIN VDE 0106-101, isolation

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## PLC-ESK GY - Power terminal block

2966508

<https://www.phoenixcontact.com/gb/products/2966508>



Power terminal block, for the input of up to four potentials, for mounting on NS 35/7.5

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## SZF 1-0,6X3,5 - Screwdriver

1204517

<https://www.phoenixcontact.com/gb/products/1204517>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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