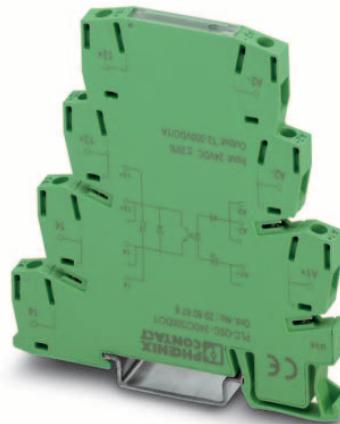


PLC-OS.../300DC/1

PLC INTERFACE With Integrated Solid-State Relay



INTERFACE

Data Sheet

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1 Description

The 6.2 mm **PLC-OS.../300DC/1** PLC INTERFACE module with screw or spring-cage connection has an integrated solid-state relay.

1.1 Input Voltages From 5 V to 230 V

PLC-OS.../300DC/1 is available on the control side in all common industrial voltages from 5 V to 230 V. A further advantage is the ready-integrated input circuit. It consists of a status indicator and polarity reversal protection function, and ensures that the operating state is displayed clearly, also preventing destruction of the optical electronics should the polarity be accidentally reversed.

1.2 Plug-In Bridges Save Wiring

The PLC INTERFACE module achieves maximum efficiency with the user-friendly FBST plug-in bridge system. PLC-OS.../300DC/1 makes effective use of the bridging options for the A1/A2 connection on the control side and for the supply at connection 13 on the load side. Especially efficient here are the 500 mm long color-insulated continuous plug-in bridges that can easily be cut to the required length and quickly inserted in the bridge shafts. They eliminate the need for complicated and time-consuming loop bridges.

1.3 Additional Advantages

- Switching power of up to 300 V DC/1 A
- Wear-resistant switching
- Integrated protective circuit
- Resistant to vibrations and shocks
- 4 kV_{rms} electrical isolation between input and output



Make sure you always use the latest documentation.
It can be downloaded at www.phoenixcontact.net/download.



This data sheet is valid for all products listed on the following page:

2 Ordering Data

PLC INTERFACE With Screw Connection, Housing Open on One Side

| Description | Type | Order No. | Pcs./Pck. |
|---|---|-----------|-----------|
| PLC INTERFACE with integrated solid-state relay | 5 V DC PLC-OSC-5DC/300DC/1 | 2980652 | 10 |
| PLC INTERFACE with integrated solid-state relay | 12 V DC PLC-OSC-12DC/300DC/1 | 2980665 | 10 |
| PLC INTERFACE with integrated solid-state relay | 24 V DC PLC-OSC-24DC/300DC/1 | 2980678 | 10 |
| PLC INTERFACE with integrated solid-state relay | 48 V DC ... 60 V DC PLC-OSC-60DC/300DC/1 | 2980681 | 10 |
| PLC INTERFACE with integrated solid-state relay | 110 V DC PLC-OSC-110DC/300DC/1 | 2980694 | 10 |
| PLC INTERFACE with integrated solid-state relay | 125 V DC PLC-OSC-125DC/300DC/1 | 2982210 | 10 |
| PLC INTERFACE with integrated solid-state relay | 220 V DC PLC-OSC-220DC/300DC/1 | 2980704 | 10 |
| PLC INTERFACE with integrated solid-state relay | 120 V AC PLC-OSC-120AC/300DC/1 | 2980717 | 10 |
| PLC INTERFACE with integrated solid-state relay | 230 V AC ¹ PLC-OSC-230AC/300DC/1 | 2980720 | 10 |

PLC INTERFACE With Spring-Cage Connection, Housing Open on One Side

| Description | Type | Order No. | Pcs./Pck. |
|---|---|-----------|-----------|
| PLC INTERFACE with integrated solid-state relay | 5 V DC PLC-OSP-5DC/300DC/1 | 2980814 | 10 |
| PLC INTERFACE with integrated solid-state relay | 12 V DC PLC-OSP-12DC/300DC/1 | 2980827 | 10 |
| PLC INTERFACE with integrated solid-state relay | 24 V DC PLC-OSP-24DC/300DC/1 | 2980830 | 10 |
| PLC INTERFACE with integrated solid-state relay | 48 V DC ... 60 V DC PLC-OSP-60DC/300DC/1 | 2980843 | 10 |
| PLC INTERFACE with integrated solid-state relay | 110 V DC PLC-OSP-110DC/300DC/1 | 2980856 | 10 |
| PLC INTERFACE with integrated solid-state relay | 125 V DC PLC-OSP-125DC/300DC/1 | 2982223 | 10 |
| PLC INTERFACE with integrated solid-state relay | 220 V DC PLC-OSP-220DC/300DC/1 | 2980869 | 10 |
| PLC INTERFACE with integrated solid-state relay | 120 V AC PLC-OSP-120AC/300DC/1 | 2980872 | 10 |
| PLC INTERFACE with integrated solid-state relay | 230 V AC ¹ PLC-OSP-230AC/300DC/1 | 2980885 | 10 |

¹ The PLC-ATP BK insulating plate must be installed for voltages greater than 250 V (L1, L2, L3) between the same terminal points on adjacent modules (see "Accessories"). FBST 8-PLC... or FBST 500... is then used for potential bridging.



For the protection of input and output, inductive loads must be damped with an effective protective circuit.

Accessories

| Description | Type | Order No. | Pcs./Pck. |
|------------------|------------|-----------|-----------|
| Insulating plate | PLC-ATP BK | 2966841 | 25 |

The PLC-ATP BK insulating plate should be used in the following cases: always fit at the start and end of a PLC terminal strip for voltages greater than 250 V (L1, L2, L3) between the same terminal points on adjacent modules (FBST 8-PLC... or FBST 500... can be used for potential bridging) and for safe isolation between adjacent modules.

For additional accessories such as power terminal blocks and plug-in bridges, please refer to the INTERFACE catalog or www.phoenixcontact.com.

3 Technical Data

| Input Data | DC | | | | | | AC | |
|--|---|---------|---------|----------------|-----------------------|----------|--|-----------------------|
| Nominal input voltage ¹ | 5 V DC | 12 V DC | 24 V DC | 48 ... 60 V DC | 110 V DC | 125 V DC | 220 V DC | 120 V AC 230 V AC |
| Permissible range (with reference to U_N) | 0.8 ... 1.2 x U_N | | | | | | 0.8 ... 1.1 x U_N | |
| Switching level | | | | | | | | |
| 1 signal ("H") | | | | | $\geq 0.8 \times U_N$ | | | $\geq 0.8 \times U_N$ |
| 0 signal ("L") | | | | | $\leq 0.4 \times U_N$ | | | $\leq 0.4 \times U_N$ |
| Typical input current at U_N | 5 mA | 6 mA | 8 mA | 5 mA | 5 mA | 6 mA | 3 mA | 3 mA |
| Typical response time at U_N | 800 µs | 300 µs | 300 µs | 300 µs | 400 µs | 400 µs | 400 µs | 19 ms |
| Typical release time at U_N | 1.5 ms | 800 µs | 700 µs | 700 µs | 700 µs | 700 µs | 1.4 ms | 6 ms |
| Transmission frequency f_{limit} | | | | 50 Hz | | | | 50 Hz |
| Input circuit | Yellow LED, polarity protection, surge protection | | | | | | Yellow LED, surge protection, bridge rectifier | |

¹ The PLC-ATP BK insulating plate must be installed for voltages greater than 250 V (L1, L2, L3) between the same terminal points on adjacent modules (see "Accessories"). FBST 8-PLC... or FBST 500... is then used for potential bridging.

Output Data

| | |
|---|--|
| Nominal output voltage range ¹ | 12 V DC ... 300 V DC |
| Limiting continuous current | 1 A (see "Derating Curve" on page 4) |
| Output configuration | 2-wire floating |
| Output circuit | Protection against polarity reversal, surge protection |
| Voltage drop at maximum limiting continuous current | < 500 mV |

¹ The PLC-ATP BK insulating plate must be installed for voltages greater than 250 V (L1, L2, L3) between the same terminal points on adjacent modules (see "Accessories"). FBST 8-PLC... or FBST 500... is then used for potential bridging.

General Data

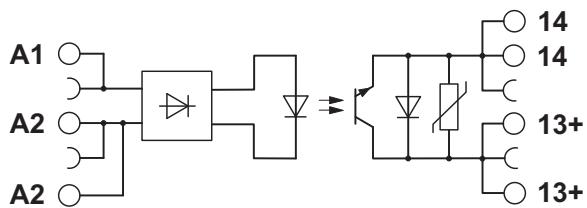
| | |
|--|--|
| Rated insulation voltage | 300 V |
| Impulse voltage withstand level | 4 kV, 50 Hz, 1 minute |
| Ambient temperature range | -20°C ... 60°C |
| Nominal operating mode | 100% operating factor |
| Inflammability class according to UL 94 (housing) | V0 |
| Air and creepage distances between the circuits ¹ | DIN EN 50178 (basic insulation) |
| Pollution degree | 2 |
| Surge voltage category | III |
| Mounting position | Any |
| Assembly | Can be aligned without spacing |
| Conductor cross section | |
| Screw connection | 0.14 mm ² ... 2.5 mm ² |
| Spring-cage connection | 0.2 mm ² ... 2.5 mm ² |
| Stripping length | 8 mm |
| Dimensions (W x H x D) | 6.2 mm x 86 mm x 80 mm |
| Housing material | Polybutylene terephthalate PBT non-reinforced, green |

¹ The PLC-ATP BK insulating plate must be installed for safe isolation between adjacent modules (see "Accessories"). FBST 8-PLC... or FBST 500... is then used for potential bridging.

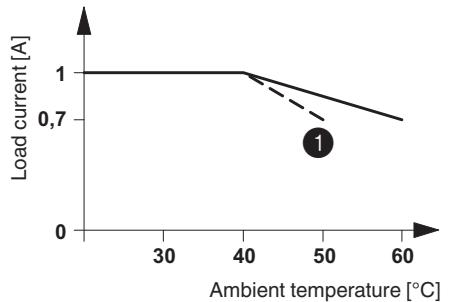
Tests/Approvals

| | |
|-----|-------------|
| CE | CE |
| UL | Applied for |
| CUL | Applied for |
| GL | Applied for |

4 Block Diagram



5 Derating Curve





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.