

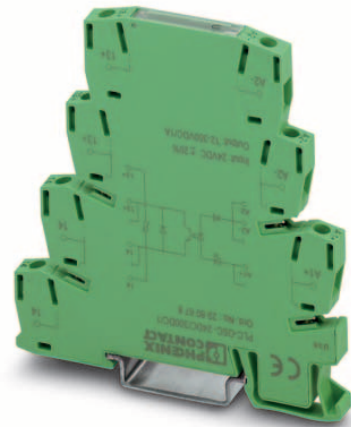
PLC-OS.../300DC/1

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 dampened 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	3 mA	
Typical response time at U_N	800 μ s	300 μ s	300 μ s	300 μ s	400 μ s	400 μ s	400 μ s	19 ms	19 ms	
Typical release time at U_N	1.5 ms	800 μ s	700 μ s	700 μ s	700 μ s	700 μ s	1.4 ms	6 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	

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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

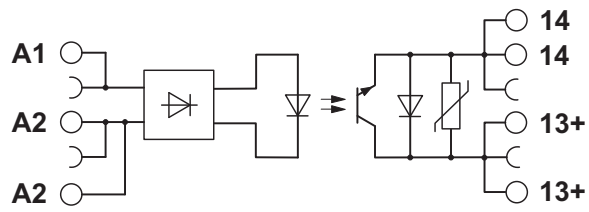
¹ The PLC-ATP BK insulating plate must be installed for voltages greater than 250 V (L1, L2, L3) between the same terminal points on adjacent modules (see "Accessories"). FBST 8-PLC... or FBST 500... is then used for potential bridging.

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

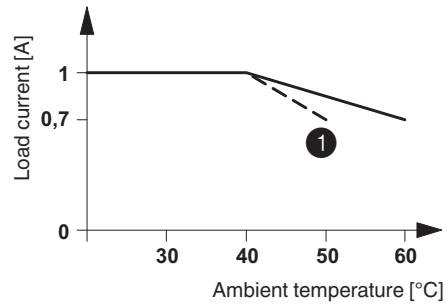
¹ The PLC-ATP BK insulating plate must be installed for safe isolation between adjacent modules (see "Accessories"). FBST 8-PLC... or FBST 500... is then used for potential bridging.

Tests/Approvals	
CE	CE
UL	Applied for
CUL	Applied for
GL	Applied for

4 Block Diagram



5 Derating Curve



① For input voltages of 220 V DC and 230 V AC

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