PLC-OS…- 24DC/24DC/2/ACT

PLC INTERFACE With Solid-State Relay, Actuator Version



INTERFACE

Data Sheet
103150_en_01

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1 Description

In applications as the interface between the PLC and actuators (e.g., motors, contactors or solenoid valves), as a rule only one N/O contact is required. In this case, the **PLC-OS…- 24DC/24DC/2/ACT** output module can be used, which is specially optimized for these applications and consists of a 6.2 mm basic terminal block and plug-in miniature solid-state relay with screw or spring-cage connection.

1.1 No Need for Output Terminal Blocks

Unlike conventional solid-state relays, all actuator connections, including the load return line, are connected directly to the PLC INTERFACE module. The PLC-OS…- 24DC/24DC/2/ACT can thus be used directly as an output terminal strip with integrated interface function for the outgoing actuator cables, without the need for additional modular terminal blocks (see also INTERFACE catalog).

- Elimination of two output terminal blocks for switching and load return lines
- Space savings of around 80%
- Time saving of around 60%
- Reduction in wiring due to plug-in bridges

1.2 Optimum Use of Plug-In Bridges

The PLC INTERFACE module achieves maximum efficiency with the user-friendly FBST plug-in bridge system. The PLC-OS…- 24DC/24DC/2/ACT makes effective use of the bridging options for the A1/A2 connection on the coil side, for the load supply at connection 13 on the contact side, and for the load return line. Especially effective 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 – the reduction in wiring by eliminating the need for modular terminal blocks and the use of all bridging options is around 60%.

1.3 Additional Advantages

- Switching power of up to 24 V DC/3 A, depending on the type
- IP67-protected fully encapsulated optical electronics
- Available with input or power solid-state relays as an option
- Integrated input circuit
- Solid-state relay can be replaced using an engagement lever
- Wear-resistant switching
- Resistant to vibrations and shocks
- Inflammability class V0 according to UL94

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

A conversion table is available on the Internet at
www.download.phoenixcontact.com/general/7000_en_00.pdf.

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

2 Ordering Data

PLC INTERFACE With Solid-State Relay, Actuator Version

Description		Type	Order No.	Pcs./Pck.
PLC INTERFACE, comprising PLC-BSC...ACT basic terminal block and plug-in miniature solid-state relay (see INTERFACE catalog), with screw connection, for mounting on ⊓. Other input voltages on request.	24 V DC	PLC-OSC- 24DC/24DC/2/ACT	2966676	10
PLC INTERFACE, comprising PLC-BSC...ACT basic terminal block and plug-in miniature solid-state relay (see INTERFACE catalog), with spring-cage connection, for mounting on ⊓. Other input voltages on request.	24 V DC	PLC-OSP- 24DC/24DC/2/ACT	2967507	10

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	
Nominal input voltage	24 V DC
Permissible range (with reference to U_N)	0.8 ... 1.2 x U_N
Switching level	
1 signal ("H")	0.8 x U_N
0 signal ("L")	0.4 x U_N
Typical input current at U_N	9 mA
Typical response time at U_N	20 µs
Typical release time at U_N	500 µs
Transmission frequency f_{limit}	300 Hz
Input circuit	Yellow LED, protection against polarity reversal, free-wheeling diode

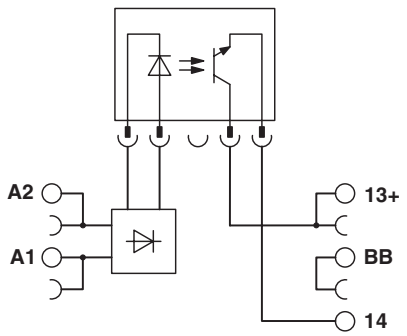
Output Data	
Maximum switching voltage	33 V DC
Minimum switching voltage	3 V DC
Limiting continuous current	3 A (see "Derating Curve" on page 3)
Maximum inrush current	15 A (10 ms)
Output configuration	2-wire floating
Output circuit	Protection against polarity reversal, surge protection
Voltage drop at maximum limiting continuous current	≤ 200 mV

General Data	
Impulse voltage withstand level	2.5 kV, 50 Hz, 1 min.
Ambient temperature range	
Operation	-25°C ... 60°C
Storage/transport	-40°C ... 85°C
Nominal operating mode	100% operating factor
Inflammability class according to UL 94 (housing)	V0
Standards/specifications[1]	IEC 60664, IEC 60664 A, DIN VDE 0110 (basic insulation)
Pollution degree	2
Surge voltage category	III
Mounting position	Any
Mounting	Can be aligned without spacing
Conductor cross-section	
Solid, with screw connection	0.14 mm² ... 2.5 mm² (26 - 14 AWG)
Stranded, with screw connection	0.14 mm² ... 1.5 mm² (26 - 14 AWG)
Solid, with spring-cage connection	0.2 mm² ... 2.5 mm² (24 - 14 AWG)
Stranded, with spring-cage connection	0.2 mm² ... 1.5 mm² (24 - 14 AWG)
Stripping length	
Screw connection	10 mm
Spring-cage connection	8 mm
Dimensions (W x H x D)	6.2 mm x 94 mm x 80 mm
Housing material	Polyamide PA, green

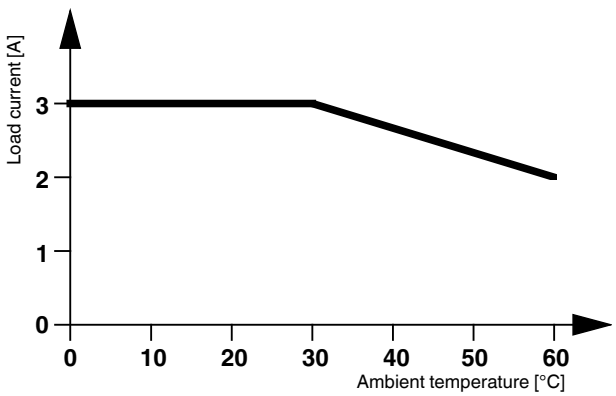
[1] The PLC-ATP BK insulating plate must be installed for safe isolation between adjacent modules (see "Accessories"). FBST 8-PLC... or FBST 500... is then used for potential bridging.

Tests/Approvals	
CE	CE
UL	
GL	

4 Block Diagram



5 Derating Curve



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