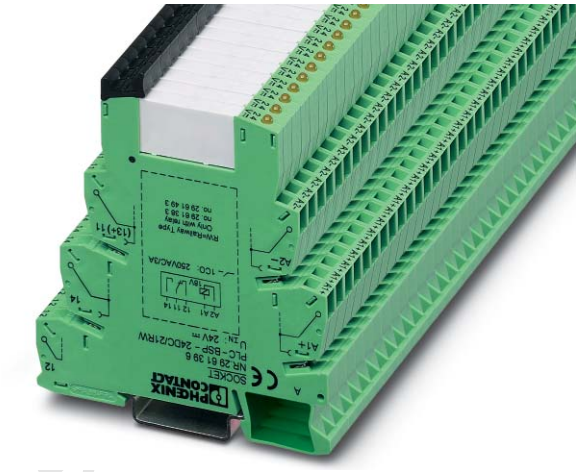
PHOENIX CONTACT
INSPIRING INNOVATIONS

PLC INTERFACE With Extended Input Voltage and Temperature Range for Railway Applications PLC-BSP-.../21RW

1. Short Description

PLC INTERFACE, the super thin, plug-in, and flexible modular interface system with a user-friendly plug-in bridge system, now offers an extended range of relay interfaces for applications in electrical equipment on rail vehicles.



Railway Application

The new PLC-BSP-24DC/21RW interface module with extended input voltage and temperature range is designed for use according to DIN EN 50155/VDE 0115 Part 200 "Railway Applications Part 200: Electronic Equipment Used on Rolling Stock".

The 6.2 mm (0.244 in.) PLC-BSP-...RW version has been specially developed for applications on rail vehicles, which are operated with an AC voltage, where the operating voltage is supplied via contact lines using a transformer with charger and battery.

The PLC-BSP...RW is designed with a permissible operating voltage of 0.7 x U_{Nom} to 1.25 x U_{Nom}.

The temperature of the air inside the vehicle and its housing can increase to up to +70°C (+158°F) due to external influences. The PLC-BSP...RW meets this extreme requirement without any problems with its temperature range of -25°C to +70°C (-13°F to +158°F).

The PLC-BSP...RW is supplied exclusively as a basic terminal block without a relay component. For possible components, please refer to the Technical Data.

All Other PLC Advantages

The PLC-…RW series also features the other advantages of the PLC range:

- Super-thin 6.2 mm (0.244 in.) design
- Universal SPDT series
- User-friendly, vibration-resistant, and time-saving plug-in bridge system
- Integrated input wiring and protective circuit
- Relay can be quickly replaced using an engagement lever
- Etc.

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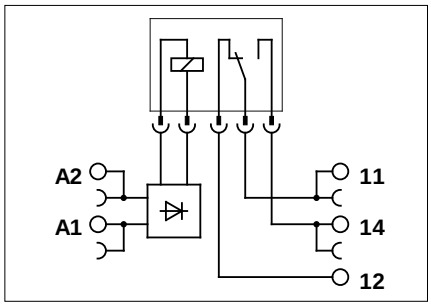
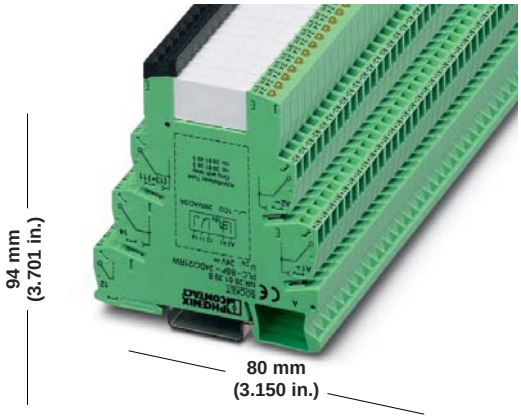
2. Technical Data



Circuit diagram



Note: Please refer to the INTERFACE catalog for installation instructions and accessories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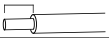
8 mm (0.31 in.)

	Solid [mm²]	Flexible [mm²]	AWG	I [A]	U [V]
Connection data	0.14 - 2.5	0.14 - 2.5	26 - 14	*	*

* The electrical data is determined by the relay.

PLC-BSP-.../21/RW

basic terminal block that can be fitted with a relay

Housing width 6.2 mm (0.244 in.) (GL, cULus provided)

[1] The technical data only applies to basic terminal blocks fitted with a REL-MR-18DC/21 or REL-MR-18DC/21AU

Description	Input voltage U_N	Type	Order No.	Pcs. /Pkt
PLC interface with screw connection PLC-BSP…/21RW basic terminal block for plug-in REL-MR-18DC... miniature relay, for mounting on ⊔	24 V DC	**PLC-BSP-24DC/21RW**	**29 61 39 6**	**10**
Suitable plug-in miniature relay	Gold contact Power contact	**REL-MR-18DC/21AU** **REL-MR-18DC/21**	**29 61 49 3** **29 61 38 3**	**18** **18**

Technical Data[1]

Input Data			
Nominal input voltage U_N		24 V DC	
Permissible range (with reference to U_N and T_u = 20°C [68°F])		0.65	
Typical input current at U_N		12 mA	
Typical response time/release time at U_N		5 ms/8 ms	
Input wiring		Operating indicator, diode for polarity reversal protection, free-wheeling diode	
Output Data (when fitted with...)		**REL-MR-18DC/21**	**REL-MR-18DC/21AU**
Contact type		Single contact, 1 PDT	Single contact, 1 PDT
Contact material		AgSnO	Ag alloy, hard gold-plated
Maximum switching voltage		250 V AC/DC	30 V AC/36 V DC
Minimum switching voltage		12 V AC/DC	100 mV
Limiting continuous current		3 A	50 mA
Maximum inrush current		On request	50 mA
Minimum switching current		10 mA	1 mA
Maximum shutdown power, ohmic load:	24 V DC	72 W	1.2 W
	48 V DC	20 W	-
	60 V DC	18 W	-
	110 V DC	23 W	-
	220 V DC	40 W	-
	250 V AC	750 VA	-
Minimum switching power		120 mW	100 µW
General Data			
Test voltage I/O		4 kV, 50 Hz, 1 minute	
Ambient operating temperature range		-25 °C to +70°C (-4°F to +158°F)	
Nominal operating mode		100% ED	
Inflammability class		V0 according to UL 94	
Mechanical service life		2 x 10^7 cycles	
Standards/specifications		IEC 60 664/IEC 60 664 A/DIN VDE 0110, degree of pollution 3, Surge Voltage Category III, DIN EN 50 178/VDE 0160 (in relev. parts), IEC 60 255/DIN VDE 0435 (in relev. parts), DIN VDE 0106-101: 1986-11, reinforced insulation for I/O	
Mounting position/mounting		Any/can be mounted without spacing	