

# PLC-BSP-120UC/21/SO46 - Relay base



2980351

<https://www.phoenixcontact.com/us/products/2980351>

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6.2 mm PLC basic terminal block with protection against interference currents/voltages on the control side, with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 1 changeover contact, input voltage 120 V AC

## Your advantages

- Resistant to interference currents
- High relay release voltage

## Commercial data

Item number	2980351
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C461
Product key	DK6221
GTIN	4017918895761
Weight per piece (including packing)	28.8 g
Weight per piece (excluding packing)	26.96 g
Customs tariff number	85366990
Country of origin	DE

## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Relay socket
Product family	PLC-INTERFACE
Application	Filter to prevent interference
Operating mode	100% operating factor
Compatible components	Miniature relay, REL-MR-60DC/21AU, REL-MR-60DC/21; miniature optocoupler, OPT-60DC/48DC/100, OPT-60DC/24DC/2, OPT-60DC/230AC/1

### Electrical properties

Protective circuit	Bridge rectifier; Bridge rectifier
	RCZ filter; RCZ filter

### Input data

Nominal input voltage $U_N$	120 V AC
	120 V AC

#### Relay assembly

Nominal input voltage $U_N$	120 V AC
Input voltage range in reference to $U_N$	0.8 ... 1.4
Typical input current at $U_N$	7 mA (50 Hz)
	8 mA (60 Hz)
Typical response time	7 ms
Typical release time	20 ms
Typical release voltage	50 V AC
Operating voltage display	Yellow LED
Protective circuit	Bridge rectifier; Bridge rectifier
	Filter; Filter

#### Optocoupler assembly

Nominal input voltage $U_N$	120 V AC
Input voltage range in reference to $U_N$	0.85 ... 1.1
Typical input current at $U_N$	7 mA (50 Hz)
	8 mA (60 Hz)
Switching threshold "0" signal in reference to $U_N$	$\leq 0.4$
Typical response time	6 ms
Typical release time	10 ms
Operating voltage display	Yellow LED

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Protective circuit	Bridge rectifier; Bridge rectifier
	Filter; Filter

## Output data

Compatible components	Miniature relay, REL-MR-60DC/21AU, REL-MR-60DC/21; miniature optocoupler, OPT-60DC/48DC/100, OPT-60DC/24DC/2, OPT-60DC/230AC/1
Maximum switching voltage	48 V DC
Minimum switching voltage	3 V DC
Limiting continuous current	100 mA
Voltage drop at max. limiting continuous current	< 1 V DC
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection
	Surge protection
Maximum switching voltage	30 V DC
Minimum switching voltage	3 V DC
Limiting continuous current	3 A
Voltage drop at max. limiting continuous current	< 200 mV
Maximum inrush current	15 A (10 ms)
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection
	Surge protection
Maximum switching voltage	253 V AC (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...)
Minimum switching voltage	24 V AC
Limiting continuous current	0.75 A
Voltage drop at max. limiting continuous current	< 1 V AC
Maximum inrush current	30 A (10 ms)
Output circuit	2-conductor, floating
Protective circuit	RCV circuit
Leakage current	< 1 mA
Phase angle cos phi min	0.5
Max. load value	4.5 A <sup>2</sup> s

## Connection data

### Input side

Connection method	Spring-cage connection
Stripping length	8 mm
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>
Conductor cross-section AWG	26 ... 14

### Output side

Connection method	Spring-cage connection
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Stripping length	8 mm
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>
Conductor cross-section AWG	26 ... 14

## Signaling

Status display	LED
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## Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

## Material specifications

Color	green (RAL 6021)
Flammability rating according to UL 94 (Housing)	V0 (Housing)

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

## Drawings

Application drawing



Occurrence of interference signals  
Scenario 1: controller - AC output card

Application drawing

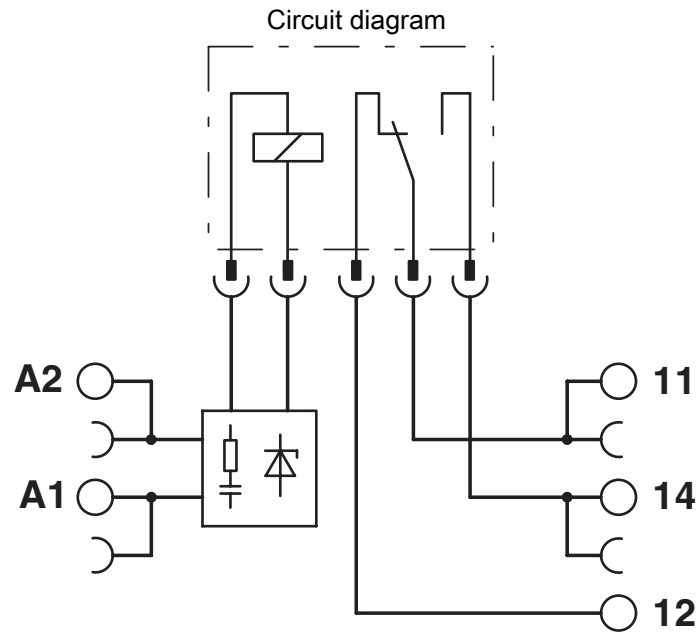


Occurrence of interference signals  
Scenario 2: long signal cables

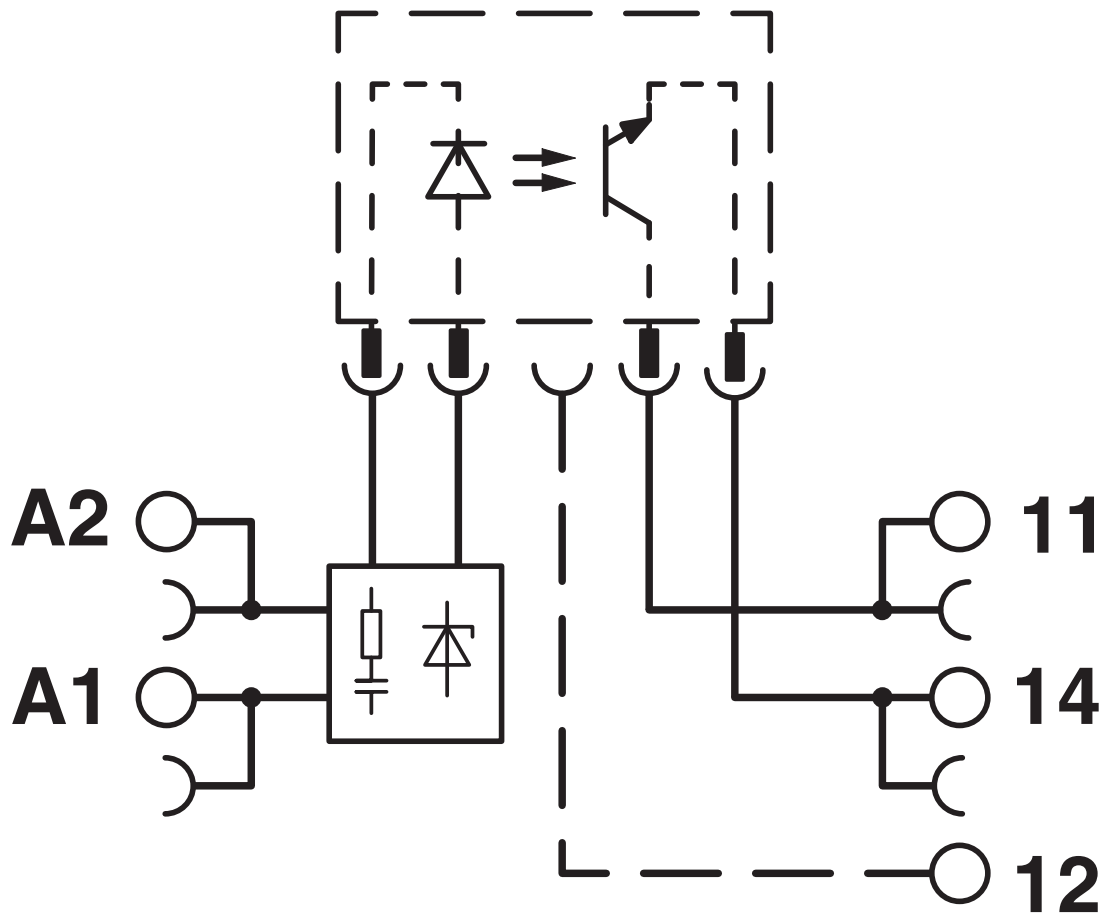
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Circuit diagram



DC output

Circuit diagram



AC output

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## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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