

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



2980319

<https://www.phoenixcontact.com/us/products/2980319>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



6.2 mm PLC basic terminal block with protection against interference currents/voltages on the control side, with screw 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	2980319
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C461
Product key	DK622M
GTIN	4017918895709
Weight per piece (including packing)	35.345 g
Weight per piece (excluding packing)	30.2 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
----------	---

### 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

#### Insulation characteristics

Pollution degree	3
------------------	---

### Electrical properties

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

### Input data

Nominal input voltage $U_N$	120 V AC
	110 V DC
	The nominal voltage of the plug-on electromechanical relay or solid-state relay (see necessary accessories) deviates from the nominal input voltage of the base with integrated upstream circuit
	120 V AC
	110 V DC
	The nominal voltage of the plug-on electromechanical relay or solid-state relay (see necessary accessories) deviates from the nominal input voltage of the base with integrated upstream circuit

### Relay assembly

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

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



2980319

<https://www.phoenixcontact.com/us/products/2980319>

	Filter; Filter
Optocoupler assembly	
Nominal input voltage $U_N$	120 V AC
	110 V DC
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
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
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
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

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



2980319

<https://www.phoenixcontact.com/us/products/2980319>

Max. load value	4.5 A <sup>2</sup> s
-----------------	----------------------

## Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
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>
	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule)
	2x 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (TWIN ferrule)
Conductor cross section AWG	26 ... 14
Tightening torque	0.6 Nm ... 0.8 Nm

## Signaling

Status display	LED
----------------	-----

## Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

## Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94 (Housing)	V0 (Housing)

## Environmental and real-life conditions

### Ambient conditions

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

## Approvals

### CE

Certificate	CE-compliant
-------------	--------------

### UKCA

Certificate	UKCA-compliant
-------------	----------------

### Shipbuilding approval

Certificate	TAE0000196
-------------	------------

### Corrosive gas test

Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

### Shipbuilding data

Temperature	D
-------------	---

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



2980319

<https://www.phoenixcontact.com/us/products/2980319>

Humidity	A
Vibration	B/C
EMC	B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

## EMC data

Electromagnetic compatibility	Conformance with EMC directive
Low Voltage Directive	Conformance with Low Voltage Directive

## Standards and regulations

Standards/regulations	IEC/EN 60664-1
-----------------------	----------------

## Mounting

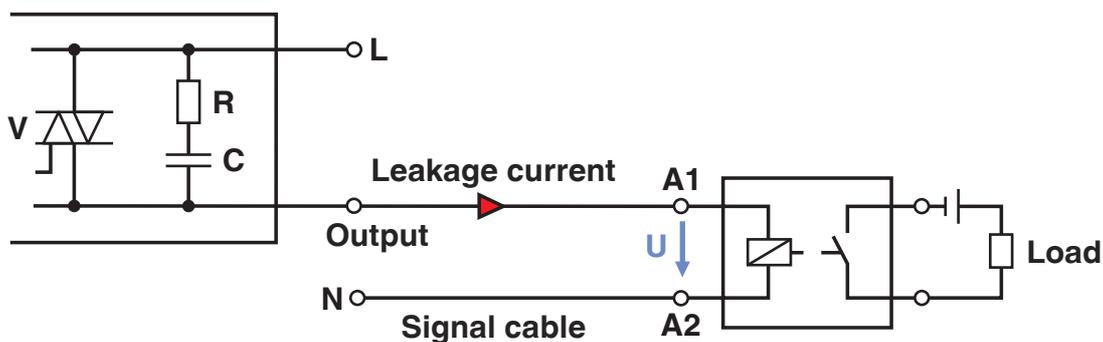
Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

2980319

<https://www.phoenixcontact.com/us/products/2980319>

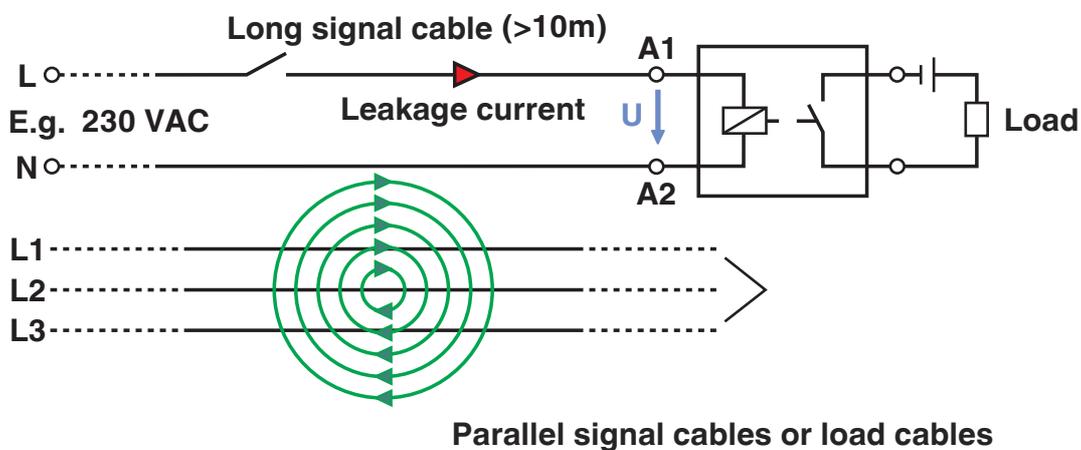
## Drawings

Application drawing



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

Application drawing



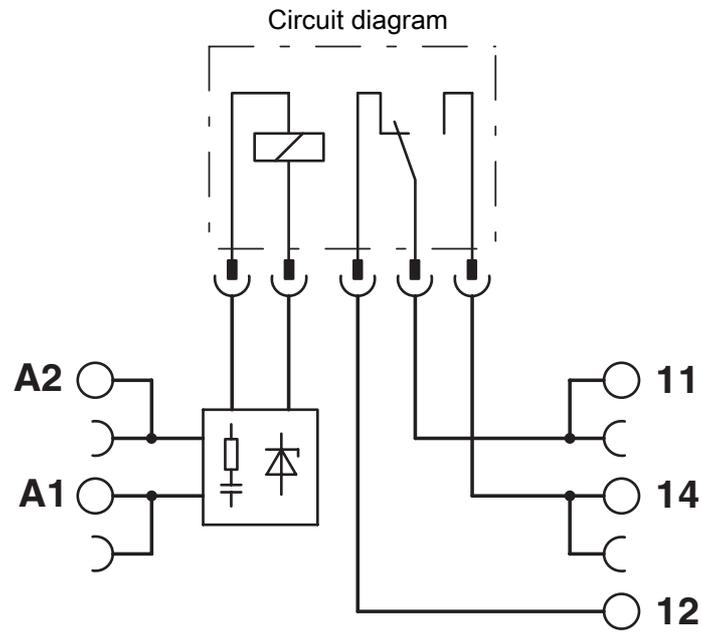
Occurrence of interference signals  
Scenario 2: long signal cables

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

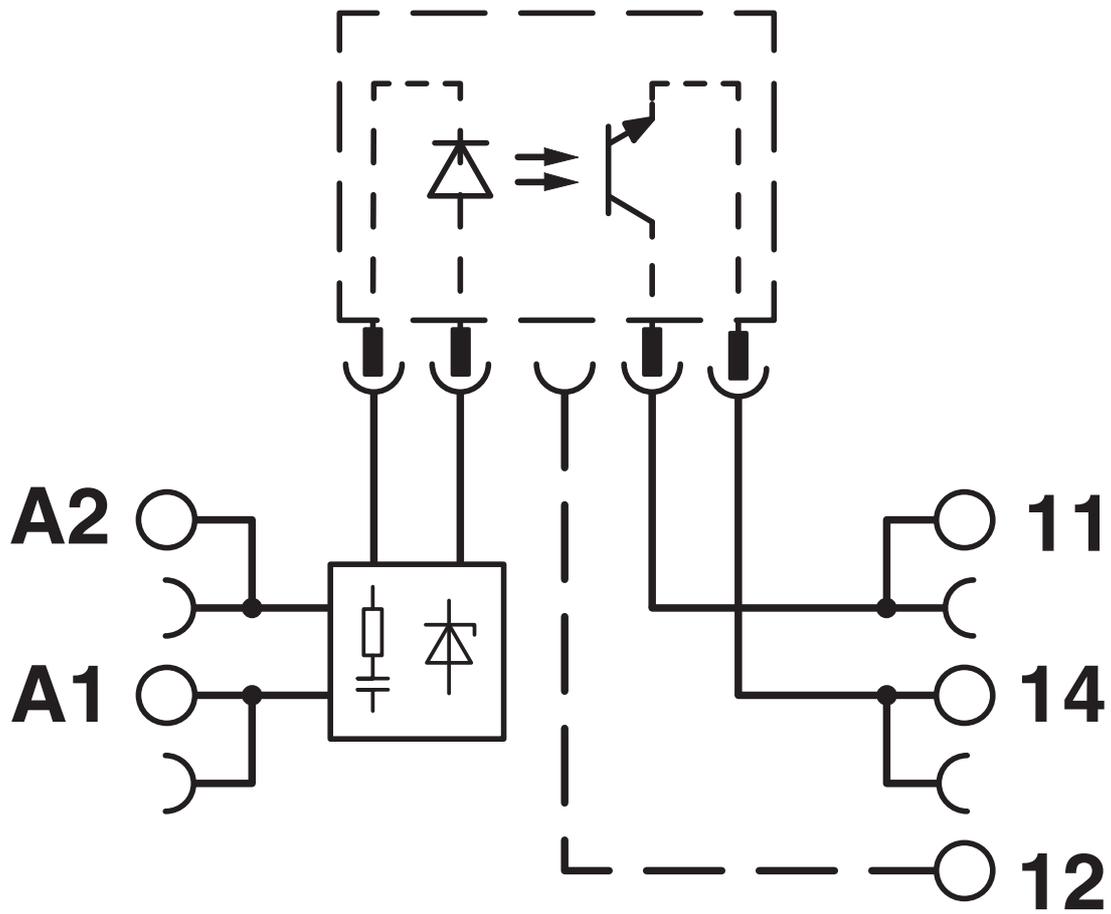


2980319

<https://www.phoenixcontact.com/us/products/2980319>

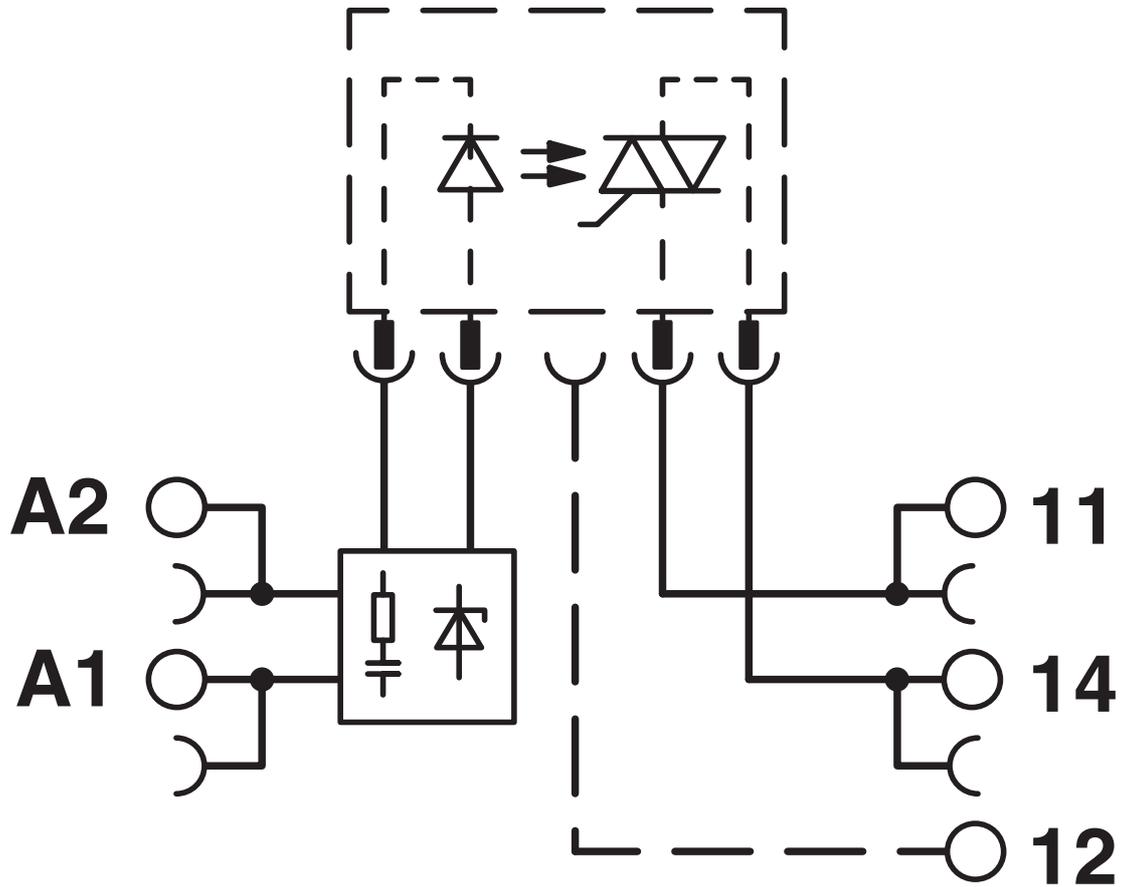


Circuit diagram



DC output

Circuit diagram



AC output

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



2980319

<https://www.phoenixcontact.com/us/products/2980319>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2980319>



**cUL Recognized**  
Approval ID: E238705



**UL Recognized**  
Approval ID: E238705



**EAC**  
Approval ID: RU D-DE.B\*00573/18



**DNV GL**  
Approval ID: TAE0000196

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



2980319

<https://www.phoenixcontact.com/us/products/2980319>

## Classifications

### ECLASS

ECLASS-13.0	27371603
ECLASS-15.0	27371603

### ETIM

ETIM 9.0	EC001456
----------	----------

### UNSPSC

UNSPSC 21.0	39122300
-------------	----------

2980319

<https://www.phoenixcontact.com/us/products/2980319>

## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### 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.)	Hexahydromethylphthalic anhydride(CAS: n/a)
	Lead(CAS: 7439-92-1)
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7)
SCIP	21bc45aa-b1c3-4d5e-a39a-db8d2c42bd99

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
 586 Fulling Mill Road  
 Middletown, PA 17057, United States  
 (+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)