

## Relay Module - PLC-RPT-120UC/21 - 2900304

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PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with push-in technology and plug-in miniature relay with power contact, for mounting on NS 35/7,5 DIN rails, 1 PDT, input voltage: 120 V AC/110 V DC

### Why buy this product

- ✓ Slim design
- ✓ Efficient connection to system cabling using V8 adapter
- ✓ RT III sealed relay
- ✓ Safe isolation according to DIN EN 50178 between coil and contact
- ✓ Functional plug-in bridges
- ✓ Integrated input circuit and interference suppression circuit



### Key Commercial Data

Packing unit	10 STK
GTIN	 4 046356 507165
GTIN	4046356507165
Weight per Piece (excluding packing)	36.270 g
Custom tariff number	85364900
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

#### Ambient conditions

# Relay Module - PLC-RPT-120UC/21 - 2900304

## Technical data

### Ambient conditions

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

### Coil side

Nominal input voltage $U_N$	120 V AC
	110 V DC
Typical input current at $U_N$	3.5 mA (at $U_N = 120$ V AC)
	3 mA (at $U_N = 110$ V DC)
Typical response time	6 ms
Typical release time	15 ms
Protective circuit	Bridge rectifier Bridge rectifier
Operating voltage display	Yellow LED
Power dissipation for nominal condition	0.42 W

### Contact side

Contact type	1 PDT
Type of switch contact	Single contact
Contact material	AgSnO
Maximum switching voltage	250 V AC/DC (The separating plate PLC-ATP should be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...)
Minimum switching voltage	5 V (at 100 mA)
Min. switching current	10 mA (at 12 V)
Maximum inrush current	10 A (4 s)
Limiting continuous current	6 A
Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	20 W (at 48 V DC)
	18 W (at 60 V DC)
	23 W (at 110 V DC)
	40 W (at 220 V DC)
	1500 VA (for 250 V AC)
Switching capacity in acc. with DIN VDE 0660/IEC 60947	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.1 A (at 220 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 230 V, AC15)

### Connection data input side

Connection name	Coil side
Connection method	Push-in connection
Stripping length	8 mm

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## Technical data

### Connection data input side

Conductor cross section solid	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

### Connection data output side

Connection name	Contact side
Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	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

### General

Note	Separating plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or FBST 500....
Test voltage relay winding/relay contact	4 kV AC (50 Hz, 1 min.)
Operating mode	100% operating factor
Degree of protection	RT III (Relay) IP20 (Relay base)
Mechanical service life	2 x 10 <sup>7</sup> cycles
Mounting position	any
Assembly instructions	In rows with zero spacing

### Standards and Regulations

Connection in acc. with standard	CUL
Designation	Standards/regulations
Standards/regulations	IEC 60664 IEC 60664A DIN VDE 0110 DIN EN 50178/DIN VDE 0160 (in relevant parts) DIN EN 50178/VDE 0160 IEC 60255/DIN VDE 0435 (in relevant parts)
Degree of pollution	3
Overvoltage category	III
Flammability rating according to UL 94	V0

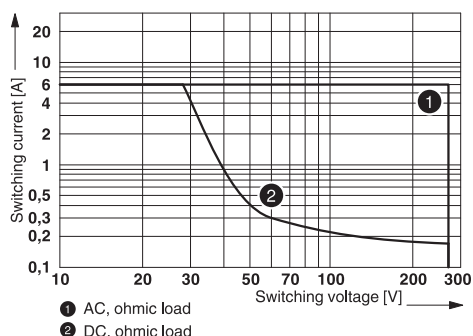
### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

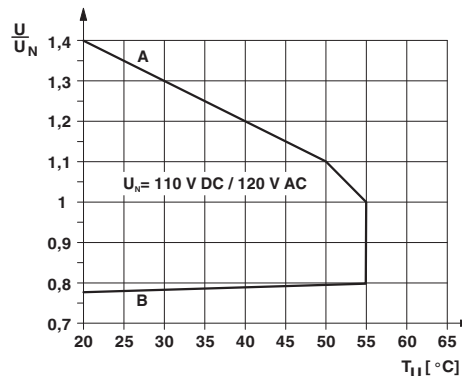
# Relay Module - PLC-RPT-120UC/21 - 2900304

Diagram



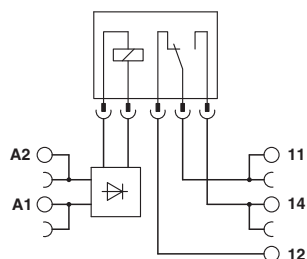
Interrupting rating

Diagram



Curve A  
Maximum permissible continuous voltage  $U_{max}$  with limiting continuous current on the contact side (see relevant technical data)  
Curve B  
Minimum permissible operate voltage  $U_{op}$  after pre-excitation (see relevant technical data)

Circuit diagram



## Articles in set

Relay base - PLC-BPT-120UC/21 - 2900280



6.2 mm PLC basic terminal block with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 120 V AC/DC

Single relay - REL-MR- 60DC/21 - 2961118



Plug-in miniature power relay, with power contact, 1 PDT, input voltage 60 V DC

# Relay Module - PLC-RPT-120UC/21 - 2900304

## Classifications

### eCl@ss

eCl@ss 5.0	27371601
eCl@ss 5.1	27371601
eCl@ss 6.0	27371601
eCl@ss 7.0	27371601
eCl@ss 8.0	27371601
eCl@ss 9.0	27371601

### ETIM

ETIM 2.0	EC001437
ETIM 3.0	EC001437
ETIM 4.0	EC001437
ETIM 5.0	EC001437
ETIM 6.0	EC001437

### UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121515
UNSPSC 11	39121515
UNSPSC 12.01	39121515
UNSPSC 13.2	39122334

## Approvals

### Approvals


#### Approvals

UL Recognized / UL Listed / cUL Recognized / cUL Listed / EAC / RC FRT / EAC / DNV GL / cULus Recognized / cULus Listed

#### Ex Approvals

### Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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# Relay Module - PLC-RPT-120UC/21 - 2900304

## Approvals

cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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EAC			EAC-Zulassung
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RC FRT		<a href="http://www.rsfgt.ru/en/web/guest/english">http://www.rsfgt.ru/en/web/guest/english</a>	B.00094
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EAC			RU C- DE.A*30.B.01082
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DNV GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAE0000196-01
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	
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cULus Listed			
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## Accessories

### Accessories

#### Bridge

Continuous plug-in bridge - FBST 500-PLC RD - 2966786



Continuous plug-in bridge, length: 500 mm, color: red

## Relay Module - PLC-RPT-120UC/21 - 2900304

### Accessories

Continuous plug-in bridge - FBST 500-PLC BU - 2966692



Continuous plug-in bridge, length: 500 mm, color: blue

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Continuous plug-in bridge - FBST 500-PLC GY - 2966838



Continuous plug-in bridge, length: 500 mm, color: gray

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Single plug-in bridge - FBST 6-PLC RD - 2966236



Single plug-in bridge, length: 6 mm, number of positions: 2, color: red

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Single plug-in bridge - FBST 6-PLC BU - 2966812



Single plug-in bridge, length: 6 mm, number of positions: 2, color: blue

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Single plug-in bridge - FBST 6-PLC GY - 2966825



Single plug-in bridge, length: 6 mm, number of positions: 2, color: gray

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## Relay Module - PLC-RPT-120UC/21 - 2900304

### Accessories

Single plug-in bridge - FBST 8-PLC GY - 2967688



Single plug-in bridge, length: 8 mm, number of positions: 2, color: gray

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### Controller board

System connection - PLC-V8/FLK14/OUT - 2295554



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of output cards; connection 1: Plug connection; connection 2: 1x IDC/FLK pin strip (14-position); number of channels: 8; control logic: positive switching

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System connection - PLC-V8/FLK14/OUT/M - 2304102



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of output cards; connection 1: Plug connection; connection 2: 1x IDC/FLK pin strip (14-position); number of channels: 8; control logic: negative switching

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System connection - PLC-V8/D15S/OUT - 2296058



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of output cards; connection 1: Plug connection; connection 2: 1x D-SUB pin strip (15-position); number of channels: 8; control logic: positive switching

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System connection - PLC-V8/D15B/OUT - 2296061



V8 adapter for 8 x PLC-INTERFACE (6.2 mm); Controller: PLC system cabling of output cards; connection 1: Plug connection; connection 2: 1x D-SUB socket strip (15-position); number of channels: 8; control logic: positive switching

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### DIN rail

DIN rail, unperforated - NS 35/ 7,5 V2A UNPERF 2000MM - 0801377

DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Stainless steel V2A, uncoated, length: 2000 mm, color: silver



## Relay Module - PLC-RPT-120UC/21 - 2900304

### Accessories

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#### DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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#### DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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#### DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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#### DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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#### DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, in acc. with EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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## Relay Module - PLC-RPT-120UC/21 - 2900304

### Accessories

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Aluminum, uncoated, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, in acc. with EN 60715: 2001, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

### Labeled terminal marker

Zack marker strip - ZB 6,LGS:FORTL.ZAHLEN - 1051016



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm

### Partition plate

Separating plate - PLC-ATP BK - 2966841



Separating plate, 2 mm thick, required at the start and end of a PLC terminal strip. Furthermore, it is used for: visual separation of groups, safe isolation of different voltages of neighboring PLC relays in acc. with DIN VDE 0106-101, isolation

### Power module

## Relay Module - PLC-RPT-120UC/21 - 2900304

### Accessories

Power terminal block - PLC-ESK GY - 2966508



Power terminal block, for the input of up to four potentials, for mounting on NS 35/7.5

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### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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### Terminal marking

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm

Zack marker strip - ZB 6/WH-100:UNBEDRUCKT - 5060935



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm

Marker for terminal blocks - UC-TM 6 - 0818085



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm

## Relay Module - PLC-RPT-120UC/21 - 2900304

### Accessories

Marker for terminal blocks - UCT-TM 6 - 0828736



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm

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### Spare parts

Relay base - PLC-BPT-120UC/21 - 2900280



6.2 mm PLC basic terminal block with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 120 V AC/DC

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Single relay - REL-MR- 60DC/21 - 2961118



Plug-in miniature power relay, with power contact, 1 PDT, input voltage 60 V DC