

## Relay Module - PLC-RPT- 24DC/21 - 2900299

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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: 24 V DC

### Product Features

- 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
- Integrated input circuit and interference suppression circuit
- Functional plug-in bridges



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	36.0 g
Custom tariff number	85364190
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- 24DC/21 - 2900299

## Technical data

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

### Coil side

Nominal input voltage $U_N$	24 V DC
Typical input current at $U_N$	9 mA
Typical response time	5 ms
Typical release time	8 ms
Protective circuit	Reverse polarity protection Polarity protection diode
	Free-wheeling diode Damping diode
Operating voltage display	yes
Power dissipation for nominal condition	0.22 W

### Contact side

Contact type	1 PDT
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

# Relay Module - PLC-RPT- 24DC/21 - 2900299

## Technical data

### Connection data input side

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

### 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

Test voltage relay winding/relay contact	4 kV AC (50 Hz, 1 min.)
Operating mode	100% operating factor
Degree of protection	RT III (Relay)
Mechanical service life	2 x 10 <sup>7</sup> cycles
Flammability rating according to UL 94	V0
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
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

# Relay Module - PLC-RPT- 24DC/21 - 2900299

## Technical data

### Standards and Regulations

	IEC 60255/DIN VDE 0435 (in relevant parts)
Degree of pollution	3
Overvoltage category	III
Flammability rating according to UL 94	V0

## Articles in set

### Relay socket - PLC-BPT- 24DC/21 - 2900445



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 24 V DC

### Single relay - REL-MR- 24DC/21 - 2961105



Plug-in miniature power relay, with power contact, 1 PDT, input voltage 24 V DC

## Classifications

### eCl@ss

eCl@ss 4.0	27371001
eCl@ss 4.1	27371001
eCl@ss 5.0	27371001
eCl@ss 5.1	27371001
eCl@ss 6.0	27371001
eCl@ss 7.0	27371001
eCl@ss 8.0	27371601
eCl@ss 9.0	27371601

### ETIM

ETIM 3.0	EC000196
ETIM 4.0	EC000196
ETIM 5.0	EC001437

# Relay Module - PLC-RPT- 24DC/21 - 2900299

## Classifications

### UNSPSC

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

## Approvals

### Approvals

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#### Approvals

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

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#### Ex Approvals


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#### Approvals submitted

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## Approval details

UL Recognized 

UL Listed 

cUL Recognized 

cUL Listed 

## Relay Module - PLC-RPT- 24DC/21 - 2900299


### Approvals

GL

EAC

RC FRT

EAC

cULus Recognized 

cULus Listed 

### Accessories

#### Accessories

#### Bridge

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



Continuous plug-in bridge, Length: 500 mm, Color: red

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



Continuous plug-in bridge, Length: 500 mm, Color: blue

## Relay Module - PLC-RPT- 24DC/21 - 2900299

### Accessories

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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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

## Relay Module - PLC-RPT- 24DC/21 - 2900299

### Accessories

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



V8-OUTPUT adapter for eight 6.2 mm PLC interfaces (1 PDT, etc./see "Supplementary Products"). 14-pos. flat-ribbon cable connection for the PLC system cabling, control logic: Plus switching

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



V8-OUTPUT adapter for eight 6.2 mm PLC interfaces (1 PDT, etc./see "Supplementary Products"). 14-pos. flat-ribbon cable connection for the PLC system cabling, control logic: Minus switching

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



V8-OUTPUT adapter for eight 6.2 mm PLC interfaces (1 PDT, etc./see "Additional Products"). 15-pin D-SUB male connector, control logic: Positive switching

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



V8-OUTPUT adapter for eight 6.2 mm PLC interfaces (1 PDT, etc./see "Additional Products"). 15-pin D-SUB female connector, control logic: Positive switching

### DIN rail

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



DIN rail, unperforated, Width: 35 mm, Height: 7.5 mm, Length: 2000 mm, Color: silver



## Relay Module - PLC-RPT- 24DC/21 - 2900299

### Accessories

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



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 7.5 mm, width 35 mm, length: 2000 mm

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



DIN rail, material: Copper, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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



DIN rail, material: Steel, unperforated, height 15 mm, width 35 mm, length: 2 m

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



DIN rail, material: Copper, unperforated, 1.5 mm thick, height 15 mm, width 35 mm, length: 2 m

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



DIN rail, material: Steel, unperforated, 2.3 mm thick, height 15 mm, width 35 mm, length: 2 m

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## Relay Module - PLC-RPT- 24DC/21 - 2900299

### Accessories

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



DIN rail, deep drawn, high profile, unperforated, 1.5 mm thick, material: aluminum, height 15 mm, width 35 mm, length 2000 mm

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



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 15 mm, width 35 mm, length: 2000 mm

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



DIN rail, material: Steel, unperforated, height 7.5 mm, width 35 mm, length: 2 m

### Labeled terminal marker

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



Zack marker strip, Strip, white, labeled, can be labeled with: 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: 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

## Relay Module - PLC-RPT- 24DC/21 - 2900299

### Accessories

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#### Power module

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: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

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



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

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#### Spare parts

# Relay Module - PLC-RPT- 24DC/21 - 2900299

## Accessories

Relay socket - PLC-BPT- 24DC/21 - 2900445



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 24 V DC

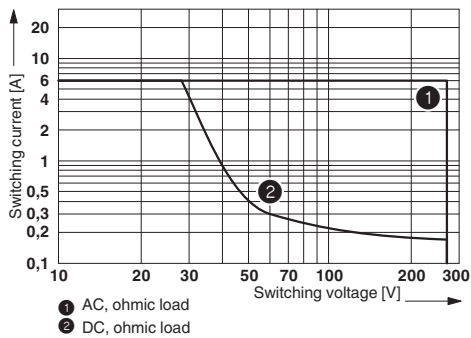
Single relay - REL-MR- 24DC/21 - 2961105



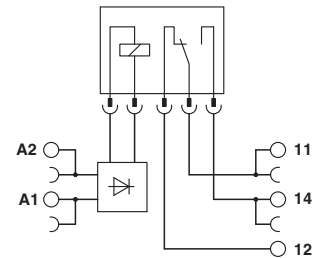
Plug-in miniature power relay, with power contact, 1 PDT, input voltage 24 V DC

## Drawings

Diagram



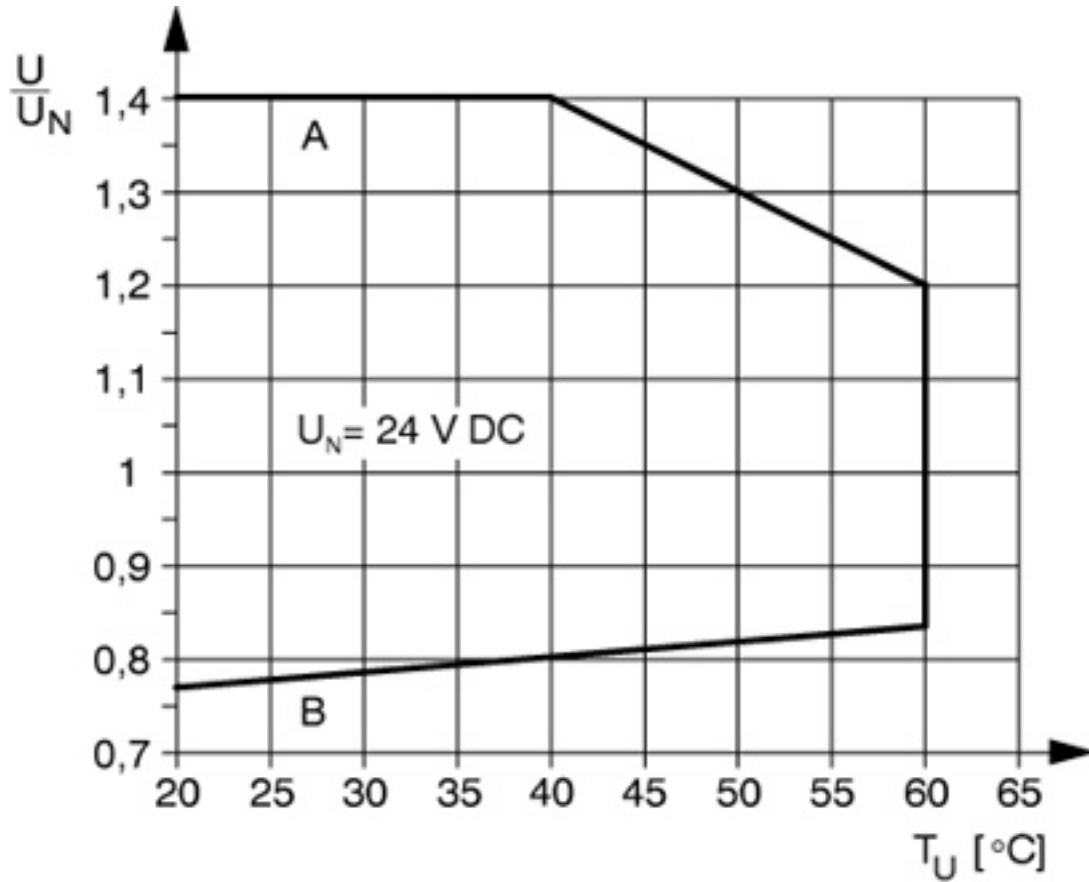
Circuit diagram



Interrupting rating

## Relay Module - PLC-RPT- 24DC/21 - 2900299

Diagram



Curve A

Maximum permissible continuous voltage  $U_{\text{max}}$  with limiting continuous current on the contact side (see relevant technical data)

Curve B

Minimum permissible operate voltage  $U_{\text{op}}$  after pre-excitation (see relevant technical data)

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