

# RPC-2SD-UNI

## time relays



RPC-2SD-UNI

- **Single-function time relays with independently controlled times T1 and T2 (time function SD - Star-Delta start-up; 10 time ranges)**
- Cadmium - free contacts 2 x 1 CO • AC/DC input voltages
- Cover - modular, width 17,5 mm
- Direct mounting on 35 mm rail mount acc. to EN 60715
- Applications: in low-voltage systems
- Compliance with standard EN 61812-1
- Recognitions, certifications, directives: RoHS,   

### Output circuit - contact data

Number and type of contacts	2 x 1 CO		
Contact material	AgSnO <sub>2</sub>		
Max. switching voltage	300 V AC		
Rated load	AC1	16 A / 250 V AC	
	DC1	16 A / 24 V DC	0,3 A / 250 V DC
Rated current	16 A / 250 V AC		
Max. breaking capacity	AC1	4 000 VA	
Min. breaking capacity	1 W 10 mA		
Contact resistance	≤ 100 mΩ		
Max. operating frequency	600 cycles/hour at rated load AC1		

### Input circuit

Rated voltage	AC: 50/60 Hz AC/DC	12...240 V	terminals (+)A1, (-)A2
Must release voltage	≥ 0,1 U <sub>n</sub>		
Operating range of supply voltage	0,9...1,1 U <sub>n</sub>		
Rated power consumption	DC	≤ 1,5 W	
Range of supply frequency	AC	48...63 Hz	

### Insulation according to EN 60664-1

Insulation rated voltage	250 V AC		
Rated surge voltage	4 000 V 1,2 / 50 μs		
Overvoltage category	III		
Insulation pollution degree	2		
Flammability class	V-0 for modular cover, UL 94		
Dielectric strength	• input - output	4 000 V AC	type of insulation: basic
	• contact clearance	1 000 V AC	type of clearance: micro-disconnection
	• pole - pole	2 000 V AC	type of insulation: basic

### General data

Electrical life	• resistive AC1	> 0,5 x 10 <sup>5</sup>	8 A, 250 V AC
Mechanical life (cycles)	> 3 x 10 <sup>7</sup>		
Dimensions (L x W x H)	90  x 17,5 x 64,6 mm		
Weight	83 g		
Ambient temperature	• storage	-40...+70 °C	
(non-condensation and/or icing)	• operating	-20...+50 °C	
Cover protection category	IP 20		EN 60529
Relative humidity	up to 85%		
Shock resistance	15 g		
Vibration resistance	0,35 mm DA 10...55 Hz		

### Time module data

Functions	SD		
Time ranges (start-up for the star) T1	1 s  ; 10 s; 30 s; 1 min.; 1,5 min.; 3 min.; 5 min.; 10 min.; 30 min.; 1 h		
Timing adjustment T1	smooth - (0,1...1) x time range		
Transit time (adjustable)  T2	smoothly within the range 0,05...0,9 s (linear adjustment of time)		
Setting accuracy	± 5%  		
Repeatability	± 0,5% 		
Values affecting the timing adjustment	temperature: ± 0,05% / °C	supply voltage: ± 0,01% / V	
Recovery time	AC: ≤ 400 ms	DC: ≤ 150 ms	
LED indicator	green LED U ON - indication of supply voltage U green LED U slow flashing - measurement of T1 time green LED U fast flashing - measurement of T2 time yellow LEDs ON/OFF - contactors switching signal		

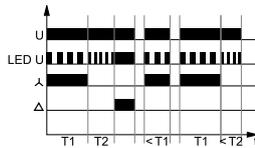
 Length with 35 mm rail catches: 98,8 mm.  For first range setpoint (1 s) setting accuracy and repeatability are smaller than the given ones in technical parameters (significant influence of the operational relay operating time, processor start-time, and the moment of supply switching as referred to the AC supply course).  Pause time between switching off the star contactor and switching on the delta contactor.  Calculated from the final range values, for the setting direction from minimum to maximum.

# RPC-2SD-UNI

## time relays

### Time functions

SD - Star-Delta start-up.



When the supply voltage U is applied, the operating star-contact (15-18) becomes closed, which is signaled with illumination of the yellow LED. Measurement of the set time T1 starts, and the green LED slow flashes. After the T1 time has lapsed, the star contact is disconnected and the relay begins measuring the T2 time, which is signaled with the green LED fast flashing. After the T2 time has lapsed, the delta contact (25-28) is switched on together with the yellow LED, and the green LED remains illuminated.

### Additional functions

**Supply diode:** it is lit permanently when the time is not being measured. In course of the T1 time measurement, it flashes at 500 ms period, in course of the T2 time measurement at 250 ms period, where it is lit for 50% of the time, and off for 50% of the time.

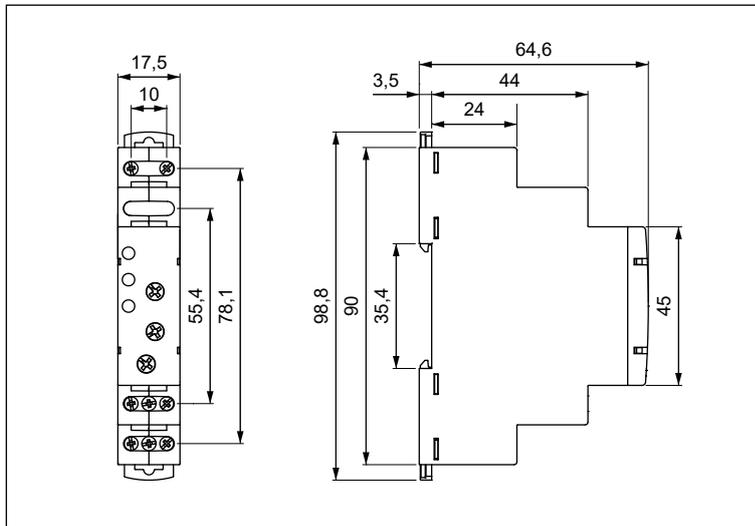
**Adjustment of the set values:** the values of time and range are read in the course of the relay's operation. The set values may be modified at any moment.

**Triggering:** the relay is triggered with the supply voltage.

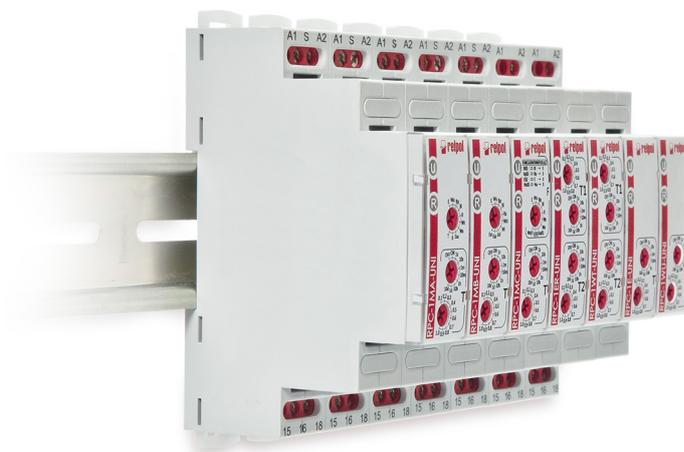
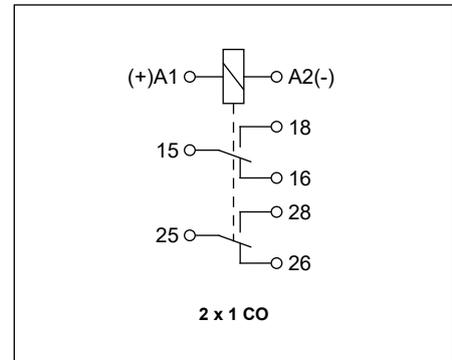
**Supply:** the relay may be supplied with DC voltage or AC voltage 48...63 Hz of 10,8...264 V.

U - supply voltage; T1, T2 - measured times; t - time axis

### Dimensions



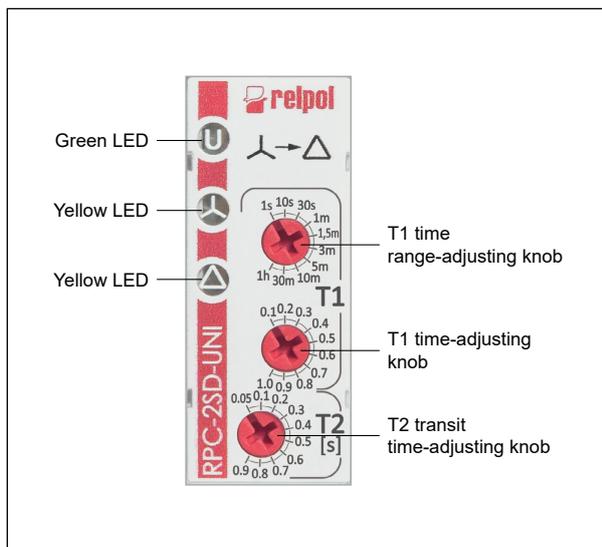
### Connection diagram



# RPC-2SD-UNI

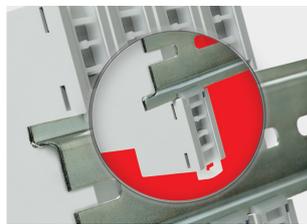
## time relays

### Front panel description

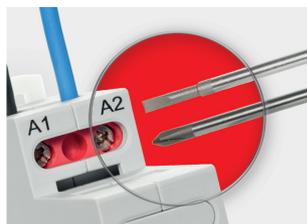


### Mounting

Relays **RPC-2SD-UNI** are designed for direct mounting on 35 mm rail mount acc. to EN 60715. Operational position - any. **Connections:** max. cross section of the cables: 1 x 2,5 mm<sup>2</sup> (1 x 14 AWG), stripping length: 6,5 mm, max. tightening moment for the terminal: 0,5 Nm.

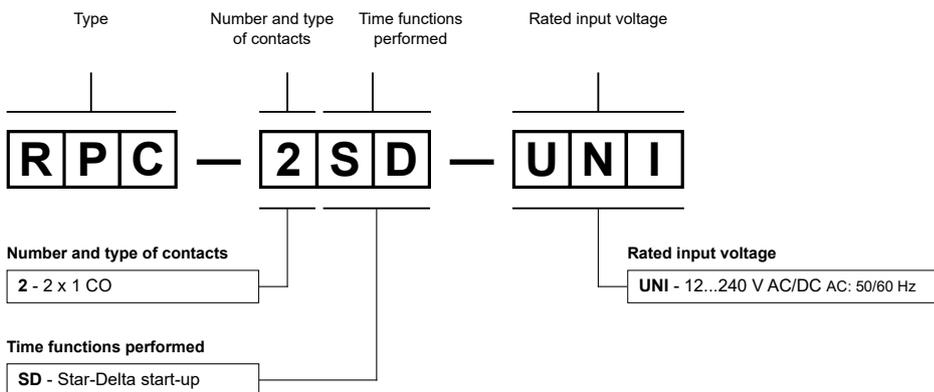


**Two catches:** easy mounting on 35 mm rail, firm hold (top and bottom).



**Mounting wires in clamps:** universal screw (cross-recessed or slotted head).

### Ordering codes



Example of ordering codes:

**RPC-2SD-UNI**

time relay **RPC-2SD-UNI**, single-function (relay perform function SD), cover - modular, width 17,5 mm, two changeover contacts, contact material AgSnO<sub>2</sub>, rated input voltage 12...240 V AC/DC AC: 50/60 Hz

### PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.