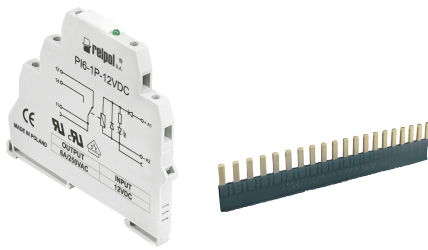


# PI6-1P

## interface relays



- Width 6,2 mm
- Interface relay **PI6-1P** - with 1 CO contact output
- 35 mm rail mount acc. to EN 60715
- May be linked with 20-pole interconnection strip type **ZG20**
- Equipped in LED green
- Version for long control lines, with anti-interference filter (**PI6-1P-230VAC/DC-10** ②)
- Recognitions, certifications, directives: : RoHS,

### Output circuit - contact data

Number and type of contacts		1 CO	
Contact material		AgSnO <sub>2</sub>	AgSnO <sub>2</sub> /Au hard gold plating ❶
Max. switching voltage		400 V AC / 250 V DC	30 V AC / 36 V DC ❶
Min. switching voltage	AC / DC	10 V	5 V
Rated load	AC1	6 A / 250 V AC	0,05 A / 30 V AC ❶
	DC1	6 A / 24 V DC; 0,15 A / 250 V DC	0,05 A / 36 V DC ❶
Min. switching current		100 mA	10 mA
Max. make current		10 A 20 ms	0,1 A 20 ms ❶
Rated current		6 A	0,05 A ❶
Max. breaking capacity	AC1	1 500 VA	1,2 VA ❶
Min. breaking capacity		1 W	0,05 W
Contact resistance		≤ 100 mΩ 100 mA, 24 V	≤ 30 mΩ 10 mA, 5 V
Max. operating frequency	AC1	360 cycles/hour 72 000 cycles/hour	
• at rated load			
• no load			
Input circuit			
Rated voltage	DC	12, <b>24</b> , 36 V	
	AC: 50/60 Hz AC/DC	24, 42, 115, <b>230 V</b>	
Must release voltage		AC: ≥ 0,2 U <sub>n</sub> AC: ≥ 0,35 U <sub>n</sub> ❷	
		DC: ≥ 0,1 U <sub>n</sub>	
Operating range of supply voltage		see Table 1	
Must operate voltage		AC: ≤ 0,8 U <sub>n</sub> AC: 0,6...0,85 U <sub>n</sub> ❷	
		DC: ≤ 0,8 U <sub>n</sub>	
Input polarization current		AC: 8 mA < I <sub>p</sub> < 10 mA 230 V AC ❷	
Rated power consumption	DC	0,3 ... 0,7 W	
	AC/DC	0,3 ... 1,6 VA / 0,3 ... 1,6 W	
Insulation according to EN 60664-1			
Insulation rated voltage		400 V AC	
Rated surge voltage		4 000 V 1,2 / 50 μs	
Overvoltage category		III	
Insulation pollution degree		3	
Dielectric strength			
• input - output		4 000 V AC	50/60 Hz, 1 min., type of insulation: reinforced
• input - output		6 000 V	1,2 / 50 μs
• mass - input, output		2 500 V AC	50/60 Hz, 1 min.
• contact clearance		1 000 V AC	50/60 Hz, 1 min., type of clearance: micro-disconnection
Input - output distance			
• clearance		≥ 6 mm	
• creepage		≥ 8 mm	

The data in bold type relate to the standard versions of the relays. ① For gold-plated contacts - when the maximum values given have been exceeded, the gold layer is destroyed. Then, the advantages of gold-plating disappear and the values are as for AgSnO<sub>2</sub> contacts (see beside), and electrical life of these contacts may be shorter than of normal contacts. ② Refers version for long control lines **PI6-1P-230VAC/DC-10** - relay with integrated anti-interference filter, resistant to occurrence of induced voltages in long distances of control wires.

### 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.

# PI6-1P

## interface relays

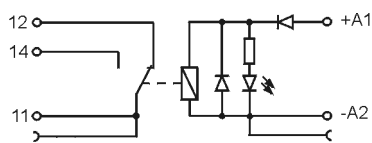
### General data

Operating time (typical value)	AC: 9 ms	DC: 8 ms
Release time (typical value)	AC: 17 ms	DC: 19 ms
Electrical life		
• resistive AC1	$> 0,6 \times 10^5$	6 A, 250 V AC
• $\cos \varphi = 0,4$	$> 2 \times 10^5$	2 A, 250 V AC
• resistive DC1	$10^5$	6 A, 30 V DC
Mechanical life (cycles)	$> 2 \times 10^7$	
Dimensions (L x W x H)	93,8 x 6,2 x 80 mm	
Weight	40 g	
Ambient temperature	• storage	-40...+70 °C
(non-condensation and/or icing)	• operating	-40...+55 °C
		-40...+60 °C 12, 24 V DC
		-40...+40 °C 230 V AC ② -40...+50 °C 230 V DC ②
Cover protection category	IP 20	EN 60529
Environmental protection	RTI	EN 61810-1
Shock resistance	10 g	
Vibration resistance	5 g 10...500 Hz	

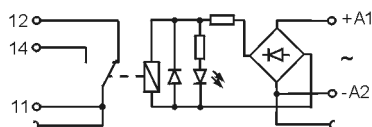
② Refers version for long control lines, with integrated anti-interference filter.

### Connection diagrams

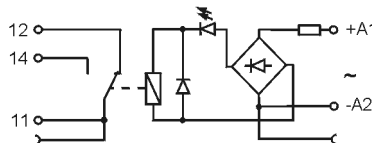
**PI6-1P-12VDC, PI6-1P-12VDC-01**  
**PI6-1P-24VDC, PI6-1P-24VDC-01**  
**PI6-1P-36VDC, PI6-1P-36VDC-01**



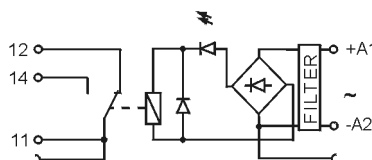
**PI6-1P-24VAC/DC, PI6-1P-24VAC/DC-01**  
**PI6-1P-42VAC/DC**



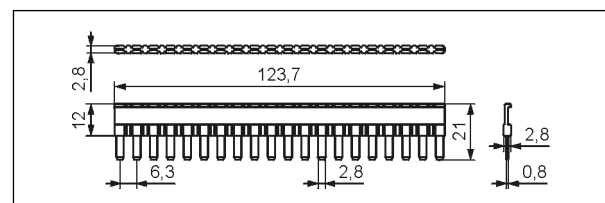
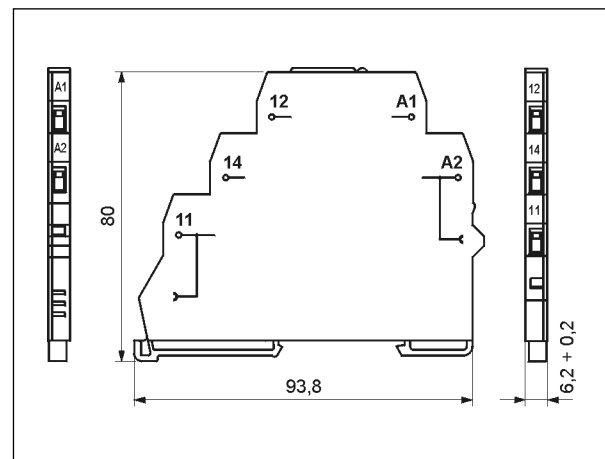
**PI6-1P-115VAC/DC**  
**PI6-1P-230VAC/DC, PI6-1P-230VAC/DC-01**



**PI6-1P-230VAC/DC-10**



### Dimensions



20-pole interconnection strip type ZG20

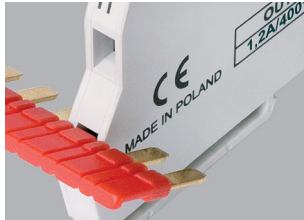
# PI6-1P

## interface relays

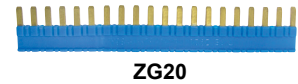
### Mounting

Relays **PI6-1P** are designed for direct mounting on 35 mm rail mount acc. to EN 60715. **Connections:** max. cross section of the cables: 1 x 2,5 mm<sup>2</sup> / 2 x 1,5 mm<sup>2</sup> (1 x 14 / 2 x 16 AWG), stripping length: 8 mm, max. tightening moment for the terminal: 0,3 Nm.

**PI6-1P** may be linked with 20-pole interconnection strip type **ZG20**. Strip **ZG20** bridges common input or output signals, maximum permissible current is 36 A / 250 V AC. Colours of strips: **ZG20-1** red, **ZG20-2** black, **ZG20-3** blue.



**Interconnection strip ZG20:**  
bridging of common  
input or output signals.



### Input data

Table 1

Interface relay code	Rated input voltage U <sub>n</sub>	Power of input circuit	Input - voltage range V	
			min. (at 20 °C)	max. (at 55 °C)
PI6-1P-12VDC	12 V DC	0,3 W	9,6	14,4
<b>PI6-1P-24VDC</b>	<b>24 V DC</b>	<b>0,4 W</b>	<b>19,2</b>	<b>28,0</b>
PI6-1P-36VDC	36 V DC	0,7 W	28,8	40,0
PI6-1P-24VAC/DC	24 V AC/DC	0,5 VA / 0,5 W	19,2	26,4
PI6-1P-42VAC/DC	42 V AC/DC	0,3 VA / 0,3 W	33,6	50,0
PI6-1P-115VAC/DC	115 V AC/DC	0,8 VA / 0,8 W	92,0	130,0
<b>PI6-1P-230VAC/DC</b>	<b>230 V AC/DC</b>	<b>0,8 VA / 0,8 W</b>	<b>184,0</b>	<b>253,0</b>
PI6-1P-230VAC/DC-10 ②	230 V AC/DC	1,6 VA / 1,6 W	196,0	253,0
PI6-1P-12VDC-01 ①	12 V DC	0,3 W	9,6	14,4
PI6-1P-24VDC-01 ①	24 V DC	0,4 W	19,2	28,0
PI6-1P-36VDC-01 ①	36 V DC	0,7 W	28,8	40,0
PI6-1P-24VAC/DC-01 ①	24 V AC/DC	0,5 VA / 0,5 W	19,2	26,4
PI6-1P-230VAC/DC-01 ①	230 V AC/DC	0,8 VA / 0,8 W	184,0	253,0

The data in bold type relate to the standard versions of the relays.

① Version with gold-plated contacts. ② Version for long control lines, with anti-interference filter.

### Ordering codes

Ordering codes **PI6-1P** are specified in Table 1, "Interface relay code" column.

### Interface relays PI6-1P

