







- Interface relay **PI6-1P** - with changeover relay, rated load 6 A / 250 V (AC1)
- 35 mm rail mount acc. to PN-EN 60715
- May be linked with interconnection strip type **ZG20**
- Equipped in LED green
- Version for long lines, with anti-interference filter (**PI6-1P-230VAC/DC-10**)
- Recognitions, certifications, directives:    



### Contact data

Number and type of contacts	1 C/O		
Contact material	<b>AgSnO<sub>2</sub></b>	AgSnO <sub>2</sub> /Au 3 μm ①	
Rated / max. switching voltage	AC	230 V / 400 V	- / 30 V ①
Max. switching voltage	DC	125 V	36 V ①
Min. switching voltage	AC/DC	10 V	5 V
Rated load	AC1	6 A / 250 V AC	0,05 A / 30 V AC ①
	DC1	6 A / 24 V DC	0,05 A / 36 V DC ①
Min. switching current	100 mA		
Max. inrush current	10 A 20 ms		
Rated current	6 A		
Max. breaking capacity	AC1	1 500 VA	1,2 VA ①
Min. breaking capacity	1 W		
Contact resistance	≤ 100 mΩ 100 mA, 24 V		≤ 30 mΩ 10 mA, 5 V
Max. operating frequency	AC1	• at rated load	360 cycles/hour
		• no load	72 000 cycles/hour

### Input control circuit

Rated voltage	DC	12-24-36 V		
	AC: 50/60 Hz AC/DC	24-42-115-230 V		
Must release voltage	AC: ≥ 0,2 U <sub>n</sub>	AC: ≥ 0,35 U <sub>n</sub> ②	DC: ≥ 0,1 U <sub>n</sub>	
Operating range of supply voltage	see Table 1			
Must operate voltage	AC and DC: ≤ 0,8 U <sub>n</sub> AC: 0,6...0,85 U <sub>n</sub> ② DC: ≤ 0,8 U <sub>n</sub> ②			
Input polarization current	AC: 8 mA < I <sub>p</sub> < 10 mA 230 V AC ②			
Rated power consumption	DC	0,3...0,7 W		
	AC/DC	0,3...1,6 VA / 0,3...1,6 W		
Max. length of supply line	≤ 100 m		AC supply ②	

### Insulation according to PN-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, surge voltage	
	• 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	≥ 6 mm \ ≥ 8 mm			
• clearance \ creepage	≥ 6 mm \ ≥ 8 mm			

### General data

Operating time (typical value)	AC: 7 ms	DC: 6 ms	
Release time (typical value)	AC: 15 ms	DC: 10 ms	
Electrical life	• resistive AC1	> 0,6 x 10 <sup>5</sup>	6 A, 250 V AC
	• cos φ = 0,4	> 2 x 10 <sup>5</sup>	2 A, 250 V AC
	• resistive DC1	10 <sup>5</sup>	6 A, 30 V DC
Mechanical life (cycles)	> 2 x 10 <sup>7</sup>		
Dimensions (L x W x H)	93,8 x 6,2 x 80 mm		
Weight	40 g		
Ambient temperature	• storage	-40...+70 °C	
	• 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
Protection category	IP 20	PN-EN 60529	
Environmental protection	RTI	PN-EN 116000-3	

The data in bold type pertain 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). In consequence however, the life of the contact may be shorter than that of the normal power contact. ② Refers version for long lines (max. 100 m) **PI6-1P-230VAC/DC-10** - relay with integrated anti-interference filter (designed on the basis of appropriately selected elements R and C, and Zener diode), resistant to occurrence of induced voltages in long distances of control wires.

Input data

Table 1

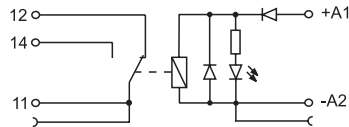
Interface relay code	Rated input voltage $U_n$	Power of input control circuit	Input - voltage range V	
			min. (at 20 °C)	max. (at 55 °C)
PI6-1P-12VDC	12 V DC	0,3 W	9,6	14,4
<b>PI6-1P-24VDC</b>	<b>24 V DC</b>	<b>0,4 W</b>	<b>19,2</b>	<b>28,0</b>
PI6-1P-36VDC	36 V DC	0,7 W	28,8	40,0
PI6-1P-24VAC/DC	24 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 pertain to the standard versions of the relays.

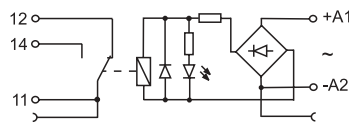
① Version with gold-plated contacts. ② Version for long lines (max. 100 m), with anti-interference filter.

## Connections diagrams

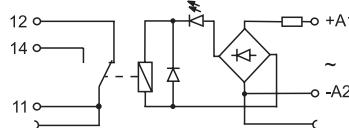
PI6-1P-12VDC, PI6-1P-12VDC-01  
PI6-1P-24VDC, PI6-1P-24VDC-01  
PI6-1P-36VDC, PI6-1P-36VDC-01



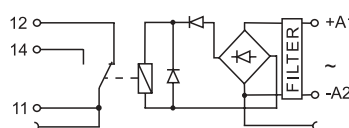
PI6-1P-24VAC/DC, PI6-1P-24VAC/DC-01  
PI6-1P-42VAC/DC



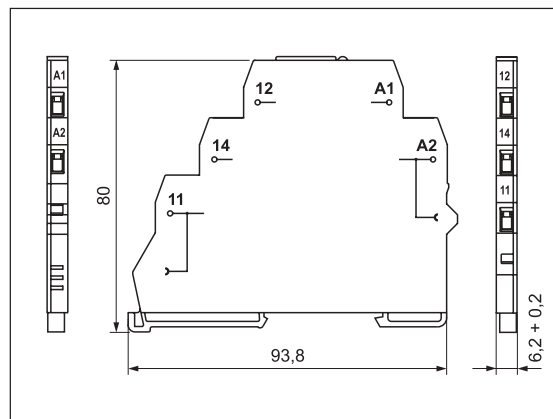
PI6-1P-115VAC/DC  
PI6-1P-230VAC/DC, PI6-1P-230VAC/DC-01



PI6-1P-230VAC/DC-10



## Dimensions



## Mounting

Relays **PI6-1P** are designed for direct mounting on 35 mm rail mount acc. to PN-EN 60715. Maximum size of wires 1 x 2,5 mm<sup>2</sup> (1 x 14 AWG). Rated contactability 2 x 1,5 mm<sup>2</sup> (2 x 16 AWG). Maximum screw torque: 0,3 Nm.

**PI6-1P** may be linked with 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 (see page 182).

## Ordering codes

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