

# PI6-1P / PI6-1T / PI6-OC

## Subminiature Electromagnetic and Solid State Modules

- Width 6,2 mm
- Interface relays PI6-1P - with SPDT contact output / PI6-1T with triac output
- 35 mm rail mount
- Maybe linked with interconnection strip type ZG20
- Equipped in green LED



PI6-1P\*

PI6-1T

PI6-OC

### Contact data

Number and type of contacts	SPDT	SPST(1NO)	SPST(1NO)
Contact material	AgSnO <sub>2</sub>		
Max. switching voltage	400 V AC / 250 V DC	400 V / 440 V	70 V / 70 V
Min. switching voltage	10 V	20 V	5 V
Rated load	6 A / 250 V AC 6 A / 24 V DC; 0.15 A / 250 V DC	1.2 A / 400 V AC	0.5 A / 70 V DC
Min. switching current	100 mA	10 mA	1 mA
Max. inrush current	10 A 20 ms		
Max. non-repeat surge current		30 A <sup>2</sup> t=20 ms	
<b>Rated current</b>	<b>6A</b>	<b>1.2 A</b>	<b>0.5 A</b>
Max. breaking capacity	1500 VA		
Min. breaking capacity	1 W		
Contact resistance	≤ 100 mΩ 100 mA, 24 V		
I <sup>2</sup> t for fusing		5.1 A <sup>2</sup> s t=1-10 ms	
dI/dt		50 A/μs	
dV/dt		40 V/μs	
Max. operating frequency			
• at rated load	AC1		
• no load	360 cycles/hour 72 000 cycles/hour		
<b>Input circuit</b>			
Rated voltage	DC 12 ... 36 V AC: 50/60 Hz AC/DC 24 ... 230 V	5...32 V 24 ... 230 V	5...32 V 24 ... 230 V
Turn-off voltage		AC: ≥ 0.2 U <sub>n</sub> ; DC: ≥ 0.1 U <sub>n</sub>	AC: ≥ 0.2 U <sub>n</sub> ; DC: ≥ 0.1 U <sub>n</sub>
Must release voltage	AC: ≥ 0.2 U <sub>n</sub> ; DC: ≥ 0.1 U <sub>n</sub>		
Operating range of supply voltage	see page 91		
Must operate voltage	AC and DC: ≤ 0.8 U <sub>n</sub>		
Rated power consumption	DC 0.3 ... 1.6 VA / 0.3 ... 1.6 W AC/DC 0.3 ... 1.6 VA / 0.3 ... 1.6 W	0.3 W; 5...32 V DC at 24 V 0.3 VA / 0.3 W; 24 V AC/DC 1.6 VA / 1.6 W; 230 V AC/DC	0.3 W; 5...32 V DC at 24 V 0.3 VA / 0.3 W; 24 V AC/DC 1.6 VA / 1.6 W; 230 V AC/DC
<b>Insulation</b>			
Insulation rated voltage	400 V AC	600 V AC	600 V AC
Rated surge voltage	4 000 V 1.2 / 50 μs		
Overvoltage category	III		
Insulation pollution degree	3	2	2
Dielectric strength	4000 V AC 50/60 Hz, 1 min. type of insulation: reinforced 6000 V 1.2 / 50 μs 2500 V AC 50/60 Hz, 1 min. 1000 V AC 50/60 Hz, 1 min. type of clearance: micro-disconnection	4000 V AC 50/60 Hz, 1 min. type of insulation: reinforced	3000 V AC 50/60 Hz, 1 min. type of insulation: reinforced
Input - output distance	≥ 6 mm / ≥ 8 mm		
• clearance / creepage			
<b>General data</b>			
Operating time (typical value)	AC: 7 ms; DC: 6 ms	10 ms max. (zero turn-on)	
Release time (typical value)	AC: 15 ms; DC: 10 ms	10 ms max.	
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>		
Max. switching frequency			10 kHz 5...32 V DC (for load up to 24 V DC; 15 kHz)
Dimensions (L x W x H)	93.8 x 6.2 x 80 mm	93.8 x 6.2 x 80 mm	93.8 x 6.2 x 80 mm
Weight	40 g	40 g	40g
Ambient temperature			
• storage	-40...+70 °C	-40...+70 °C	-40...+70 °C
• operating	AC: -40...+55 °C; DC (12, 24 V): -40...+60 °C	-40...+55 °C	-40...+55 °C
Protection category	IP 20 PN-EN 60529	IP 20 PN-EN 60529	IP 20 PN-EN 60529
Environmental protection	RTI PN-EN 116000-3	RTI PN-EN 116000-3	RTI PN-EN 116000-3

\* UL Recognized

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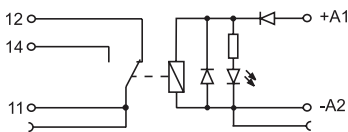


## PI6-1P

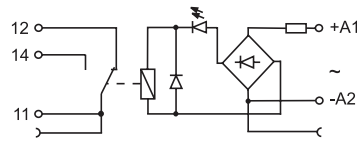


### CONNECTION DIAGRAMS

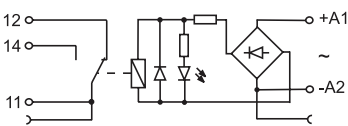
PI6-1P-12VDC, PI6-1P-12VDC-01  
PI6-1P-24VDC, PI6-1P-24VDC-01  
PI6-1P-36VDC, PI6-1P-36VDC-01



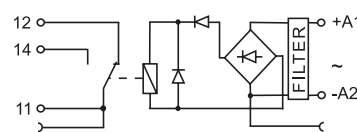
PI6-1P-115VAC/DC  
PI6-1P-230VAC/DC, PI6-1P-230VAC/DC-01



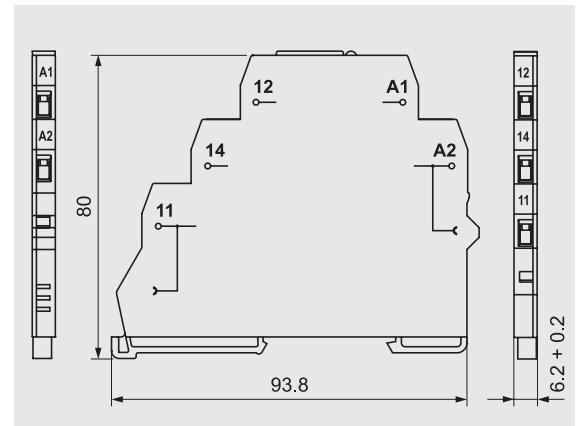
PI6-1P-24VAC/DC, PI6-1P-24VAC/DC-01  
PI6-1P-42VAC/DC



PI6-1P-230VAC/DC-10



### DIMENSIONS



### PI6-1P SPDT AC 50/60Hz & DC coil

Part Number	Rated input voltage Un	Power of input circuit	Input voltage range in V	
			min. (at 20°C)	max. (at 55°C)
PI6-1P-12VDC	12 V DC	0.3 W	9.6	14.1
PI6-1P-24VDC	24 V DC	0.4 W	19.2	28.0
PI6-1P-36VDC	36 V DC	0.7 W	28.8	40.0
▶ <b>PI6-1P-24VAC/DC</b>	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
▶ <b>PI6-1P-115VAC/DC</b>	115 V AC/DC	0.8 VA / 0.8 W	92.0	130.0
PI6-1P-230VAC/DC	230 V AC/DC	0.8 VA / 0.8 W	184.0	253.0

▶ **BOLD** - Regular stocked items.

# PI6-1P / PI6-1T / PI6-OC

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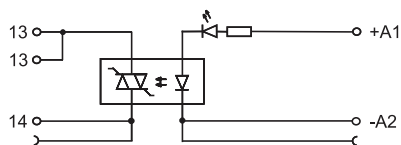


**PI6-1T**

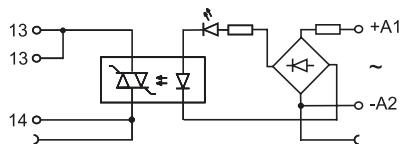


### CONNECTION DIAGRAMS

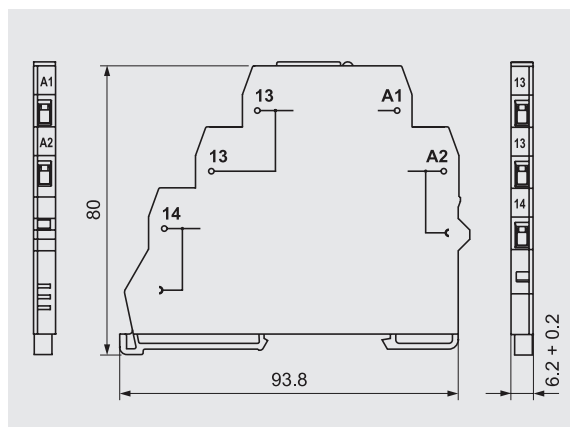
**PI6-1T-5...32VDC**



**PI6-1T-24VAC/DC**  
**PI6-1T-230VAC/DC**



### DIMENSIONS



### PI6-1T SPST(1NO) AC 50/60Hz & DC coil

Part Number	Rated input voltage Un	Power of input circuit
<b>PI6-1T-5...32VDC</b>	5...32 V DC	0.3 W at 24V
PI6-1T-24VAC/DC	24 V AC/DC	0.3 VA / 0.3 W
PI6-1T-230VAC/DC	230 V AC/DC	1.6 VA / 1.6 W

► **BOLD** - Regular stocked items.

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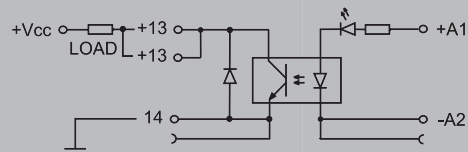


## PI6-OC

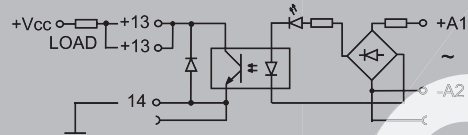


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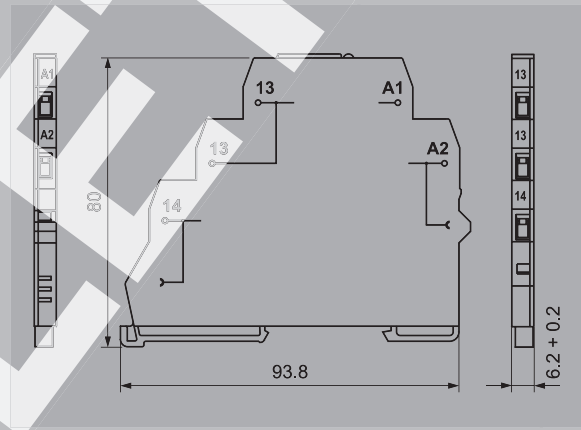
#### PI6-OC-5...32VDC



#### PI6-OC-24VAC/DC PI6-OC-230VAC/DC



### DIMENSIONS



### PI6-OC SPST(1NO) AC 50/60Hz & DC coil

Part Number

Rated input voltage  $U_n$

Power of input circuit

Part Number	Rated input voltage $U_n$	Power of input circuit
▶ <b>PI6-OC-5...32VDC</b>	5...32 V DC	0.3 W at 24V
PI6-OC-24VAC/DC	24 V AC/DC	0.3 VA / 0.3 W
PI6-OC-230VAC/DC	230 V AC/DC	1.0 VA / 1.0 W

▶ **BOLD** - Regular stocked items.