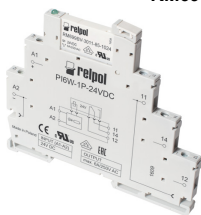






PIR6W-1P-...

interface relays

RM699BV + PI6W-1P-...



- Width 6,2 mm • Interface relay **PIR6W-1P-...** consists of: screw terminals socket, with electronic **PI6W-1P-...**, miniature operational relay - electromagnetic **RM699BV** ❶
- 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 (**PIR6W-1P-230V...-10** ❷)
- Accessories: description plates **PI6W-1246**
- Recognitions, certifications, directives: RoHS,    

Output circuit (RM699BV) - contact data ❶

| | | | |
|---|------------------------|--------------------------------------|--|
| Number and type of contacts | | 1 CO | |
| Contact material | | AgSnO₂ | AgSnO ₂ /Au hard gold plating ❷ |
| Max. switching voltage | | 400 V AC / 250 V DC | 30 V AC / 36 V DC ❷ |
| Min. switching voltage | AC / DC | 10 V | 5 V |
| Rated load | AC1 | 6 A / 250 V AC | 0,05 A / 30 V AC ❷ |
| | DC1 | 6 A / 24 V DC; 0,15 A / 250 V DC | 0,05 A / 36 V DC ❷ |
| Min. switching current | | 100 mA | 10 mA |
| | | – | 1 mA 24 V |
| Max. make current | | 10 A 20 ms | 0,1 A 20 ms ❷ |
| Rated current | | 6 A | 0,05 A ❷ |
| Max. breaking capacity | AC1 | 1 500 VA | 1,2 VA ❷ |
| 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 | • at rated load | 360 cycles/hour |
| | | • no load | 72 000 cycles/hour |
| Input circuit | | | |
| Rated voltage | 50/60 Hz AC | 230 V | |
| | DC | 12, 24 , 36 V | |
| | AC: 50/60 Hz AC/DC | 24, 42, 115, 230 V | |
| Must release voltage | | AC: ≥ 0,2 U _n | AC: ≥ 0,1 U _n 230 V AC |
| | | AC: ≥ 0,35 U _n 230 V AC ❸ | AC: ≥ 0,35 U _n 230 V AC/DC ❸ |
| | | DC: ≥ 0,1 U _n | |
| Operating range of supply voltage | | see Table 1 | |
| Must operate voltage | | AC: ≤ 0,8 U _n | AC: 0,6...0,85 U _n ❸ |
| | | DC: ≤ 0,8 U _n | |
| Rated power consumption | AC | ≤ 0,8 ... 0,9 VA | |
| | DC | 0,3 W | |
| | AC/DC | 0,3 ... 2,1 VA / 0,3 ... 1,0 W | |
| 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 | | 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 | |
| Mass - output distance | • clearance | ≥ 3 mm | |
| | • creepage | ≥ 3,6 mm | |

The data in bold type relate to the standard versions of the relays. ❶ Characteristics of the capacity of relays **PIR6W-1P-...** with **RM699BV** - see www.repol.com.pl ❷ 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 AgSnO₂ contacts (see beside), and electrical life of these contacts may be shorter than of normal contacts. ❸ Refers version for long control lines **PIR6W-1P-230V...-10** - relay which includes the socket **PI6W-1P-230V...-10** with integrated anti-interference filter, resistant to occurrence of induced voltages in long distances of control wires, and operational miniature relay **RM699BV-3011-85-1060**.

PIR6W-1P-...

interface relays

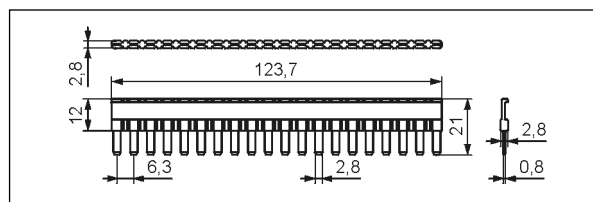
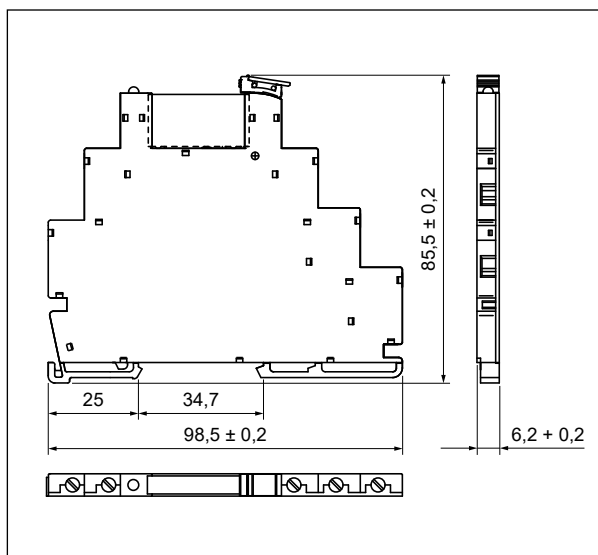
General data

| | | | | |
|---------------------------------|-------------------------|--------------------------------|---------------------------|-----------------------|
| Operating time (typical value) | AC: 11 ms | DC: 8 ms | AC, AC/DC: 20 ms | 0,85 U _n ③ |
| Release time (typical value) | AC: 15 ms | DC: 10 ms | AC, AC/DC: 18 ms | ④ |
| Electrical life | | | | |
| • resistive AC1 | > 0,6 x 10 ⁵ | 6 A, 250 V AC, 360 cycles/hour | | |
| • cos φ = 0,4 | > 2 x 10 ⁵ | 2 A, 250 V AC | | |
| Mechanical life (cycles) | > 2 x 10 ⁷ | | | |
| Dimensions (L x W x H) | 98,5 x 6,2 x 85,5 mm | | | |
| Weight | 45 g | | | |
| Ambient temperature | -40...+70 °C | | | |
| (non-condensation and/or icing) | • storage | -40...+60 °C | | |
| | • operating | 12 V DC, 24 V DC | | |
| | | -40...+50 °C | 230 V AC ③, 230 V AC/DC ④ | |
| | | -40...+55 °C | other voltages | |
| Cover protection category | IP 20 | EN 60529 | | |
| Environmental protection | RTI | EN 61810-1 | | |
| Shock resistance | 10 g | | | |
| Vibration resistance | 5 g | 10...500 Hz | | |

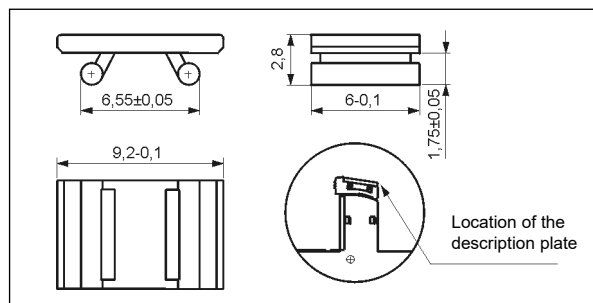
③ Refers version for long control lines, with integrated anti-interference filter.

④ For versions 230VAC/DC and 230VAC/DC-10: the distance at least 5 mm between the relays mounted side by side.

Dimensions



20-pole interconnection strip type ZG20



Description plate PI6W-1246

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.

PIR6W-1P-...

interface relays

Mounting

Relays **PIR6W-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 mm² / 2 x 1,5 mm² (1 x 14 / 2 x 16 AWG), stripping length: 9 mm, max. tightening moment for the terminal: 0,3 Nm.

Interface relay **PIR6W-1P-...** consists of: screw terminals socket, with electronic **PI6W-1P-...**, miniature operational relay - electromagnetic **RM699BV**.

PIR6W-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. Description plates of **PI6W-1246** type are offered for **PIR6W-1P-...** relays; they are delivered with the relays, not mounted.

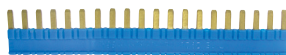
⚡ For versions 230VAC/DC and 230VAC/DC-10: the distance at least 5 mm between the relays mounted side by side.



PI6W-1P-...



RM699BV



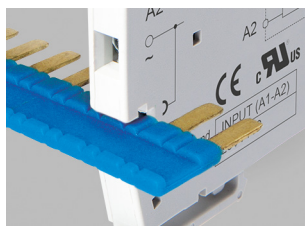
ZG20



PI6W-1246



Green LED:
signalling the operation
status of the relay.



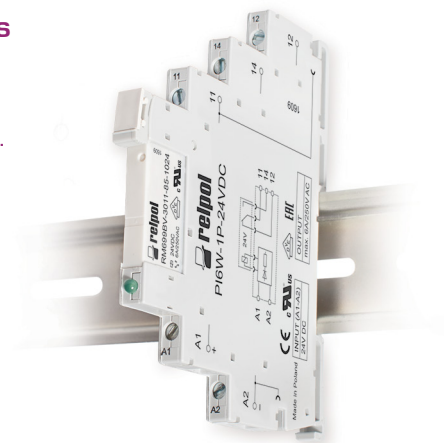
Interconnection strip ZG20:
bridging of common
input or output signals.



Movable ejector: protection
and easy replacement
of the operational relay.

Interface relays PIR6W-1P-...

set: relay RM699BV
+ socket PI6W-1P-...



PIR6W-1P-...

interface relays

Input data

Table 1

| Interface relay code | Input - voltage range V | |
|----------------------------------|----------------------------|--------------|
| | min. | max. |
| PIR6W-1P-12VDC | 9,6 | 14,4 |
| PIR6W-1P-24VDC | 19,2 | 28,0 |
| PIR6W-1P-36VDC | 28,8 | 40,0 |
| PIR6W-1P-24VAC/DC | 19,2 | 26,4 |
| PIR6W-1P-42VAC/DC | 33,6 | 50,0 |
| PIR6W-1P-115VAC/DC | 92,0 | 130,0 |
| PIR6W-1P-230VAC/DC ④ | 184,0 | 253,0 |
| PIR6W-1P-230VAC | 184,0 | 253,0 |
| PIR6W-1P-230VAC/DC-10 ④ ⑤ | ⑤ 196,0 | 253,0 |
| PIR6W-1P-230VAC-10 ④ | 196,0 | 253,0 |
| PIR6W-1P-12VDC-01 ② | 9,6 | 14,4 |
| PIR6W-1P-24VDC-01 ② | 19,2 | 28,0 |
| PIR6W-1P-36VDC-01 ② | 28,8 | 40,0 |
| PIR6W-1P-24VAC/DC-01 ② | 19,2 | 26,4 |
| PIR6W-1P-42VAC/DC-01 ② | 33,6 | 50,0 |
| PIR6W-1P-115VAC/DC-01 ② | 92,0 | 130,0 |
| PIR6W-1P-230VAC/DC-01 ② ④ | 184,0 | 253,0 |
| PIR6W-1P-230VAC-01 ② | 184,0 | 253,0 |

Connection diagrams

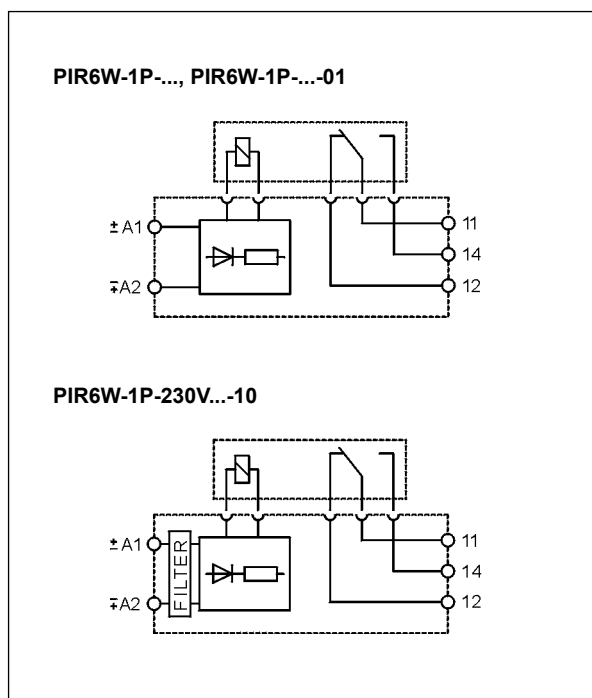


Table of codes

Table 2

| Interface relay code | Rated input voltage U_n ④ | Power of input circuit | Socket code | Operational relay code | Rated voltage of operational relay U_s ⑥ |
|----------------------------------|--------------------------------|------------------------|--------------------------|-----------------------------|---|
| PIR6W-1P-12VDC | 12 V DC | 0,3 W | PI6W-1P-12VDC | RM699BV-3011-85-1012 | 12 V DC |
| PIR6W-1P-24VDC | 24 V DC | 0,3 W | PI6W-1P-24VDC | RM699BV-3011-85-1024 | 24 V DC |
| PIR6W-1P-36VDC | 36 V DC | 0,3 W | PI6W-1P-36VDC | RM699BV-3011-85-1024 | 24 V DC |
| PIR6W-1P-24VAC/DC | 24 V AC/DC | 0,3 VA / 0,3 W | PI6W-1P-24VAC/DC | RM699BV-3011-85-1024 | 24 V DC |
| PIR6W-1P-42VAC/DC | 42 V AC/DC | 0,4 VA / 0,4 W | PI6W-1P-42VAC/DC | RM699BV-3011-85-1024 | 24 V DC |
| PIR6W-1P-115VAC/DC | 115 V AC/DC | 0,9 VA / 0,9 W | PI6W-1P-115VAC/DC | RM699BV-3011-85-1024 | 24 V DC |
| PIR6W-1P-230VAC/DC ④ | 230 V AC/DC | 0,8 VA / 0,8 W | PI6W-1P-230VAC/DC | RM699BV-3011-85-1060 | 60 V DC |
| PIR6W-1P-230VAC | 230 V AC | ≤ 0,8 VA | PI6W-1P-230VAC | RM699BV-3011-85-1060 | 60 V DC |
| PIR6W-1P-230VAC/DC-10 ④ ⑤ | 230 V AC/DC | 2,1 VA / 1,0 W | PI6W-1P-230VAC/DC-10 | RM699BV-3011-85-1060 | 60 V DC |
| PIR6W-1P-230VAC-10 ④ | 230 V AC | ≤ 0,9 VA | PI6W-1P-230VAC-10 | RM699BV-3011-85-1060 | 60 V DC |
| PIR6W-1P-12VDC-01 ② | 12 V DC | 0,3 W | PI6W-1P-12VDC | RM699BV-3211-85-1012 | 12 V DC |
| PIR6W-1P-24VDC-01 ② | 24 V DC | 0,3 W | PI6W-1P-24VDC | RM699BV-3211-85-1024 | 24 V DC |
| PIR6W-1P-36VDC-01 ② | 36 V DC | 0,3 W | PI6W-1P-36VDC | RM699BV-3211-85-1024 | 24 V DC |
| PIR6W-1P-24VAC/DC-01 ② | 24 V AC/DC | 0,3 VA / 0,3 W | PI6W-1P-24VAC/DC | RM699BV-3211-85-1024 | 24 V DC |
| PIR6W-1P-42VAC/DC-01 ② | 42 V AC/DC | 0,4 VA / 0,4 W | PI6W-1P-42VAC/DC | RM699BV-3211-85-1024 | 24 V DC |
| PIR6W-1P-115VAC/DC-01 ② | 115 V AC/DC | 0,9 VA / 0,9 W | PI6W-1P-115VAC/DC | RM699BV-3211-85-1024 | 24 V DC |
| PIR6W-1P-230VAC/DC-01 ② ④ | 230 V AC/DC | 0,8 VA / 0,8 W | PI6W-1P-230VAC/DC | RM699BV-3211-85-1060 | 60 V DC |
| PIR6W-1P-230VAC-01 ② | 230 V AC | ≤ 0,8 VA | PI6W-1P-230VAC | RM699BV-3211-85-1060 | 60 V DC |

The data in bold type relate to the standard versions of the relays. ② Version with gold-plated contacts. ③ Version for long control lines, with anti-interference filter. ④ For versions 230VAC/DC and 230VAC/DC-10: the distance at least 5 mm between the relays mounted side by side. ⑤ 196,0 V at supply voltage AC; 184,0 V at supply voltage DC. ⑥ It shall be remarked that rated input voltage of the operational relay U_s not always complies with the rated input voltage U_n (which is important on ordering operational relays for sockets).

Ordering codes

Ordering codes **PIR6W-1P-...** are specified in Tables 1, 2, "Interface relay code" column.

28.12.2023