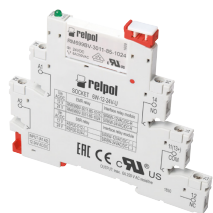
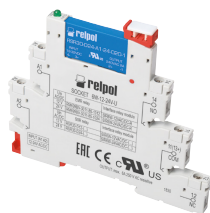





SIR6W-... interface relays

RM699BV + 6W-...



RSR30 + 6W-...



- Width 6,2 mm • Interface relay **SIR6W-...** consists of: screw terminals universal socket, with electronic **6W-...**, miniature operational relay - electromagnetic **RM699BV** or solid state **RSR30** ①
- 35 mm rail mount acc. to EN 60715 • May be linked with interconnection strip type **JB20** • Equipped in LED green
- Accessories: separators **6W-SEP**, cards of description plates **MP6-C**
- Recognitions, certifications, directives: RoHS,   

Output circuit (RM699BV) - contact data ①



| | | | |
|--|---------------------------|-----------------|--|
| Number and type of contacts (code of output) | 1 CO (R) ② | | |
| Contact material | AgSnO₂ | | |
| Max. switching voltage | 400 V AC / 250 V DC | | |
| Min. switching voltage | AC / DC | 10 V | |
| Rated load (capacity) | AC1 | 6 A / 250 V AC | |
| | AC15 | 3 A / 120 V | 1,5 A / 240 V (B300) |
| | DC1 | 6 A / 30 V DC | |
| | DC13 | 0,22 A / 120 V | 0,1 A / 250 V (R300) |
| Motor load | acc. to UL 508 | 1/4 HP | 240 V AC, contact 1 NO, single-phase motor |
| | AC3 acc. to IEC 60947-4-1 | 0,186 kW | 240 V AC, contact 1 NO, single-phase motor |
| Min. switching current | 100 mA | | |
| Max. inrush current | 10 A 20 ms | | |
| Rated current | 6 A | | |
| Max. breaking capacity | AC1 | 1 500 VA | |
| Min. breaking capacity | 1 W | | |
| Contact resistance | ≤ 100 mΩ 100 mA, 24 V | | |
| Max. operating frequency | AC1 | • at rated load | |
| | | • no load | |
| | | 360 cycles/hour | 72 000 cycles/hour |

Output circuit (RSR30) - output data ①

| Type of output (code of output) | Triac (T) ② max. 2 A | Transistor (C) ② max. 1 A | Transistor (O) ② max. 2 A |
|--|-------------------------|------------------------------|------------------------------|
| Number and type of outputs | 1 NO | 1 NO | 1 NO |
| Rated voltage | 240 V AC | 48 V DC | 24 V DC |
| Switching voltage range | 12 ... 280 V AC | 1,5 ... 60 V DC | 1,5 ... 32 V DC |
| Rated continuous output current | AC1 | 1 A | 2 A |
| | DC1 | | |
| Min. making capacity current | 50 mA | 1 mA | 1 mA |
| Max. off-state leakage current (turn-off state) | 1,5 mA | 1 mA | 1 mA |
| Max. on-state voltage drop on the connection (operating state) | 1,2 V | 0,4 V | 0,24 V |
| Operating switching frequency | | 10 Hz | 10 Hz |

Input circuit

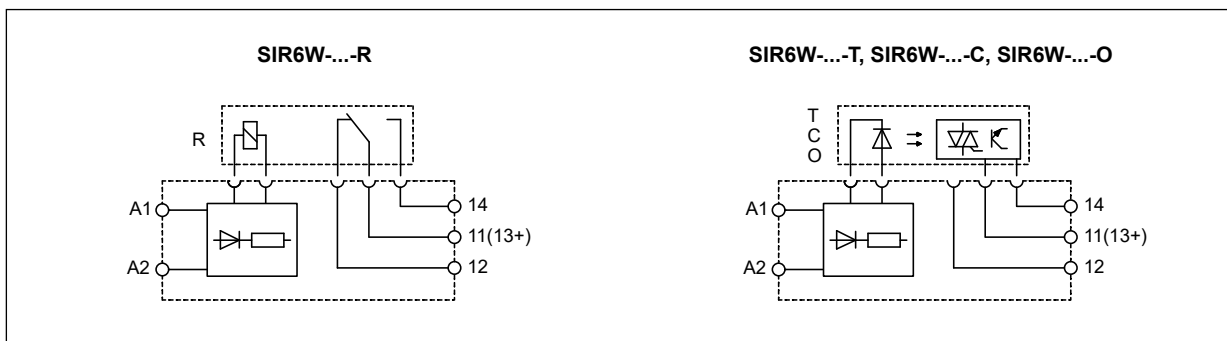
| | | |
|-----------------------------------|--------------------|---|
| Rated voltage | ③ DC | 6, 12, 24 V |
| | AC: 50/60 Hz AC/DC | 12, 24 , 48, 60, 110...125, 220...240 V |
| Operating range of supply voltage | DC | SIR6W-...-R: 0,8...1,2 U _n |
| | AC/DC | SIR6W-...-R: 0,8...1,1 U _n SIR6W-...-R: 0,85...1,1 U _n 6 V DC |
| | AC/DC | SIR6W-...-T/-C/-O: 0,8...1,25 U _n |
| Rated power consumption | see Table 1 | |

Insulation according to EN 60664-1

| | | | |
|-----------------------------|------------------------|---|--|
| Insulation rated voltage | 250 V AC | | |
| Rated surge voltage | 4 000 V | | |
| 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., output R, type of clearance: micro-disconnection |
| Input - output distance | ≥ 6 mm / ≥ 8 mm | | |
| • clearance / creepage | | | |
| Mass - output distance | ≥ 3 mm / ≥ 3,6 mm | | |
| • clearance / creepage | | | |

The data in bold type relate to the standard versions of the relays. ① Characteristics of the contact capacity of relays **SIR6W-... with RM699BV** - see catalog "Relays" and www.relpol.com.pl; **SIR6W-... with RSR30** - see www.relpol.com.pl ② Type of outputs: **R** - contacts AgSnO₂; **T** - triac; **C** - transistor (1 A); **O** - transistor (2 A). ③ Note: fixed polarization of input voltage (+A1, -A2)

Connection diagrams



Mounting

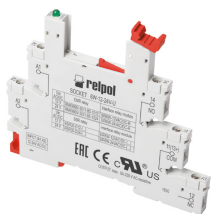
Relays **SIR6W-...** are designed for direct mounting on 35 mm rail mount acc. to EN 60715. **Connections:** max. cross section of the cables: 1 x 2,5 mm² / 2 x 1,5 mm² (1 x 14 / 2 x 16 AWG), stripping length: 7 mm, maks. max. tightening moment for the terminal: 0,5 Nm.

Interface relay **SIR6W-...** consists of: screw terminals universal socket, with electronic **6W-...**, miniature operational relay - electromagnetic **RM699BV** or solid state **RSR30** Ⓣ.

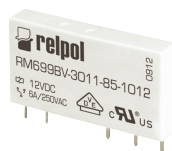
SIR6W-... may be linked with interconnection strip type **JB20**. Strip **JB20** bridges common input or output signals, maximum permissible current is 36 A / 250 V AC. Colours of strips: **JB20-1** red, **JB20-2** black, **JB20-3** blue.

For **SIR6W-...** relays we offer **6W-SEP** separators that provide: optical division of groups of interface relays, separation of group of interface relays with different supply voltages (according to VDE 0106-101), insulation for cut **JB20** interconnection strips, additional insulation from other devices in metal housings or from metal end clamps on 35 mm rails. In the set with the **SIR6W-...** interface relay, a single description plate is supplied, snap into tall marker groove, compatible with the standard for DIN rail terminal blocks. **MP6-C** cards for automatic printing, containing 64 description plates should be ordered separately.

Ⓣ Type of outputs: **R** - contacts AgSnO₂; **T** - triac; **C** - transistor (1 A); **O** - transistor (2 A).



6W-...



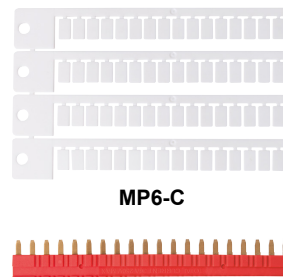
RM699BV



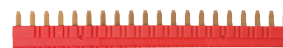
RSR30



6W-SEP



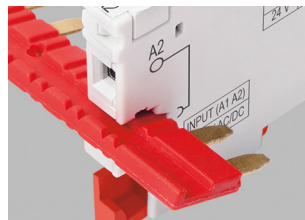
MP6-C



JB20



Green LED: signalling the operation status of the relay.



Interconnection strip JB20: bridging of common input or output signals.



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

Table of codes

Table 1

| Interface relay code | Rated input voltage U_n ⑥ | Power of input circuit at voltage U_n | Socket code for the set | Operational relay code | Rated voltage of operational relay U_s ⑥ |
|--------------------------------|-----------------------------|---|-------------------------|------------------------------|--|
| SIR6W-6VDC-R ④ | 6 V DC | 0,2 W | 6W-6-24VDC | RM699BV-3011-85-1005 | 5 V DC |
| SIR6W-12VDC-R ④ | 12 V DC | 0,2 W | 6W-6-24VDC | RM699BV-3011-85-1012 | 12 V DC |
| SIR6W-24VDC-R ④ | 24 V DC | 0,4 W | 6W-6-24VDC | RM699BV-3011-85-1024 | 24 V DC |
| SIR6W-12VAC/DC-R | 12 V AC/DC | 0,2 VA / 0,2 W | 6W-12-24V-U | RM699BV-3011-85-1012 | 12 V DC |
| SIR6W-24VAC/DC-R | 24 V AC/DC | 0,4 VA / 0,4 W | 6W-12-24V-U | RM699BV-3011-85-1024 | 24 V DC |
| SIR6W-48VAC/DC-R | 48 V AC/DC | 0,4 VA / 0,4 W | 6W-48-60V-U | RM699BV-3011-85-1048 | 48 V DC |
| SIR6W-60VAC/DC-R | 60 V AC/DC | 0,5 VA / 0,5 W | 6W-48-60V-U | RM699BV-3011-85-1060 | 60 V DC |
| SIR6W-110-125VAC/DC-R ④ | 110...125 V AC/DC | 0,7 VA / 0,7 W ⑤ | 6W-110-125V-U | RM699BV-3011-85-1060 | 60 V DC |
| SIR6W-220-240VAC/DC-R ④ | 220...240 V AC/DC | 0,9 VA / 0,86 W ⑤ | 6W-220-240V-U | RM699BV-3011-85-1060 | 60 V DC |
| SIR6W-12VAC/DC-T | 12 V AC/DC | 0,15 VA / 0,15 W | 6W-12-24V-U | RSR30-D12-A1-24-020-1 | 12 V DC |
| SIR6W-24VAC/DC-T | 24 V AC/DC | 0,3 VA / 0,3 W | 6W-12-24V-U | RSR30-D24-A1-24-020-1 | 24 V DC |
| SIR6W-12VAC/DC-C | 12 V AC/DC | 0,15 VA / 0,15 W | 6W-12-24V-U | RSR30-D12-D1-04-025-1 | 12 V DC |
| SIR6W-24VAC/DC-C | 24 V AC/DC | 0,3 VA / 0,3 W | 6W-12-24V-U | RSR30-D24-D1-04-025-1 | 24 V DC |
| SIR6W-48VAC/DC-C | 48 V AC/DC | 0,4 VA / 0,4 W | 6W-48-60V-U | RSR30-D48-D1-04-025-1 | 48 V DC |
| SIR6W-12VAC/DC-O | 12 V AC/DC | 0,15 VA / 0,15 W | 6W-12-24V-U | RSR30-D12-D1-02-040-1 | 12 V DC |
| SIR6W-24VAC/DC-O | 24 V AC/DC | 0,3 VA / 0,3 W | 6W-12-24V-U | RSR30-D24-D1-02-040-1 | 24 V DC |
| SIR6W-48VAC/DC-O | 48 V AC/DC | 0,4 VA / 0,4 W | 6W-48-60V-U | RSR30-D48-D1-02-040-1 | 48 V DC |

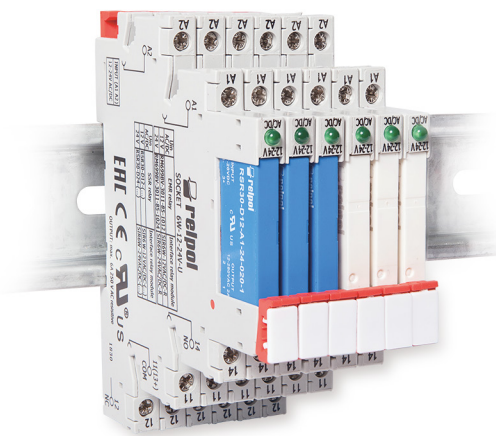
The data in bold type relate to the standard versions of the relays. ④ Note: fixed polarization of input voltage (+A1, -A2) ⑤ For versions 110...125 V AC/DC and 220...240 V AC/DC: see recommendations regarding ambient temperature during operation. ⑥ Power consumption at $U_n=125$ V and $U_n=240$ V ⑦ 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 **SIR6W-...** are specified in Table 1, "Interface relay code" column.

Interface relay SIR6W-...

set: relay
RM699BV (RSR30)
+ socket 6W-...



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.