

# PIR6WB-1PS

## Subminiature Electromagnetic and Solid State Modules



- Spring Clamp Terminals
- Electronic **spring** terminals socket (PI6W-1PS)
- Electromagnetic relay (RM699BV) or solid state relay (RSR30)
- Width 6.2 mm
- Equipped with green LED



### PIR6WB-1PS

#### Electromagnetic Relay (RM699BV) contact information

| Number and type of contacts (code of output) |  | SPDT (R)                         | SPDT (R-01)                |
|----------------------------------------------|--|----------------------------------|----------------------------|
| Contact material                             |  | AgSnO <sub>2</sub>               | AgSnO <sub>2</sub> / Au3μm |
| Max. switching voltage                       |  | 400 V AC / 250 V DC              | 30 V AC / 36 V DC          |
| Min. switching voltage                       |  | 10 V                             | 5 V                        |
| Rated load                                   |  | 6 A / 250 V AC                   | 0.05 A / 30 V AC           |
|                                              |  | 6 A / 24 V DC; 0.15 A / 250 V DC | 0.05 A / 36 V DC           |
| Min. switching current                       |  | 100 mA                           | 10 mA                      |
| Max. inrush current                          |  | 10 A 20 ms                       | 0.1 A 20 ms                |
| Rated current                                |  | 6A                               | 0.05A                      |
| Max. / Min. breaking capacity                |  | 1500 VA / 1 W                    | 1.2 VA / 0.05 W            |
| Contact resistance                           |  | ≤ 100 mΩ 100 mA 24 V             | ≤ 30 mΩ 10 mA 5 V          |
| Max. operating frequency                     |  | 360 cycles/hour                  | 360 cycles/hour            |
| • at rated load                              |  | 72 000 cycles/hour               | 72 000 cycles/hour         |
| • no load                                    |  |                                  |                            |

#### Solid State (RSR30) output information

| Type of output (code of output)                                | Triac (T)<br>max. 2 A | Transistor (C)<br>max. 1 A | Transistor (O)<br>max. 2 A |
|----------------------------------------------------------------|-----------------------|----------------------------|----------------------------|
| Number and type of outputs                                     | SPST (1 NO)           | SPST (1 NO)                | SPST (1 NO)                |
| Rated voltage                                                  | 240 V AC              | 48 V DC                    | 24 V DC                    |
| Max./ Min. output voltage                                      | 280 V AC / 12 V AC    | 60 V DC / 1,5 V DC         | 32 V DC / 1,5 V DC         |
| Rated continuous output current                                | 1A                    | 1A                         | 2A                         |
|                                                                |                       |                            |                            |
| Min. making capacity current                                   | 50 mA                 | 1 mA                       | 1 mA                       |
| Max. off-state leakage current (rest condition)                | 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                     | DC                 | 6 ... 60 V                                                  |
|                                   |                    | 24 ... 230 V                                                |
| Must release voltage              | AC: 50/60 Hz AC/DC | AC: ≥ 0.2 U <sub>n</sub> ; DC: ≥ 0.1 U <sub>n</sub>         |
| Operating range of supply voltage |                    | 0.8...1.2 U <sub>n</sub> ; 0.85...1.2 U <sub>n</sub> 6 V DC |
| Must operate voltage              |                    | ≤ 0.8 U <sub>n</sub> ; ≤ 0.85 U <sub>n</sub> 6 V DC         |
| Rated power consumption           | DC                 | 0.2 ... 0.5 W                                               |
|                                   | AC/DC              | 0.5 ... 1.2 VA / 0.4 ... 1.2 W                              |

#### Insulation

|                                               |                                                            |
|-----------------------------------------------|------------------------------------------------------------|
| Insulation rated voltage                      | 250 V AC                                                   |
| Rated surge voltage                           | 4000 V 1.2 / 50 μs                                         |
| Overvoltage category                          | III                                                        |
| Insulation pollution degree                   | 3                                                          |
| Dielectric strength: input - output           | 4000 V AC 50/60 Hz. 1 min.. type of insulation: reinforced |
| Dielectric strength: input - output           | 6000 V 1.2 / 50 μs                                         |
| Dielectric strength: contact clearance        | 1000 V AC 50/60 Hz. 1 min.. output R and R-01              |
| Input - output distance: clearance / creepage | ≥ 6 mm / ≥ 8 mm                                            |

#### General data

|                                 |                                                              |
|---------------------------------|--------------------------------------------------------------|
| Operating time (typical value)  | PIR6W-1PS-...-R/-R01: DC: 8 ms AC/DC: 20 ms                  |
|                                 | PIR6W-1PS-...-T: DC: 100 μs AC/DC: 10 ms                     |
|                                 | PIR6W-1PS-...-C/-O: DC: 50 μs AC/DC: 10 ms                   |
| Release time (typical value)    | PIR6W-1PS-...-R/-R01: DC: 10 ms AC/DC: 25 ms                 |
|                                 | PIR6W-1PS-...-T: DC: 1/2 cycle + 1 ms AC/DC: 30 ms           |
|                                 | PIR6W-1PS-...-C/-O: DC: 600 μs AC/DC: 20 ms                  |
| Electrical life (resistive AC1) | PIR6W-1PS-...-R: > 0.5 x 10 <sup>6</sup> 6 A 250 V AC        |
| Mechanical life (cycles)        | PIR6W-1PS-...-R/-R01: > 10 <sup>7</sup>                      |
| Dimensions (L x W x H)          | 98.5 x 6.2 x 84.6 mm                                         |
| Weight                          | 55 g                                                         |
| Ambient temperature: storage    | PIR6W-1PS-...-R/-R01-T: -40...+70 °C ...-C/-O: -25...+70 °C  |
| Ambient temperature: operating  | PIR6W-1PS-...-R/-R01: -40...+55 °C ...-T/-C/-O: -20...+55 °C |
| Protection category             | IP 20 PN-EN 60529                                            |
| Environmental protection        | RTI PN-EN 116000-3                                           |
| Shock resistance                | 10 g                                                         |
| Vibration resistance            | 5 g 10...500 Hz                                              |

T - triac; C - transistor; O - transistor.

# PIR6WB-1PS

## Subminiature Electromagnetic and Solid State Modules

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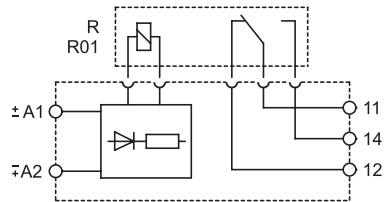


### PIR6WB-1PS

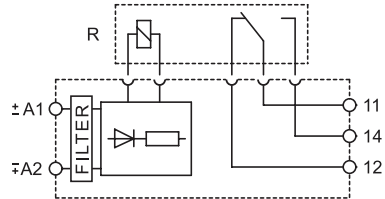


#### CONNECTION DIAGRAMS

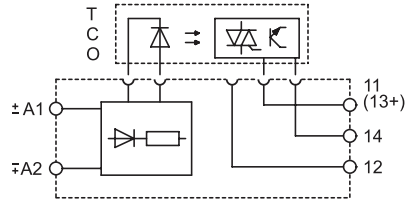
PIR6WB-1PS-...-R, PIR6WB-1PS-...-R01



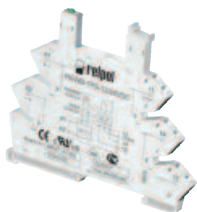
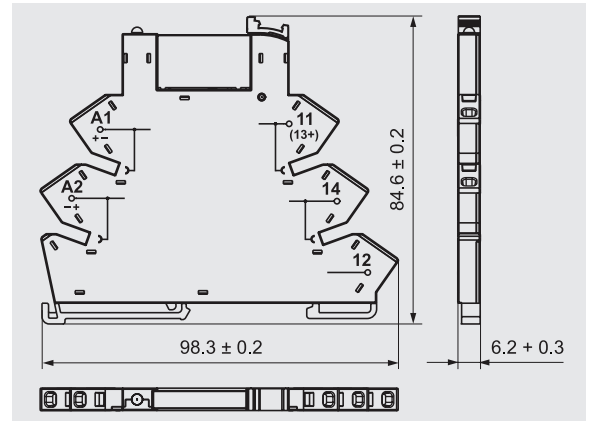
PIR6WB-1P-230VAC/DC-10



PIR6WB-1PS-...-T, PIR6WB-1PS-...-C, PIR6WB-1PS-...-O



#### DIMENSIONS



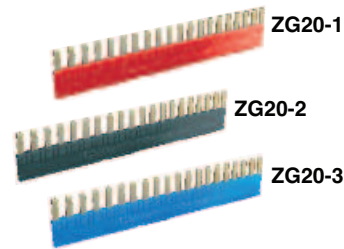
PI6WB-1PS-...



RM699BV



RSR30



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.

All accessories are sold separately.

# PIR6WB-1PS

## Subminiature Electromagnetic and Solid State Modules

### Electromagnetic Relays

Featuring Electromagnetic relay RM699BV / 6A; 250VAC / 24VDC

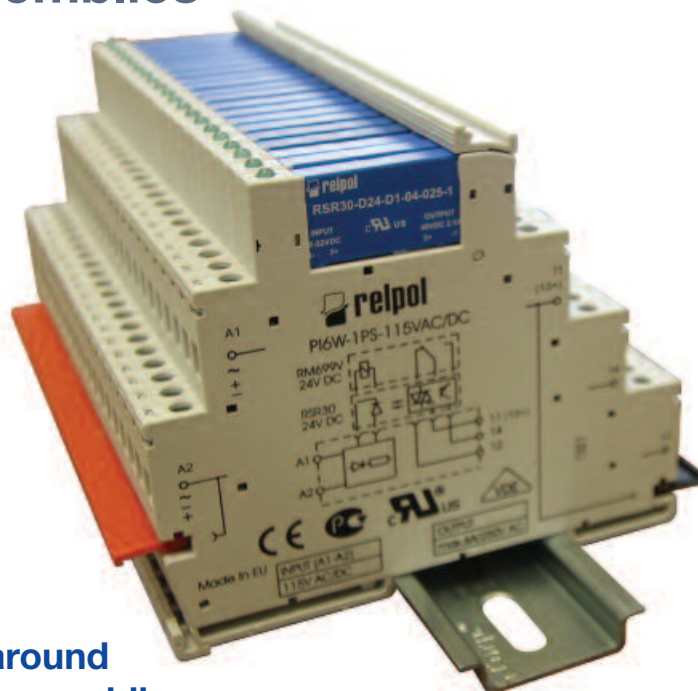
| Part Number              | Rated input voltage $U_N$ | Power of input circuit | Socket code         | Operational relay code | Rated voltage of operational relay $U_S$ |
|--------------------------|---------------------------|------------------------|---------------------|------------------------|------------------------------------------|
| PIR6WB-1PS-6VDC-R        | 6 V DC                    | 0.3 W                  | PI6WB-1PS-6VDC      | RM699BV-3011-85-1005   | 5 V DC                                   |
| PIR6WB-1PS-12VDC-R       | 12 V DC                   | 0.2 W                  | PI6WB-1PS-12/24VDC  | RM699BV-3011-85-1012   | 12 V DC                                  |
| ► PIR6WB-1PS-24VDC-R     | 24 V DC                   | 0.3 W                  | PI6WB-1PS-12/24VDC  | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-36VDC-R       | 36 V DC                   | 0.3 W                  | PI6WB-1PS-36VDC     | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-48VDC-R       | 48 V DC                   | 0.4 W                  | PI6WB-1PS-48VDC     | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-60VDC-R       | 60 V DC                   | 0.5 W                  | PI6WB-1PS-60VDC     | RM699BV-3011-85-1024   | 24 V DC                                  |
| ► PIR6WB-1PS-24VAC/DC-R  | 24 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-24VAC/DC  | RM699BV-3011-85-1012   | 12 V DC                                  |
| PIR6WB-1PS-42VAC/DC-R    | 42 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-42VAC/DC  | RM699BV-3011-85-1024   | 24 V DC                                  |
| ► PIR6WB-1PS-115VAC/DC-R | 115 V AC/DC               | 1.2 VA / 1.2 W         | PI6WB-1PS-115VAC/DC | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-230VAC/DC-R   | 230 V AC/DC               | 1.2 VA / 1.2 W         | PI6WB-1PS-230VAC/DC | RM699BV-3011-85-1048   | 48 V DC                                  |

Featuring Electromagnetic relay RM699BV / 0.05A; 30VAC / 36VDC. gold plated contacts

| Part Number               | Rated input voltage $U_N$ | Power of input circuit | Socket code         | Operational relay code | Rated voltage of operational relay $U_S$ |
|---------------------------|---------------------------|------------------------|---------------------|------------------------|------------------------------------------|
| PIR6WB-1PS-6VDC-R01       | 6 V DC                    | 0.3 W                  | PI6WB-1PS-6VDC      | RM699BV-3011-85-1005   | 5 V DC                                   |
| PIR6WB-1PS-12VDC-R01      | 12 V DC                   | 0.2 W                  | PI6WB-1PS-12/24VDC  | RM699BV-3011-85-1012   | 12 V DC                                  |
| PIR6WB-1PS-24VDC-R01      | 24 V DC                   | 0.3 W                  | PI6WB-1PS-12/24VDC  | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-36VDC-R01      | 36 V DC                   | 0.3 W                  | PI6WB-1PS-36VDC     | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-48VDC-R01      | 48 V DC                   | 0.4 W                  | PI6WB-1PS-48VDC     | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-60VDC-R01      | 60 V DC                   | 0.5 W                  | PI6WB-1PS-60VDC     | RM699BV-3011-85-1024   | 24 V DC                                  |
| ► PIR6WB-1PS-24VAC/DC-R01 | 24 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-24VAC/DC  | RM699BV-3011-85-1012   | 12 V DC                                  |
| PIR6WB-1PS-42VAC/DC-R01   | 42 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-42VAC/DC  | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-115VAC/DC-R01  | 115 V AC/DC               | 1.2 VA / 1.2 W         | PI6WB-1PS-115VAC/DC | RM699BV-3011-85-1024   | 24 V DC                                  |
| PIR6WB-1PS-230VAC/DC-R01  | 230 V AC/DC               | 1.2 VA / 1.2 W         | PI6WB-1PS-230VAC/DC | RM699BV-3011-85-1048   | 48 V DC                                  |

The 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). For versions of the input voltage  $U_N = 230$  V AC/DC keep the distance between the mounting relays min. 5 mm under maximum load and at continuous operation.

## Altech Custom Assemblies



Altech provides quick turnaround and competitive prices on assemblies.

For complete assemblies contact Altech.

► BOLD - Regular stocked items.

### Solid State Relays

#### Featuring Solid State Triac (T) relay RSR30 / 2A; 240VAC output

| Part Number                    | Rated input voltage $U_N$ | Power of input circuit | Socket code         | Operational relay code | Rated voltage of operational relay $U_S$ |
|--------------------------------|---------------------------|------------------------|---------------------|------------------------|------------------------------------------|
| PIR6WB-1PS-6VDC-T              | 6 V DC                    | 0.2 W                  | PI6WB-1PS-6VDC      | RSR30-D05-A1-24-020-1  | 5 V DC                                   |
| PIR6WB-1PS-12VDC-T             | 12 V DC                   | 0.2 W                  | PI6WB-1PS-12/24VDC  | RSR30-D12-A1-24-020-1  | 12 V DC                                  |
| PIR6WB-1PS-24VDC-T             | 24 V DC                   | 0.3 W                  | PI6WB-1PS-12/24VDC  | RSR30-D24-A1-24-020-1  | 24 V DC                                  |
| PIR6WB-1PS-36VDC-T             | 36 V DC                   | 0.3 W                  | PI6WB-1PS-36VDC     | RSR30-D24-A1-24-020-1  | 24 V DC                                  |
| PIR6WB-1PS-48VDC-T             | 48 V DC                   | 0.4 W                  | PI6WB-1PS-48VDC     | RSR30-D24-A1-24-020-1  | 24 V DC                                  |
| PIR6WB-1PS-60VDC-T             | 60 V DC                   | 0.5 W                  | PI6WB-1PS-60VDC     | RSR30-D24-A1-24-020-1  | 24 V DC                                  |
| ► <b>PIR6WB-1PS-24VAC/DC-T</b> | 24 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-24VAC/DC  | RSR30-D12-A1-24-020-1  | 12 V DC                                  |
| PIR6WB-1PS-42VAC/DC-T          | 42 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-42VAC/DC  | RSR30-D24-A1-24-020-1  | 24 V DC                                  |
| PIR6WB-1PS-115VAC/DC-T         | 115 V AC/DC               | 1.0 VA / 1.0 W         | PI6WB-1PS-115VAC/DC | RSR30-D24-A1-24-020-1  | 24 V DC                                  |

#### Featuring Solid State transistor (C) relay RSR30 / 1A; 48VDC output

| Part Number                    | Rated input voltage $U_N$ | Power of input circuit | Socket code         | Operational relay code | Rated voltage of operational relay $U_S$ |
|--------------------------------|---------------------------|------------------------|---------------------|------------------------|------------------------------------------|
| PIR6WB-1PS-6VDC-C              | 6 V DC                    | 0.2 W                  | PI6WB-1PS-6VDC      | RSR30-D05-D1-04-025-1  | 5 V DC                                   |
| PIR6WB-1PS-12VDC-C             | 12 V DC                   | 0.2 W                  | PI6WB-1PS-12/24VDC  | RSR30-D12-D1-04-025-1  | 12 V DC                                  |
| PIR6WB-1PS-24VDC-C             | 24 V DC                   | 0.3 W                  | PI6WB-1PS-12/24VDC  | RSR30-D24-D1-04-025-1  | 24 V DC                                  |
| PIR6WB-1PS-36VDC-C             | 36 V DC                   | 0.3 W                  | PI6WB-1PS-36VDC     | RSR30-D24-D1-04-025-1  | 24 V DC                                  |
| PIR6WB-1PS-48VDC-C             | 48 V DC                   | 0.4 W                  | PI6WB-1PS-48VDC     | RSR30-D24-D1-04-025-1  | 24 V DC                                  |
| PIR6WB-1PS-60VDC-C             | 60 V DC                   | 0.5 W                  | PI6WB-1PS-60VDC     | RSR30-D24-D1-04-025-1  | 24 V DC                                  |
| ► <b>PIR6WB-1PS-24VAC/DC-C</b> | 24 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-24VAC/DC  | RSR30-D12-D1-04-025-1  | 12 V DC                                  |
| PIR6WB-1PS-42VAC/DC-C          | 42 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-42VAC/DC  | RSR30-D24-D1-04-025-1  | 24 V DC                                  |
| PIR6WB-1PS-115VAC/DC-C         | 115 V AC/DC               | 1.0 VA / 1.0 W         | PI6WB-1PS-115VAC/DC | RSR30-D24-D1-04-025-1  | 24 V DC                                  |
| PIR6WB-1PS-230VAC/DC-C         | 230 V AC/DC               | 1.0 VA / 1.0 W         | PI6WB-1PS-230VAC/DC | RSR30-D48-D1-04-025-1  | 48 V DC                                  |

#### Featuring Solid State transistor (O) relay RSR30 / 2A; 24VDC output

| Part Number                    | Rated input voltage $U_N$ | Power of input circuit | Socket code         | Operational relay code | Rated voltage of operational relay $U_S$ |
|--------------------------------|---------------------------|------------------------|---------------------|------------------------|------------------------------------------|
| PIR6WB-1PS-6VDC-O              | 6 V DC                    | 0.2 W                  | PI6WB-1PS-6VDC      | RSR30-D05-D1-02-040-1  | 5 V DC                                   |
| PIR6WB-1PS-12VDC-O             | 12 V DC                   | 0.2 W                  | PI6WB-1PS-12/24VDC  | RSR30-D12-D1-02-040-1  | 12 V DC                                  |
| PIR6WB-1PS-24VDC-O             | 24 V DC                   | 0.3 W                  | PI6WB-1PS-12/24VDC  | RSR30-D24-D1-02-040-1  | 24 V DC                                  |
| PIR6WB-1PS-36VDC-O             | 36 V DC                   | 0.3 W                  | PI6WB-1PS-36VDC     | RSR30-D24-D1-02-040-1  | 24 V DC                                  |
| PIR6WB-1PS-48VDC-O             | 48 V DC                   | 0.4 W                  | PI6WB-1PS-48VDC     | RSR30-D24-D1-02-040-1  | 24 V DC                                  |
| PIR6WB-1PS-60VDC-O             | 60 V DC                   | 0.5 W                  | PI6WB-1PS-60VDC     | RSR30-D24-D1-02-040-1  | 24 V DC                                  |
| ► <b>PIR6WB-1PS-24VAC/DC-O</b> | 24 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-24VAC/DC  | RSR30-D12-D1-02-040-1  | 12 V DC                                  |
| PIR6WB-1PS-42VAC/DC-O          | 42 V AC/DC                | 0.5 VA / 0.4 W         | PI6WB-1PS-42VAC/DC  | RSR30-D24-D1-02-040-1  | 24 V DC                                  |
| PIR6WB-1PS-115VAC/DC-O         | 115 V AC/DC               | 1.0 VA / 1.0 W         | PI6WB-1PS-115VAC/DC | RSR30-D24-D1-02-040-1  | 24 V DC                                  |
| PIR6WB-1PS-230VAC/DC-O         | 230 V AC/DC               | 1.0 VA / 1.0 W         | PI6WB-1PS-230VAC/DC | RSR30-D48-D1-02-040-1  | 48 V DC                                  |

It should be noted that the rated input voltage of the operational relay ( $U_S$ ) is not always the same as the rated input voltage of the relay and socket combination ( $U_N$ ) (This is important when ordering operational relays for sockets). For versions of the input voltage  $U_N = 230$  V AC/DC keep the distance between the mounting relays min. 5 mm under maximum load and at continuous operation.

► **BOLD** - Regular stocked items.

# Mouser Electronics

Authorized Distributor

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[PIR6WB-1PS-115VAC/DC-C](#) [PIR6WB-1PS-36VDC-O](#) [PIR6WB-1PS-48VDC-R](#) [PIR6WB-1PS-24VAC/DC-C](#) [PIR6WB-](#)  
[1PS-60VDC-O](#) [PIR6WB-1PS-60VDC-T](#) [PIR6WB-1PS-6VDC-C](#) [PIR6WB-1PS-36VDC-R](#) [PIR6WB-1PS-42VAC/DC-T](#)  
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