

## PSSR 24VDC/1PH AC 25A

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

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### Product image



Similar to illustration

- Load circuit: 1-phase 12...275 V AC / 25 A or 24...510 V AC / 35 A
- Zero-cross switch or instantaneous-switching
- Ready-to-use: snap on - connect - ready
- Wear-free and silent switching
- High capacity for handling surge currents ( $I^2t$ ) up to 6000 A<sup>2</sup>s (10 ms)
- Plug-in current-monitoring module



### General ordering data

|            |   |
|------------|---|
| Version    | Power Solid-State Relais, Solid state contactor, Rated control voltage: 3.5...32 V DC , Rated switching voltage: 12...275 V AC, Continuous current: 17 A (AC51) at 40 °C, 3.5 A (AC 53), Screw connection |
| Order No.  | <a href="#">1406200000</a>  |
| Type       | PSSR 24VDC/1PH AC 25A   |
| GTIN (EAN) | 4050118206821   |
| Qty.       | 1 pc(s).  |

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**Technical data****Dimensions and weights**

|            |          |                 |            |
|------------|----------|-----------------|------------|
| Depth      | 115.9 mm | Depth (inches)  | 4.563 inch |
| Height     | 98 mm    | Height (inches) | 3.858 inch |
| Width      | 22.5 mm  | Width (inches)  | 0.886 inch |
| Net weight | 244 g    |                 |            |

**Temperatures**

|                     |                                    |                       |                 |
|---------------------|------------------------------------|-----------------------|-----------------|
| Storage temperature | -55 °C...125 °C                    | Operating temperature | -55 °C...100 °C |
| Humidity            | 40...85 % (indoor) no condensation |                       |                 |

**Rated data UL**

|                         |         |
|-------------------------|---------|
| Certificate No. (cURus) | E360862 |
|-------------------------|---------|

**Control side**

|                       |               |                                |                  |
|-----------------------|---------------|--------------------------------|------------------|
| Rated control voltage | 3.5...32 V DC | Nominal control current        | 10...13 mA       |
| Power rating          | < 500 mW      | Pull-in/drop-out voltage, typ. | 3 V / 2 V DC     |
| Status indicator      | LED yellow    | Protective circuit             | Suppressor diode |

**Load side**

|   |  |                                |  |
|---|--|--------------------------------|--|
| Rated switching voltage                       | 12...275 V AC                            | Continuous current             | 17 A (AC51) at 40 &deg;C,<br>3.5 A (AC 53) |
| Max. switching current                        | 25 A                                     | Load category                  | AC 51, AC 53                               |
| Inrush current                                | 140 A (10 ms)                            | Pulse load, max. current       | 250 A (10 ms), non-recurrent               |
| Load limit integral ( $I^2t$ ) <10 ms         | 340 A <sup>2</sup> s                     | Switch-on delay                | ≤ 10 ms                                    |
| Switch-off delay                              | ≤ 10 ms                                  | Voltage drop at max. load      | ≤1.25 V                                    |
| Leakage current                               | ≤ 1 mA                                   | Min. switching current         | 5 mA                                       |
| Short-circuit-proof                           | No                                       | Protective circuit, load side  | Varistor                                   |
| Contact type                                  | 1 NO contact (Triac (zero-cross switch)) | Output voltage frequency range | 50...60 Hz                                 |
| max. switching frequency (DC control voltage) | 10 Hz                                    |                                |  |

**General data**

|         |  |      |       |
|---------|--|------|-------|
| Version | Single-phase with mounted heat sink (zero-voltage switch output) | Rail | TS 35 |
| Colour  | black  |      |       |

**Insulation coordination**

|  |                     |  |                     |
|--|---------------------|--|---------------------|
| Insulation coordination according to       | EN 60947-4-3:2014   | Pollution severity                               | 2                   |
| Surge voltage category                     | III                 | Dielectric strength for control side - load side | 4 kV <sub>eff</sub> |
| Dielectric strength of load side - housing | 4 kV <sub>eff</sub> | Impulse withstand voltage                        | 4 kV (1.2/50 μs)    |
| Protection degree                          | IP20                |  |                     |

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**Technical data****Further details of approvals / standards**

|           |                                     |                         |                             |
|-----------|-------------------------------------|-------------------------|-----------------------------|
| Standards | EN 60947-4-3, EN 60950, IEC 60335-1 | Certificate No. (cURus) | www.weidmueller.com E360862 |
|-----------|-------------------------------------|-------------------------|-----------------------------|

**Connection data (control side)**

|   |                      |   |                     |
|---|----------------------|---|---------------------|
| Wire connection method (control side)               | Screw connection     | Nom. rated connection clamping range (control side) | 1.5 mm <sup>2</sup> |
| Min. rated connection clamping range (control side) | 0.13 mm <sup>2</sup> | Max. rated connection clamping range (control side) | 3.3 mm <sup>2</sup> |
| Min. tightening torque (control side)               | 0.4 Nm               | Max. tightening torque (control side)               | 0.5 Nm              |
| Blade size (control side)                           | 0.6 x 3.5 mm         |   |                     |

**Connection data (load side)**

|  |                               |  |                   |
|--|-------------------------------|--|-------------------|
| Wire connection method (load side)               | Screw connection              | Nom. rated connection clamping range (load side) | 6 mm <sup>2</sup> |
| Min. rated connection clamping range (load side) | 1.5 mm <sup>2</sup>           | Max. rated connection clamping range (load side) | 6 mm <sup>2</sup> |
| Wire connection method (load side)               | M5 ring cable lug (insulated) | Min. tightening torque (load side)               | 2 Nm              |
| Max. tightening torque (load side)               | 3 Nm                          | Blade size (load side)                           | Gr. PZ2           |

**Connection data**

|                        |                  |
|------------------------|------------------|
| Wire connection method | Screw connection |
|------------------------|------------------|

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002055    | ETIM 7.0    | EC002055    |
| ETIM 8.0    | EC002055    | ECLASS 9.0  | 27-37-10-14 |
| ECLASS 9.1  | 27-37-10-14 | ECLASS 10.0 | 27-37-10-14 |
| ECLASS 11.0 | 27-37-10-14 | ECLASS 12.0 | 27-37-10-14 |

**Environmental Product Compliance**

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

**Approvals**

Approvals



|                         |            |
|-------------------------|------------|
| ROHS                    | Conform    |
| UL File Number Search   | UL Website |
| Certificate No. (cURus) | E360862    |

**Data sheet****PSSR 24VDC/1PH AC 25A****Weidmüller Interfaces GmbH & Co. KG**

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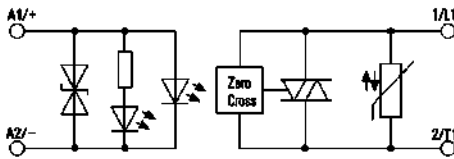
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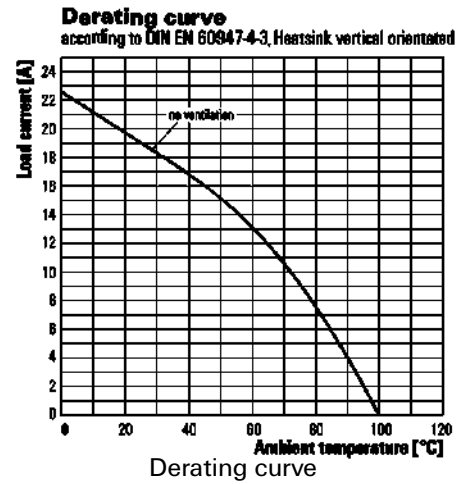
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**Drawings**

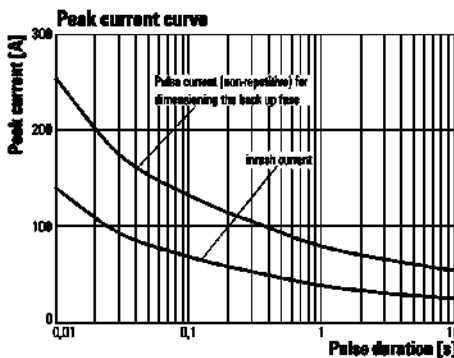
**Wiring diagram**



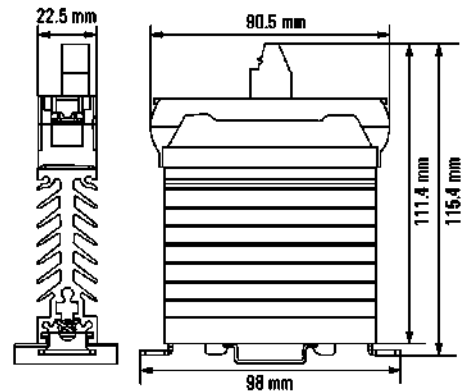
**Graph**



**Graph**



**Dimensional drawing**

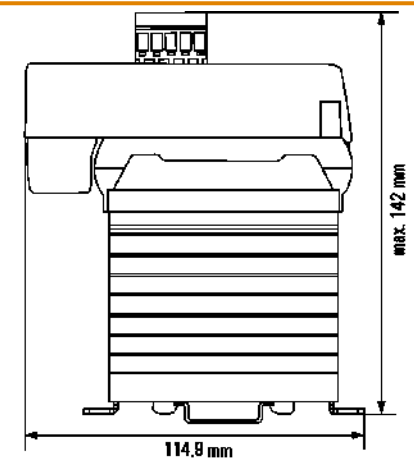


**Example of use**



Optional plug-in current-monitoring module (item no.: 1406230000)

**Dimensional drawing**



Dimensions of a 1-phase PSSR with current monitoring module attached

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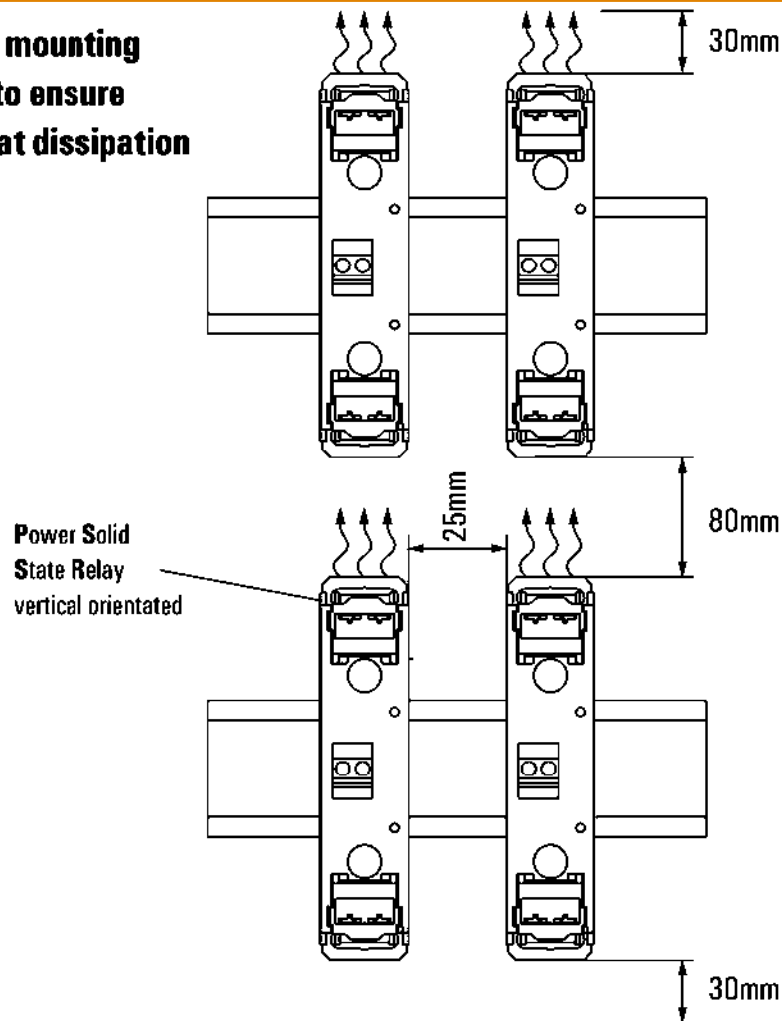
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**Drawings**

**Miscellaneous**

**Suggested mounting distances to ensure optimal heat dissipation**



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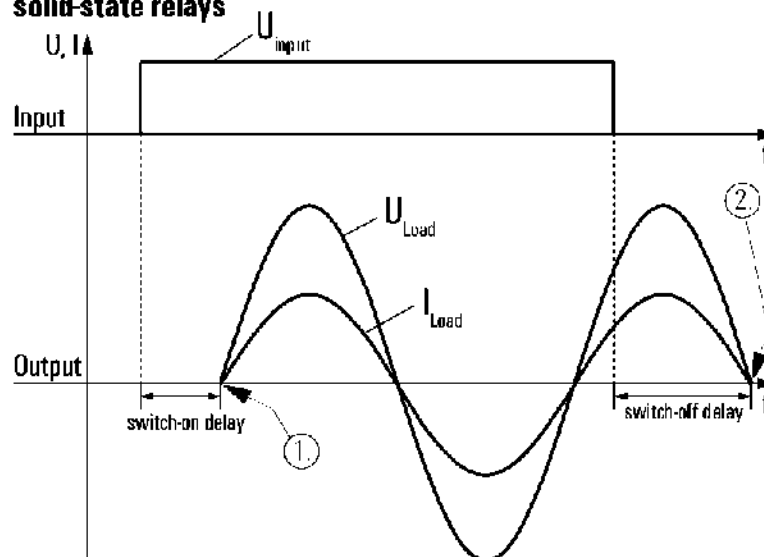
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## Drawings

## Signal characteristics of zero cross switching solid-state relays

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Shown at an example with resistive load.

1. Switches on at first zero cross of mains voltage while control input gets signal.
2. Switches off at next zero cross of mains current after control input signal was switched off.

Switching DC voltages is not possible with this solid-state relays.