

**Power Solid-State Relais
PSSR 24VDC/1PH AC50A HP****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com

Product image

- Load circuit: single-phase 24...600 VAC / 50 A or 75 A
- No-voltage switching
- Wear-free and silent switching
- High capacity for handling surge currents (I^2t) up to 6000 A²s (10 ms)
- Compact design

General ordering data

Type	PSSR 24VDC/1PH AC50A HP
Order No.	1406240000
Version	Power Solid-State Relais, Solid state contactor, 1 NO contact (Thyristor (zero-cross switch)), Rated control voltage: 3.5...32 V DC , Rated switching voltage: 24...600 V AC, Continuous current: 52 A (AC51) at 40 °C, mounted on heatsink with 0.75 K/W
GTIN (EAN)	4050118206746
Qty.	2 pc(s).

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Technical data

Dimensions and weights

Width	45 mm	Width (inches)	1.772 inch
Height	58.5 mm	Height (inches)	2.303 inch
Depth	29 mm	Depth (inches)	1.142 inch
Net weight	87 g		

Temperatures

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Rated data UL

Certificate No. (cURus)	E360862
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Control side

Rated control voltage	3.5...32 V DC	Nominal control current	13.4 mA DC ± 20 %
Power rating	≤ 280 mW	Cut-in / dropout voltage	3 V / 2 V DC
Status indicator	Green LED	Protective circuit	Suppressor diode

Load side

Rated switching voltage	24...600 V AC	Continuous current	52 A (AC51) at 40 °C, mounted on heatsink with 0.75 K/W
Max. switching current	60 A	Load category	AC 51
Inrush current	400 A (10 ms)	Pulse load, max. current	700 A (10 ms), non-recurrent
Load limit integral (I^2t) <10 ms	2,450 A ² s	Switch-on delay	≤ 10 ms
Switch-off delay	≤ 10 ms	Voltage drop at max. load	≤ 1.35 V
Leakage current	≤ 1 mA	Min. switching current	5 mA
Short-circuit-proof	No	Protective circuit, load side	Varistor
Output voltage frequency range	50 / 60 Hz	max. switching frequency (DC control voltage)	10 Hz

Contact data

Contact type	1 NO contact (Thyristor (zero-cross switch))
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General data

Version	Single-phase without heat sink (zero-voltage switch output)	Colour	black
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Technical data

Insulation coordination

Pollution severity	2	Surge voltage category	III
Clearance and creepage distances for control side - load side	≥ 8 mm	Dielectric strength for control side - load side	4 kV _{eff}
Dielectric strength of load side - housing	4 kV _{eff}	Impulse withstand voltage	4 kV (1.2/50 µs)
Protection degree	IP20		

Further details of approvals / standards

Standards	EN 60947-4-3, EN 60950, IEC 60335-1	Certificate No. (cURus)	E360862
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Connection data (control side)

Wire connection method (control side)	Screw connection	Nom. rated connection clamping range (control side)	1.5 mm ²
Min. rated connection clamping range (control side)	0.75 mm ²	Max. rated connection clamping range (control side)	2.5 mm ²
Wire connection method (control side)	M4 ring cable lug (insulated)	Min. tightening torque (control side)	1.2 Nm
Max. tightening torque (control side)	2 Nm	Blade size (control side)	Gr. PZ2

Connection data (load side)

Wire connection method (load side)	Screw connection	Nom. rated connection clamping range (load side)	10 mm ²
Min. rated connection clamping range (load side)	1.5 mm ²	Max. rated connection clamping range (load side)	10 mm ²
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

Classifications

ETIM 6.0	EC002055	ETIM 7.0	EC002055
eClass 9.0	27-37-10-14	eClass 9.1	27-37-10-14
eClass 10.0	27-37-10-14		

Approvals

Approvals



ROHS Conform

Downloads

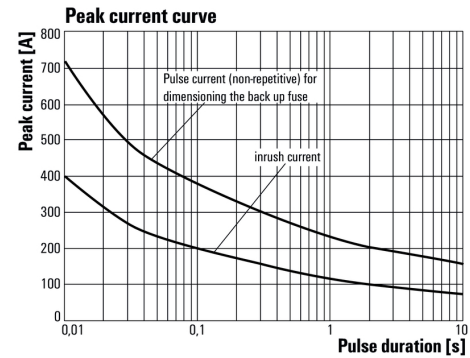
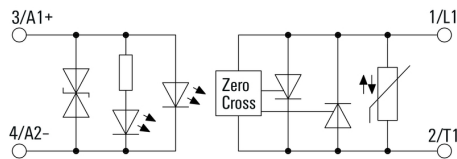
Approval/Certificate/Document of Conformity	EU Konformitätserklärung / EU Declaration of Conformity
Brochure/Catalogue	CAT 4.2 ELECTR 18/19 EN
Engineering Data	EPLAN, WSCAD
User Documentation	Beipackzettel / Package Insert - multilingual

Power Solid-State Relais PSSR 24VDC/1PH AC50A HP

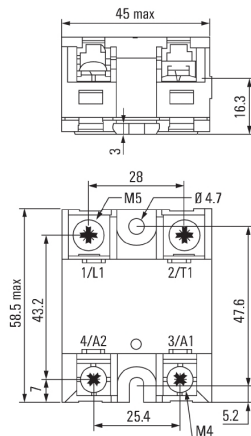
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Drawings

Wiring diagram



Dimensional drawing



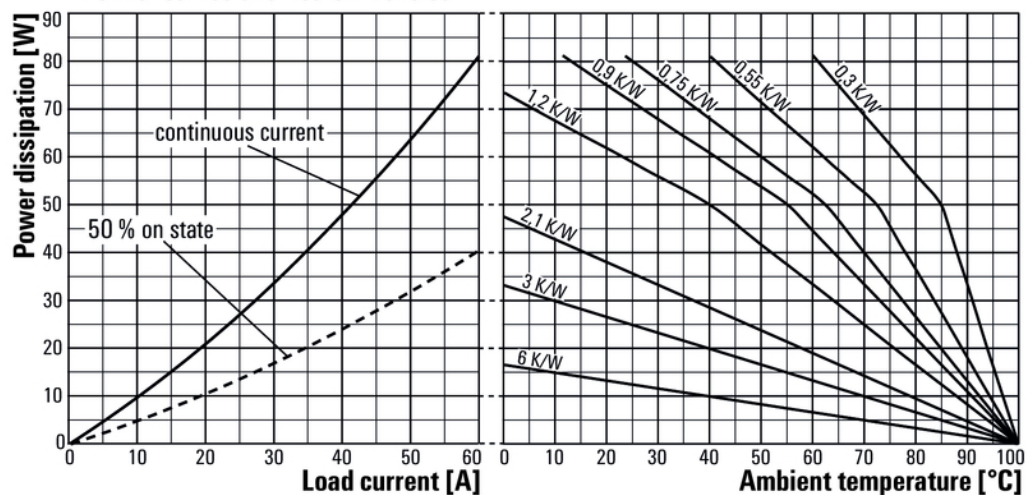
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Drawings

Derating curve

Thermal curves and heatsink choice



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Drawings**Signal characteristics of zero cross switching PSSR**

shown at an example with resistive load

