

PSSRN S 24VDC 1M K 600VAC 30A T

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Product image



Switch high AC loads up to 30 A completely wear-free, reliable and noiseless.

- Load circuit 1-phase: 42...600 V AC / 30 A
- The integrated current monitoring allows the current monitoring of the load
- Compact design with a width from 22.5 mm
- Ready to use with integrated heat sink and mounting rail base for mounting on DIN rail TS35
- Short circuit protection with circuit breakers possible
- Output connections ring lug suitable

General ordering data

Version	Power Solid-State Relais, Solid state contactor, Rated control voltage: 4...32 V DC , Rated switching voltage: 42...600 V AC +10% -15%, Continuous current: 30 A
Order No.	2986920000
Type	PSSRN S 24VDC 1M K 600VAC 30A T
GTIN (EAN)	409998685304 1
Qty.	1 items

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Technical data

Approvals

Approvals



ROHS Conform

UL File Number Search [UL Website](#)

Certificate no. (cULus) E537615

Dimensions and weights

Depth	167.5 mm	Depth (inches)	6.5945 inch
Height	110 mm	Height (inches)	4.3307 inch
Width	22.5 mm	Width (inches)	0.8858 inch
Net weight	370 g		

Temperatures

Storage temperature	-40 °C...100 °C	Ambient temperature	-25 °C...70 °C
Operating temperature		Humidity	95% relative humidity, non-condensing @ 40°C

Probability of failure

MTTF 10 a

Environmental Product Compliance

RoHS Compliance Status Compliant with exemption

RoHS Exemption (if applicable/known) 7cl

REACH SVHC No SVHC above 0.1 wt%

Control side

Rated control voltage	4...32 V DC	Nominal control current	7.8 mA...10.4 mA
Status indicator	Green LED, Yellow LED, Red LED		

Load side

Rated switching voltage	42...600 V AC +10% -15%	Continuous current	30 A (AC 51) @ 40 °C
Max. switching current	30 A	Load category	AC 51
Pulse load, max. current	1150 A (10 ms, non-recurrent)	Load limit integral (I ² t) <10 ms	6600 A ² s
Switch-on delay	≤ 10 ms	Switch-off delay	≤ 10 ms
Voltage drop at max. load	≤20 V	Leakage current	<3 mA
Min. switching current	1.2 A	Short-circuit-proof	No
Protective circuit, load side	Integrated varistor	Contact type	1 NO contacts (Thyristor (zero-cross switch))
Output voltage frequency range	45...65 Hz		

Alarm output

Connection designation (Alarm output)	11+, 12-	Solid-state type (Alarm output)	Bipolar transistor
Status indicator (Alarm output)	Red LED: device detects a fault	Voltage drop at max. load (Alarm output)	3 V

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output current, max. (Alarm output) 50 mA

TEACH input

Connection designation (TEACH input) IN1

Input supply

Connection designation (Input supply) A1+, A2- Current consumption (Input supply) 50 mA
 Protective circuit (Input supply) Reverse polarity protection

General data

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

Insulation coordination

Pollution severity 2 Surge voltage category III
 Dielectric strength for control side - load side 2.5 kVeff Dielectric strength of load side - housing 4 kVeff
 Impulse withstand voltage 6 kV (1.2/50 µs) Protection degree IP20

Further details of approvals / standards

Certificate no. (cULus) E537615

Connection data (control side)

Wire connection cross-section, twin wire-end ferrules, control side, min.	1 mm ²	Stripping length, two clampable wire, control side	6 mm
Wire connection cross-section, solid, control side, max.	2.5 mm ²	Wire connection cross-section, solid, control side, max. (AWG)	AWG 18
Wire connection cross-section, twin wire-end ferrules, control side, max.	2.5 mm ²	Wire connection cross-section, solid, control side, min. (AWG)	AWG 12
Stripping length, control side	13 mm	Wire connection method (control side)	Box clamp connection
Min. rated connection clamping range (control side)	1 mm ²	Max. rated connection clamping range (control side)	2.5 mm ²
Wire connection (control side)	M3 screw with captivated washer	Min. tightening torque (control side)	0.4 Nm
Max. tightening torque (control side)	0.5 Nm	Blade size (control side)	PZ 1

Connection data (load side)

Stripping length, load side	12 mm	Wire connection cross-section, finely stranded, two clampable wires, load side, min.	1 mm ²
Wire connection cross-section, stranded, AWG 10 load side, min. (AWG)		Wire connection cross-section, finely stranded, two clampable wires, load side, min. (AWG)	AWG 10
Wire connection cross-section, solid, load side, min. (AWG)	AWG 10	Wire connection cross-section, stranded, AWG 18 load side, max. (AWG)	
Wire connection cross-section, solid, load side, min.	2.5 mm ²	Wire connection cross-section, twin wire-end ferrules, load side, max. (AWG)	AWG 18

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Wire connection cross-section, twin wire-end ferrules, load side, min. (AWG)	AWG 12	Wire connection cross-section, solid, load side, max. (AWG)	AWG 14
Wire connection cross-section, finely stranded, two clampable wires, load side, max.	6 mm ²	Wire connection cross-section, stranded, 1 mm ² load side, min.	
Wire connection cross-section, solid, load side, max.	6 mm ²	Wire connection cross-section, finely stranded, two clampable wires, load side, max. (AWG)	AWG 18
Wire connection cross-section, stranded, 6 mm ² load side, max.		Wire connection method (load side)	Screw connection
Min. rated connection clamping range (load side)	2.5 mm ²	Max. rated connection clamping range (load side)	6 mm ²
Wire connection (load side)	M4 screw with captivated washer	Min. tightening torque (load side)	1.5 Nm
Max. tightening torque (load side)	2 Nm	Blade size (load side)	PZ 2

Classifications

ETIM 8.0	EC002055	ETIM 9.0	EC002055
ETIM 10.0	EC002055	ECLASS 14.0	27-37-10-14
ECLASS 15.0	27-37-10-14		

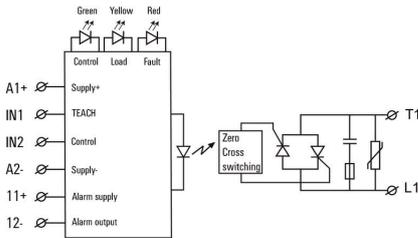
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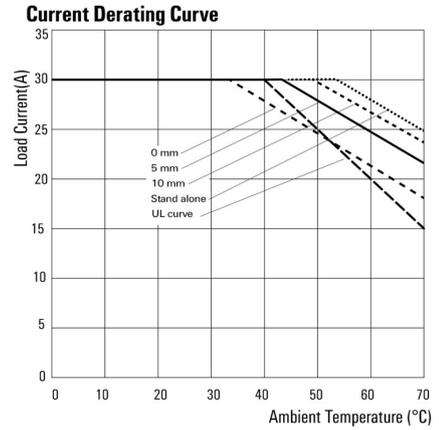
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Drawings

Wiring diagram

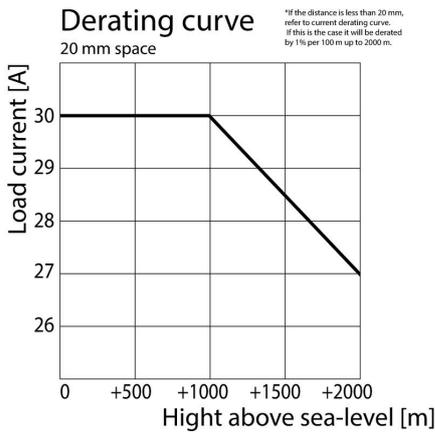


Graph



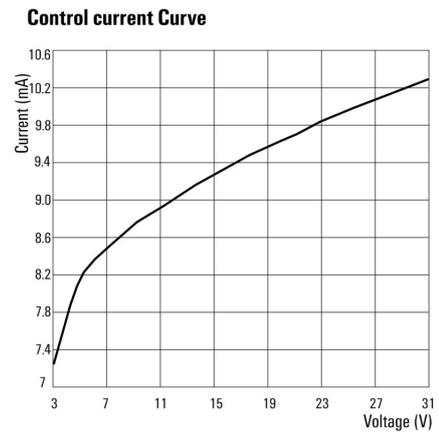
Derating curve

Graph



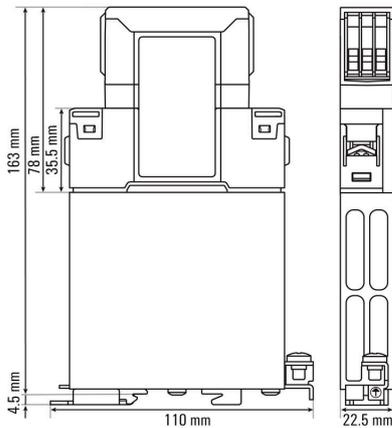
Derating curve

Graph

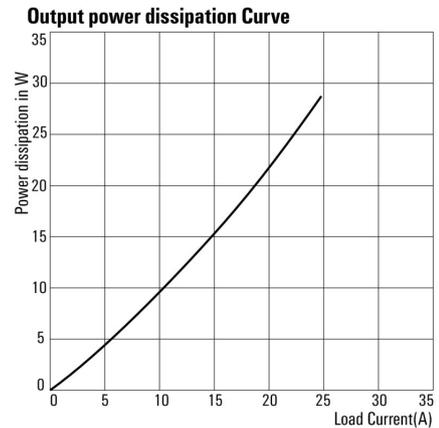


Control current Curve

Dimensional drawing



Graph



Output power dissipation Curve

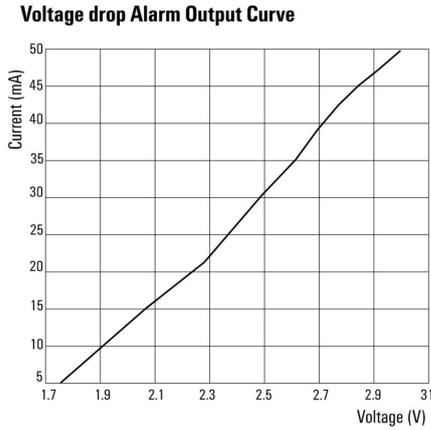
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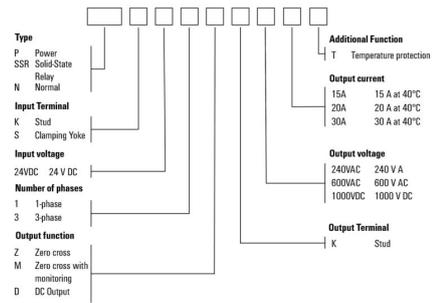
Drawings

Graph



Miscellaneous

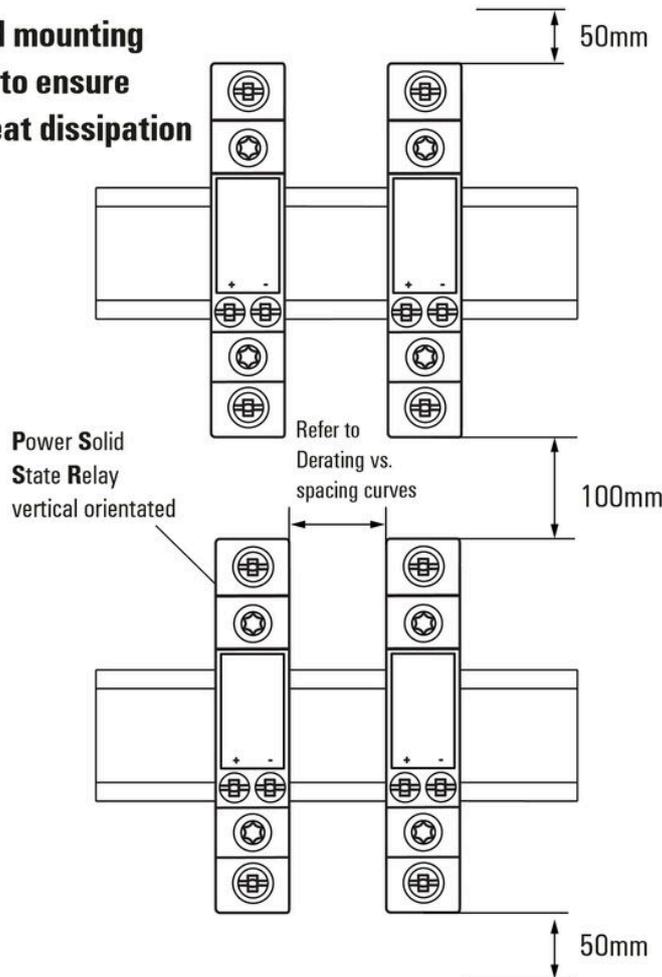
Power Solid-State Relay (PSSR)



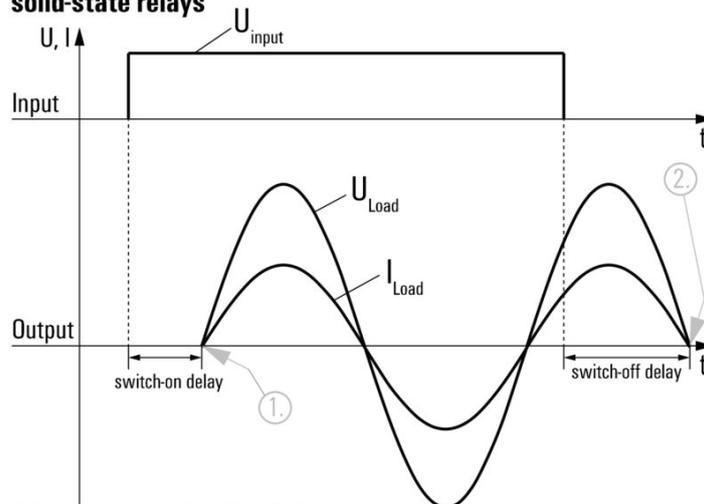
Type codes

Miscellaneous

Suggested mounting distances to ensure optimal heat dissipation



Miscellaneous

Signal characteristics of zero cross switching
solid-state relays

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.