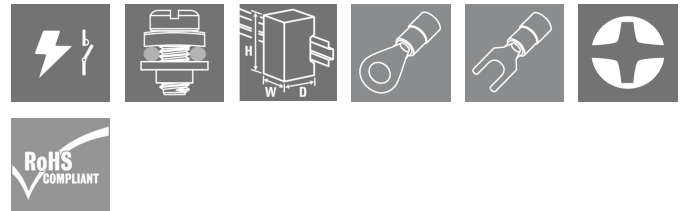


**PSSRN K 24VDC 1Z K 240VAC 20A****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image**

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

- Load circuit 1-phase: 24...230 V AC / 20 A, 42...600 V AC / 30 A or 24...1000 V DC / 15 A
- Compact design with a width from 17.8 mm
- Optional version with integrated current monitoring allows the current monitoring
- 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, Rated control voltage: 3...32 V DC, Rated switching voltage: 24...230 V AC +10% -15%, Continuous current: 20 A
Order No.	<a href="#">2986890000</a>
Type	PSSRN K 24VDC 1Z K 240VAC 20A
GTIN (EAN)	4099986853010
Qty.	1 pc(s).

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## Technical data

## Dimensions and weights

Depth	103 mm	Depth (inches)	4.055 inch
Height	110 mm	Height (inches)	4.331 inch
Width	17.8 mm	Width (inches)	0.701 inch
Net weight	206 g		

## Temperatures

Storage temperature	-40 °C...100 °C	Operating temperature	-40 °C...80 °C
Humidity	95% relative humidity, non-condensing @ 40°C		

## Probability of failure

MTTF	28 a
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## Control side

Rated control voltage	3...32 V DC	Nominal control current	7.5 mA...11 mA
Status indicator	Green LED		

## Load side

Rated switching voltage	24...230 V AC +10% -15%	Continuous current	5 A (AC 53) ; 20 A (AC 53) @ 40 °C
Max. switching current	20 A	Load category	AC 51, AC 53
Inrush current	51 A	Pulse load, max. current	325 A (10 ms, non-recurrent)
Load limit integral ( $I^2t$ ) <10 ms	525 A <sup>2</sup> s	Switch-on delay	≤ 10 ms
Switch-off delay	≤ 10 ms	Leakage current	<3 mA
Min. switching current	150 mA	Short-circuit-proof	No
Protective circuit, load side	Integrated varistor, RC element	Contact type	1 NO contacts (Thyristor (zero-cross switch))
Output voltage frequency range	45...65 Hz		

## General data

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

## Insulation coordination

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	6 kV (1.2/50 µs)	Protection degree	IP20

## Further details of approvals / standards

Certificate no. (cULus)	E537615
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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Connection data (control side)**

Wire connection method (control side)	Screw connection	Min. rated connection clamping range (control side)	0.75 mm <sup>2</sup>
Max. rated connection clamping range (control side)	2.5 mm <sup>2</sup>	Wire connection method (control side)	M3 screw with captivated washer
Min. tightening torque (control side)	0.5 Nm	Max. tightening torque (control side)	0.6 Nm
Blade size (control side)	Gr. PZ2		

**Connection data (load side)**

Wire connection method (load side)	Screw connection	Min. rated connection clamping range (load side)	2.5 mm <sup>2</sup>
Max. rated connection clamping range (load side)	6 mm <sup>2</sup>	Wire connection method (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 1		

**Classifications**

ETIM 6.0	EC002055	ETIM 7.0	EC002055
ETIM 8.0	EC002055	ETIM 9.0	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	ECLASS 13.0	27-37-10-14

**Environmental Product Compliance**

REACH SVHC

/

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E537615

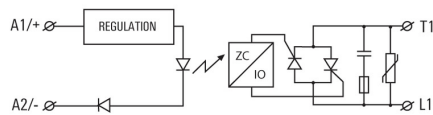
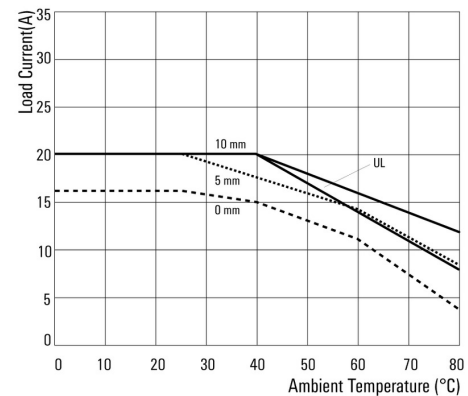
**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">EU Konformitätserklärung / EU Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a>
User Documentation	<a href="#">Beipackzettel / Package Insert – multilingual</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

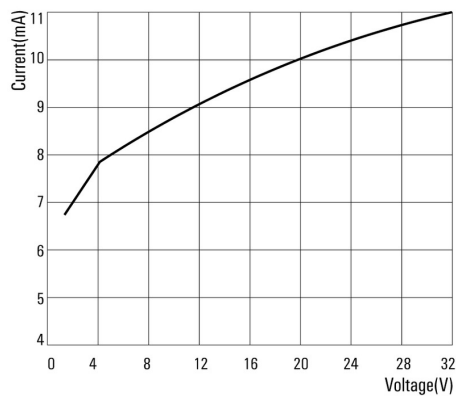
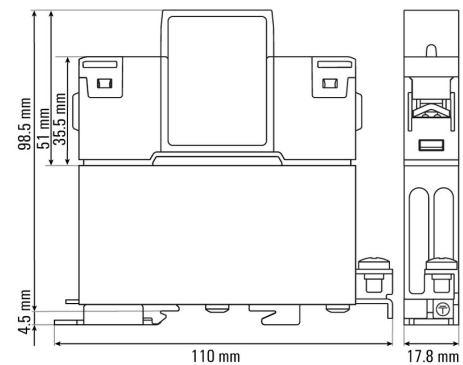
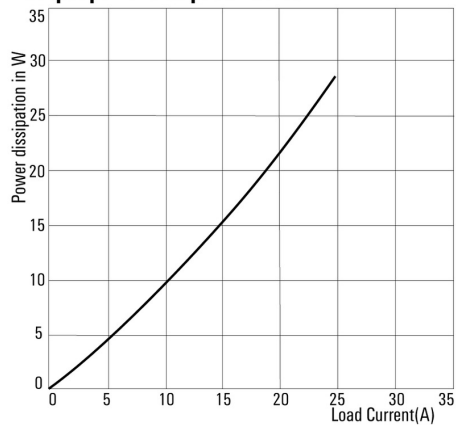
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**Drawings**
**Wiring diagram**

**Graph**
**Current Derating Curve**


Derating curve

**Graph**
**Control current Curve**

**Dimensional drawing**

**Graph**
**Output power dissipation Curve**


# PSSRN K 24VDC 1Z K 240VAC 20A

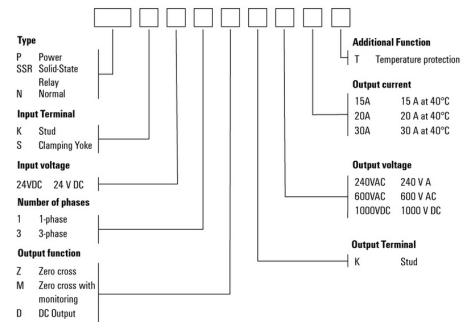
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## Drawings

### Miscellaneous

#### Power Solid-State Relay (PSSR)

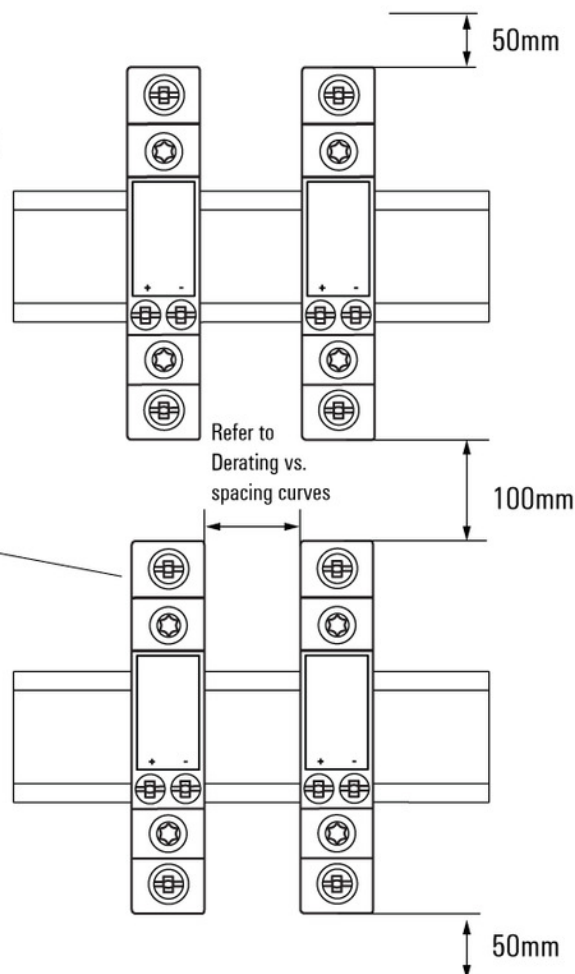


#### Type codes

### Miscellaneous

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

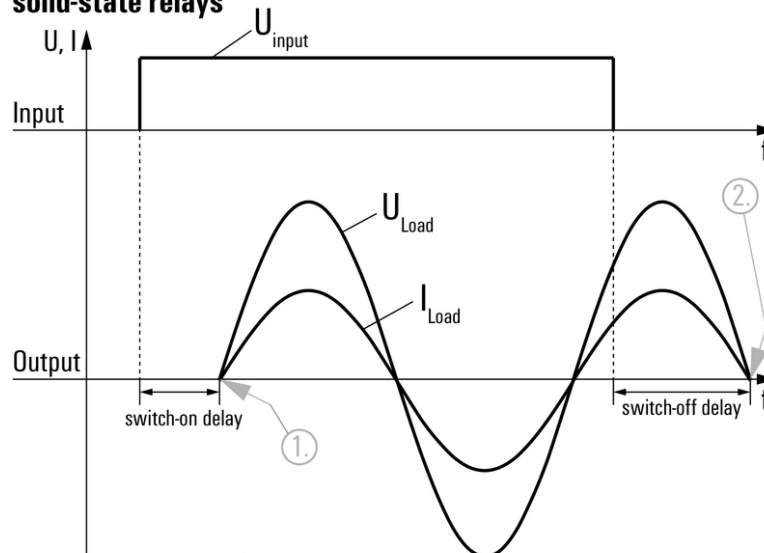
Power Solid State Relay vertical orientated



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**Drawings****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.