

## Technical data



Data at  $T_a = 25\text{ °C}$  and rated values, unless otherwise indicated

### Input circuits

Supply circuit		
Rated control supply voltage $U_s$	A1-A2	110-130 V AC
	A1-A2	220-240 V AC
	A1-A2	380-415 V AC
	A1-B1	24 V AC/DC
Rated control supply voltage $U_s$ tolerance		-15...+10 %
Typical current / power consumption	24 V AC/DC	approx. 1.0 VA/W
	110-130 V AC	approx. 2.0 VA
	220-240 V AC	approx. 2.0 VA
	380-415 V AC	approx. 3.0 VA
Rated frequency	AC/DC version	DC or 50/60 Hz
	AC version	50/60 Hz

Timing circuit	
Starting time	0.3 - 30 s
Star-delta transition time	30 ms fixed
Recovery time	< 400 ms
Repeat accuracy (constant parameters)	$\Delta t < 1\%$
Accuracy within the rated control supply voltage tolerance	$\Delta t < 0.5\% / V$
Accuracy within the temperature range	$\Delta t < 0.1\% / \text{°C}$

### User interface

Indication of operational states		
Control supply voltage	U: green LED	 : control supply voltage applied
Relay status	R: red LED	 : output relay energized

### Output circuit

Kind of output	15-16, 15-18	relay, 1 n/c and 1 n/o with common contact
Contact material		AgCdO
Rated operational voltage $U_e$ (IEC/EN 60947-1)		250 V
Maximum switching voltage		250 V AC, 250 V DC
Rated operational current $I_e$ (IEC/EN 60947-5-1)	AC12 (resistive) at 230 V	4 A
	AC15 (inductive) at 230 V	3 A
	DC12 (resistive) at 24 V	4 A
	DC13 (inductive) at 24 V	2 A
AC rating (UL 508)	Utilization category (Control Circuit Rating Code)	B 300
	max. rated operational voltage	300 V AC
	Maximum continuous thermal current at B300	5 A
	max. making/breaking apparent power at B300	3600 VA / 360 VA
Mechanical lifetime		$30 \times 10^6$ switching cycles
Electrical lifetime	AC12, 230 V, 4 A	$0.1 \times 10^6$ switching cycles
Maximum fuse rating to achieve	n/c contact	10 A fast
short-circuit protection	n/o contact	10 A fast

## General data

MTBF	on request		
Duty time	100 %		
Dimensions (W x H x D)	product dimensions	22.5 x 78.0 x 78.5 mm (0.89 x 3.07 x 3.09 in)	
	packaging dimensions	84.2 x 83.1 x 24.6 mm (3.31 x 3.27 x 0.97 in)	
Weight	net weight	1SVR550210R4100	0.068 kg (0.150 lb)
		1SVR550217R4100	0.077 kg (0.170 lb)
		1SVR550212R4100	0.079 kg (0.174 lb)
	gross weight	1SVR550210R4100	0.079 kg (0.174 lb)
		1SVR550217R4100	0.089 kg (0.196 lb)
		1SVR550212R4100	0.090 kg (0.198 lb)
Mounting	DIN rail (IEC/EN 60715), snap-on mounting without any tool		
Mounting position	any		
Degree of protection	housing	IP50	
	terminals	IP20	

## Electrical connection

Wire size	fine-strand with wire end ferrule	2 x 0.75-1.5 mm <sup>2</sup> (2 x 18-16 AWG)
	fine-strand without wire end ferrule	2 x 1-1.5 mm <sup>2</sup> (2 x 18-16 AWG)
	rigid	2 x 0.75-1.5 mm <sup>2</sup> (2 x 18-16 AWG)
Stripping length	10 mm (0.39 in)	
Tightening torque	0.6-0.8 Nm (5.31-7.08 lb.in)	

## Environmental data

Ambient temperature ranges	operation	-20...+60 °C
	storage	-40...+85 °C
Operational reliability	IEC/EN 60068-2-6	6 g
Mechanical resistance	IEC/EN 60068-2-6	10 g
Damp heat, cyclic	IEC/EN 60068-2-30	24 h cycle, 55 °C, 93 % rel., 96 h

## Isolation data

Rated insulation voltage between supply, control and output circuit (IEC/EN 60947-1)	Control supply voltage up to 240 V: 300 V
	Control supply voltage up to 440 V: 500 V
Rated impulse withstand voltage $U_{imp}$ between all isolated circuits (IEC/EN 60664)	4 kV / 1.2-50 $\mu$ s
Test voltage between all isolated circuits (routine test)	2.5 kV, 50 Hz, 1 min.
Pollution degree (IEC/EN 60664, IEC/EN 60255-5)	III/C
Overvoltage category (IEC/EN 60664, IEC/EN 60255-5)	III/C

## Standards

Product standard	IEC 61812-1, EN 61812-1 +A11
Low Voltage Directive	2006/95/EC
EMC directive	2004/108/EC

## Electromagnetic compatibility

Interference immunity to	IEC/EN 61000-6-2	
electrostatic discharge	IEC/EN 61000-4-2	Level 3 (6 kV / 8 kV)
radiated, radio-frequency, electromagnetic field	IEC/EN 61000-4-3	Level 3 (10 V/m)
electrical fast transient / burst	IEC/EN 61000-4-4	Level 3 (2 kV / 5 kHz)
surge	IEC/EN 61000-4-5	Level 4 (2 kV L-L)
conducted disturbances, induced by radio-frequency fields	IEC/EN 61000-4-6	Level 3 (10 V)
Interference emission	IEC/EN 61000-6-4	