





RSR72

single-phase solid state relays, with heatsinks



- Zero-crossing or random-on switching • AC or DC control input
- SCR output (thyristors) • Load current 10...75 A
- Load voltage 240, 480, 600 V AC (single-phase)
- Dielectric strength 4 000 Vrms (opto-isolation)
- RC/MOV protection (built-in resistor, capacitor, varistor)
- LED indicator (red) • Screw terminals
- Mounting on 35 mm rail mount acc. to EN 60715 (integrated with heatsink)
- Applications: temperature chamber, injection molding machine, packaging machine
- Recognitions, certifications, directives: RoHS, REACH,    

Input data


Control voltage range	RSR72-...A...	AC control	90...280 V AC (50 Hz)
	RSR72-...D...	DC control	4...32 V DC
Must turn-on voltage		AC control	90 V AC
		DC control	4 V DC
Must turn-off voltage		AC control	15 V AC
		DC control	1 V DC
Maximum input current		25 mA (@ 280 V AC, 50 Hz / 32 V DC)	

Output data

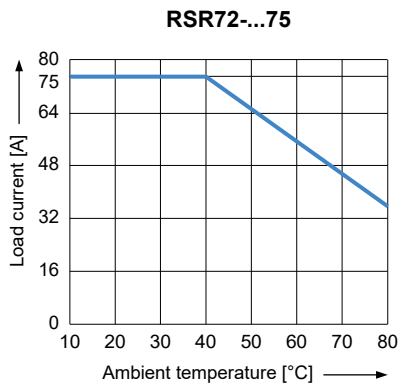
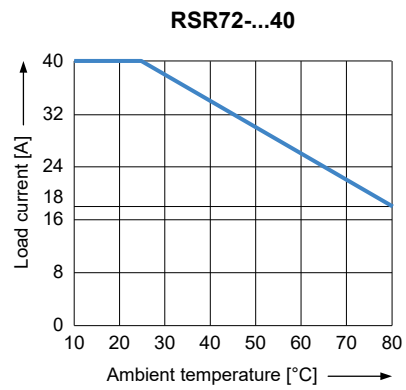
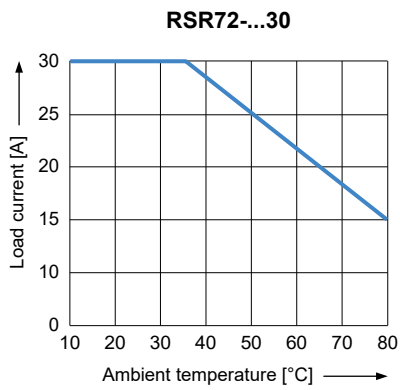
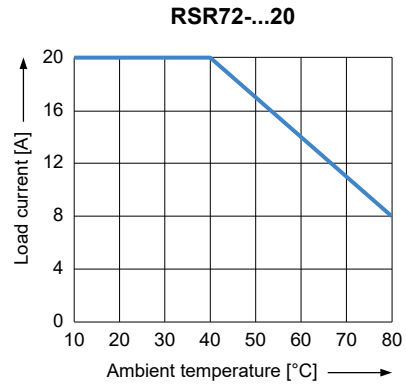
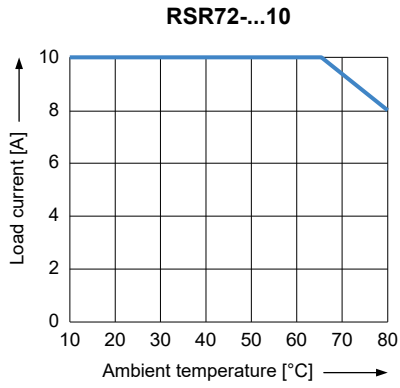
Operational voltage range	RSR72-28...	240 V AC (AC control)	24...280 V AC
	RSR72-24...	240 V AC (DC control)	
	RSR72-48...	480 V AC	24...530 V AC
	RSR72-60...	600 V AC	24...660 V AC
Blocking voltage		240 V AC	600 Vpk
		480 V AC	1 200 Vpk
		600 V AC	1 600 Vpk
Response time pick-up		AC control	≤ 40 ms
		DC control (zero-crossing)	≤ 1/2 cycle + 1 ms
		DC control (random-on)	≤ 1 ms
Response time drop-out		AC control	≤ 40 ms
		DC control	≤ 1/2 cycle + 1 ms
Maximum surge current (@ 10 ms)	RSR72-...10	10 A	200 A
	RSR72-...20	20 A	300 A
	RSR72-...30	30 A	500 A
	RSR72-...40	40 A	600 A
	RSR72-...75	75 A	800 A
Maximum I ² t for fusing (@ 10 ms)		10 A	200 A ² s
		20 A	450 A ² s
		30 A	1 250 A ² s
		40 A	1 800 A ² s
	75 A	3 200 A ² s	
Maximum off-state leakage current (@ rated load voltage)		10 mA	
Maximum on-state voltage drop (@ rated current)		1,6 Vrms	
Minimum off-state dV/dt (@ maximum rated voltage)		500 V/μs	

General data

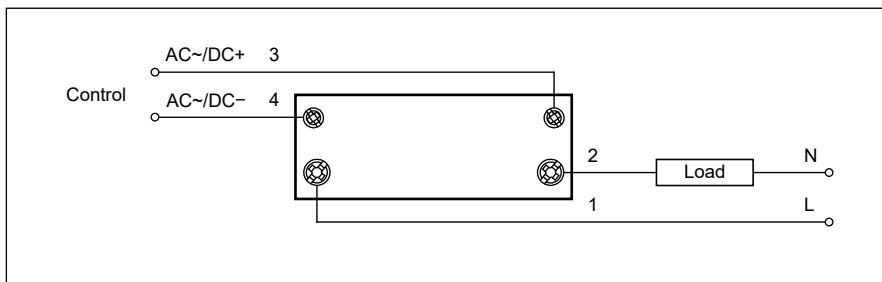
Dielectric strength (50/60 Hz)	input - output	4 000 Vrms
	input, output - base	2 500 Vrms
Minimum insulation resistance (@ 500 V DC)	1 000 MΩ	
Dimensions (L x W x H)	10 A, 20 A, 30 A	100 x 30,5 x 112,5 mm
	40 A	122 x 50,5 x 110 mm
	75 A	153 x 105 x 122 mm
Weight (typical)	10 A, 20 A, 30 A	355 g
	40 A	540 g
	75 A	1 062 g
Ambient temperature (non-condensation and/or icing)	storage	-30...+100 °C
	operating	-30...+80 °C
Cover protection category	IP 20 (EN 60529)	

 Data are given for ambient temperature +25 °C. When temperature is above +25 °C the maximum load current decreases - see "Thermal derating curves", page 2.

Thermal derating curves



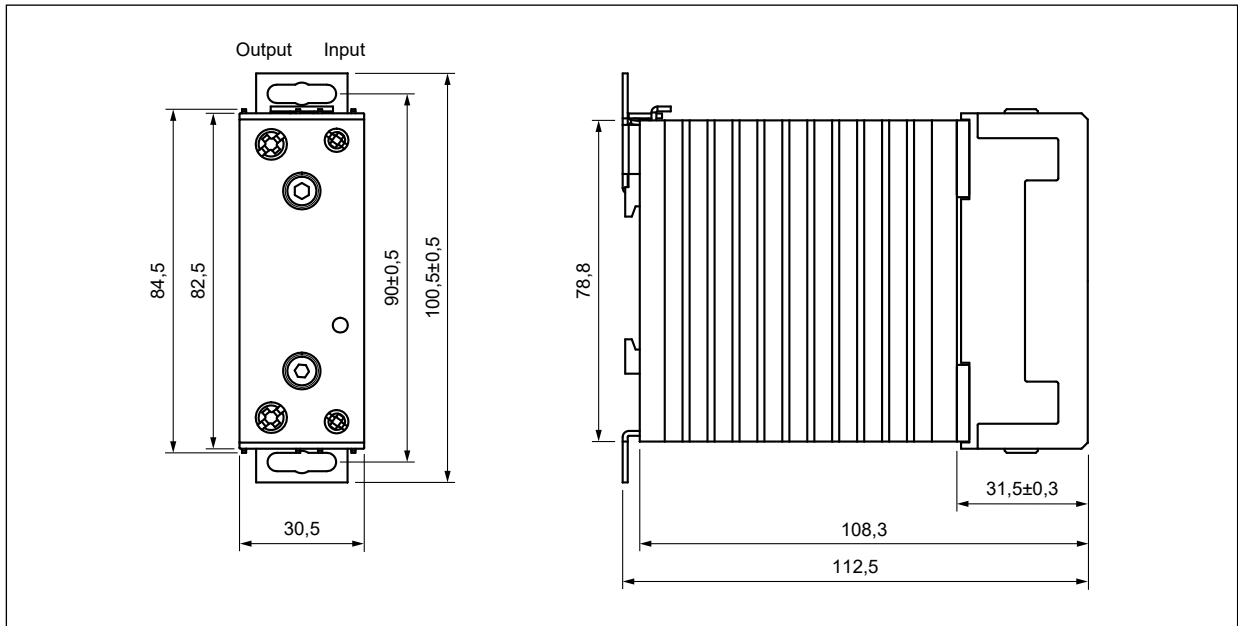
Connection diagram



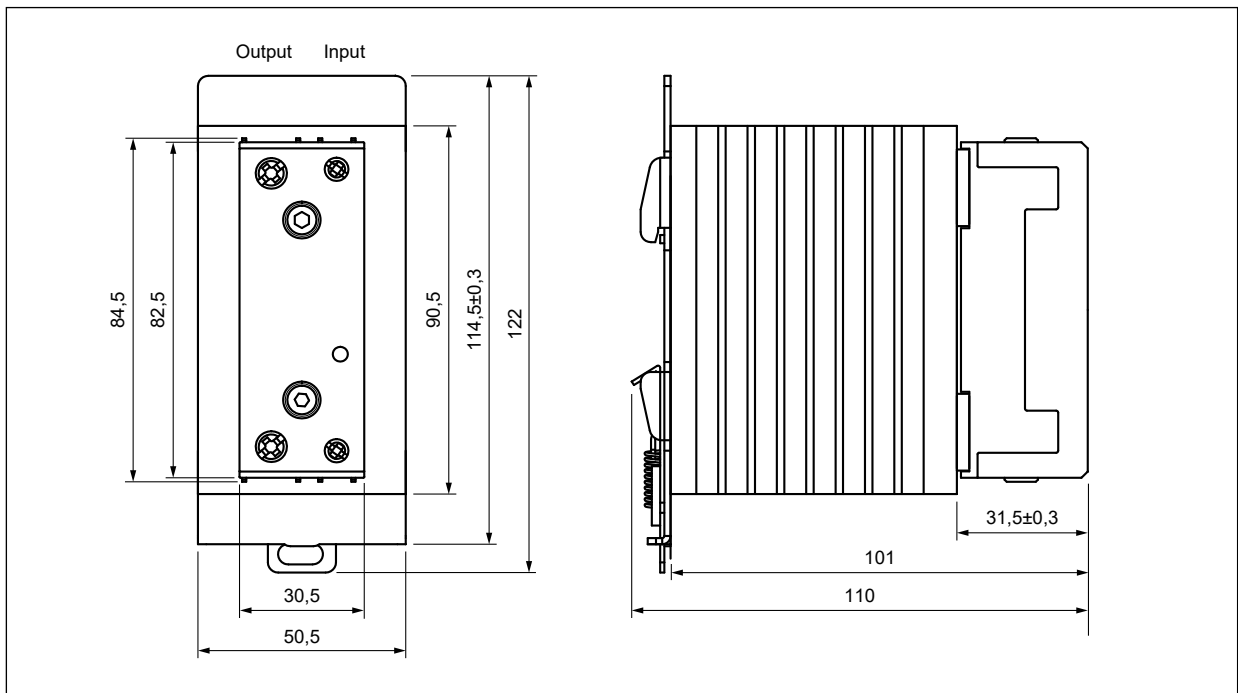
RSR72

single-phase solid state relays, with heatsinks

Dimensions



Solid state relay **RSR72-...10/20/30-.H**

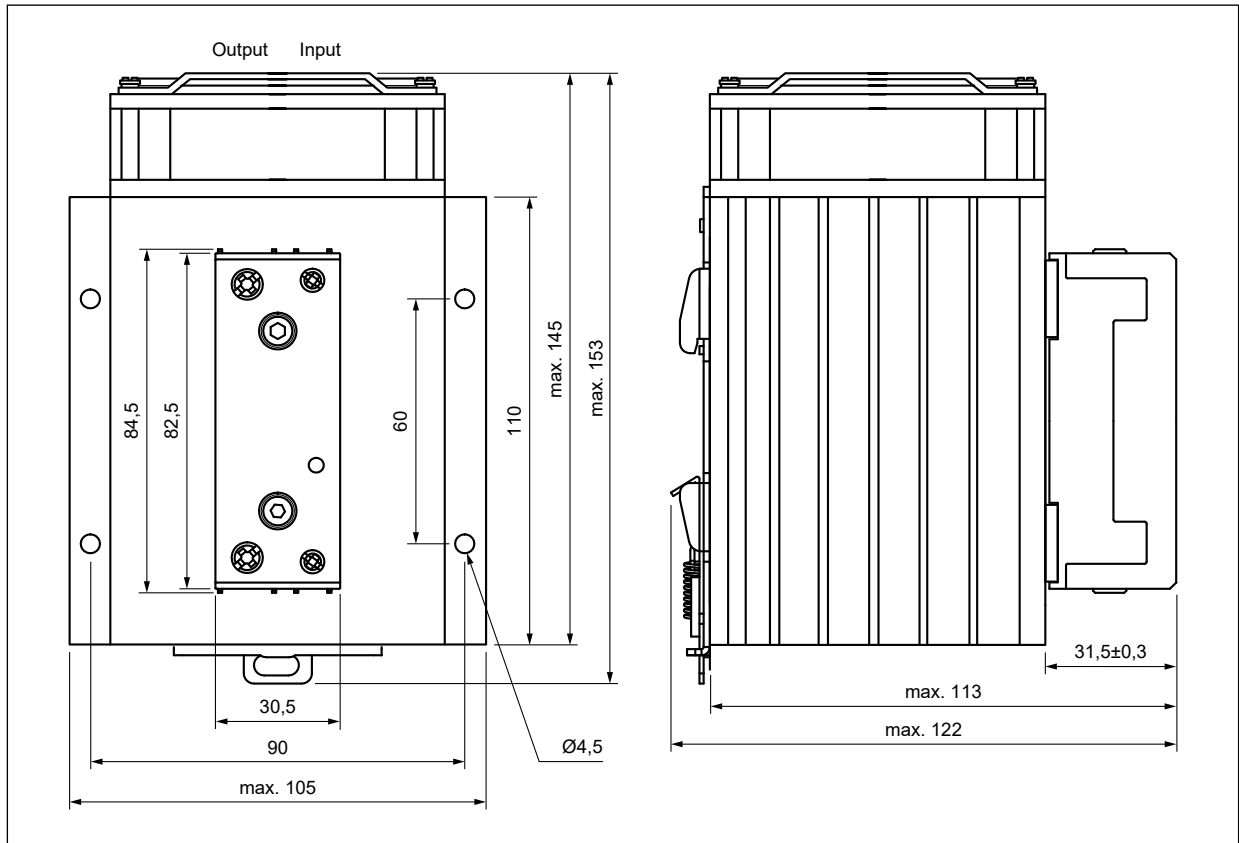


Solid state relay **RSR72-...40-.H**

RSR72

single-phase solid state relays, with heatsinks

Dimensions



Solid state relay **RSR72-...75-H**

RSR72

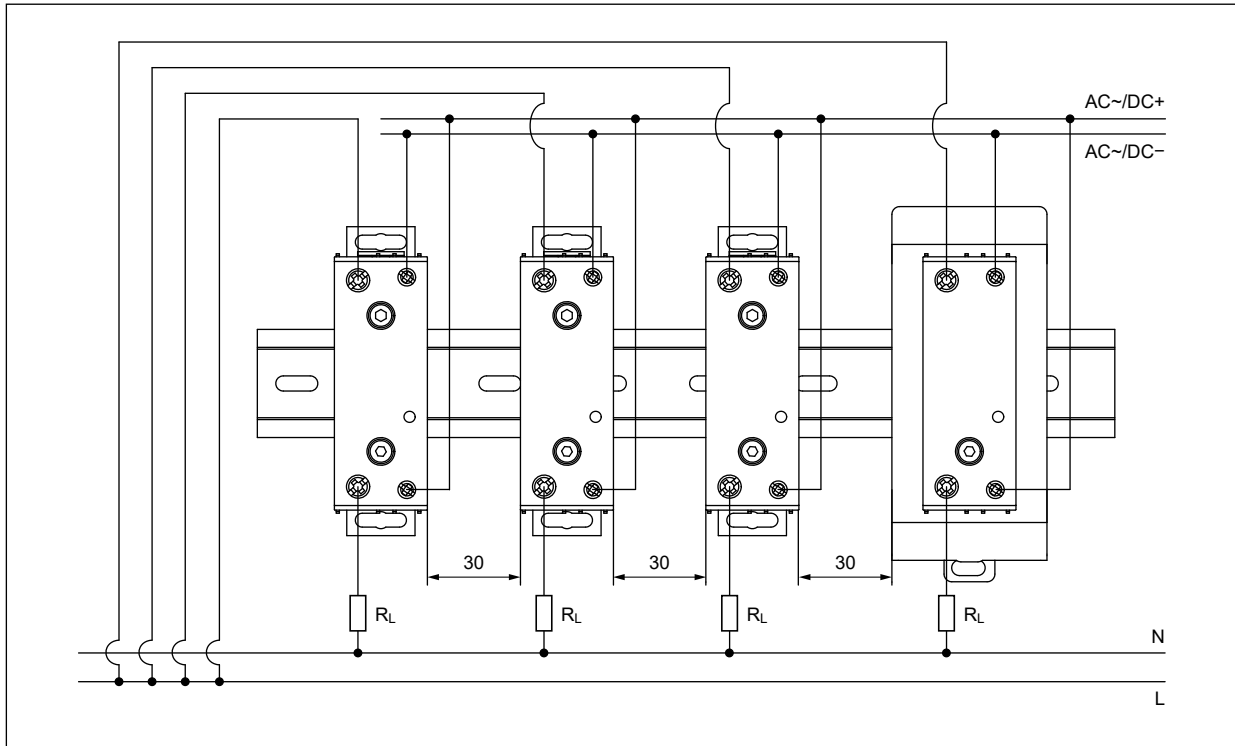
Solid state relays
with integrated
heatsinks

NEW



Mounting, accessories for relays

Relays **RSR72** integrated with heatsink are designed for direct mounting on 35 mm rail mount acc. to EN 60715. For relays mounted side by side, the recommended minimum distance is 30 mm.



Mounting on heatsink ②			
Screws	⊕	M4	
Tightening moment		0,98...1,37 N•m	
Screw length	⊕	12 mm	
Switching terminals ③			
Screws	⊕	Input	Output
Tightening moment		M3	M4
Stripping length	⊕	0,6 N•m	1 N•m
Aperture for termination lug	⊕	7 mm	10 mm
		6,5 mm	11,5 mm
Cross section of the cables			
		Input	Output
Single core cable	-	1 x 0,5...2,5 mm ² (1 x 18...12 AWG) 2 x 0,5...1 mm ² (2 x 18...17 AWG)	2 x 1,5...6 mm ² (2 x 16...10 AWG)
Multi-core cable (with ferrule)	-	1 x 0,5...2,5 mm ² (1 x 18...12 AWG) 2 x 0,5...1 mm ² (2 x 18...17 AWG)	1 x 1,5...10 mm ² (1 x 16...8 AWG) 2 x 1,5...6 mm ² (2 x 16...10 AWG)

② Relay is mounted to heatsink, based on "Thermal derating curves".

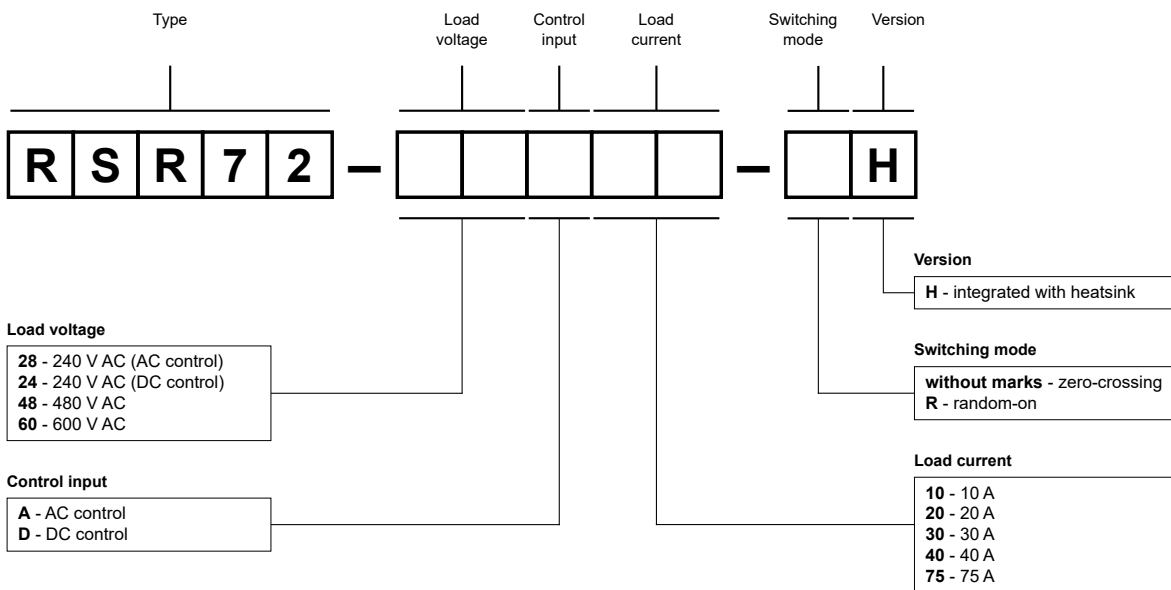
③ When connection cables to relay: please ensure, screws are torqued down properly.

Table of codes

Table 1

Solid state relay code			Heatsink width
zero-crossing switching, AC control	zero-crossing switching, DC control	random-on switching, DC control	
RSR72-28A10-H	RSR72-24D10-H	–	30,5 mm
RSR72-28A20-H	RSR72-24D20-H	–	30,5 mm
RSR72-28A30-H	RSR72-24D30-H	–	30,5 mm
RSR72-28A40-H	RSR72-24D40-H	–	50,5 mm
RSR72-28A75-H	RSR72-24D75-H	–	105 mm
RSR72-48A10-H	RSR72-48D10-H	RSR72-48D10-RH	30,5 mm
RSR72-48A20-H	RSR72-48D20-H	RSR72-48D20-RH	30,5 mm
RSR72-48A30-H	RSR72-48D30-H	RSR72-48D30-RH	30,5 mm
RSR72-48A40-H	RSR72-48D40-H	RSR72-48D40-RH	50,5 mm
RSR72-48A75-H	RSR72-48D75-H	–	105 mm
–	RSR72-60D20-H	RSR72-60D20-RH	30,5 mm
–	RSR72-60D30-H	RSR72-60D30-RH	30,5 mm
–	RSR72-60D40-H	RSR72-60D40-RH	50,5 mm
–	RSR72-60D75-H	RSR72-60D75-RH	105 mm

Ordering codes



Examples of ordering codes ⑥:

- RSR72-28A10-H** relay **RSR72**, integrated with heatsink, zero-crossing switching, AC control, load voltage 240 V AC (single-phase), load current 10 A
- RSR72-24D30-H** relay **RSR72**, integrated with heatsink, zero-crossing switching, DC control, load voltage 240 V AC (single-phase), load current 30 A
- RSR72-48A40-H** relay **RSR72**, integrated with heatsink, zero-crossing switching, AC control, load voltage 480 V AC (single-phase), load current 40 A
- RSR72-60D75-RH** relay **RSR72**, integrated with heatsink, random-on switching, DC control, load voltage 600 V AC (single-phase), load current 75 A

⑥ Ordering codes **RSR72** are specified in Table 1.

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