




RSR75

single-phase solid state relays, with heatsinks



- Zero-crossing switching • DC control input
- SCR output (thyristors) • Load current 15...25 A
- Max. load voltage 280, 660 V AC (single-phase)
- Dielectric strength 4 000 Vrms (opto-isolation)
- TVS protection
- LED indicator (red) • Screw terminals
- Mounting on 35 mm rail mount acc. to EN 60715 (integrated with heatsink)
- Recognitions, certifications, directives: RoHS, REACH,   

Applications

Industrial applications (under toughest conditions and high mechanical load), frequently switching in conveyor systems (valves and resistive motor loads), controlling electrical heat (heaters), in noisesensitive areas (offices, hospitals).



Description

The RSR75 solid state relay mounted in the control cabinet on 35 mm rail mount takes up very little space (wide only 17,8 mm).



Basic technical data

Load voltage: 24...280 V AC, 24...660 V AC

Control input: DC

Load current: 15 A, 25 A

Type		zero-crossing	
Load voltage	Control voltage	Load current	
		15 A	25 A
24...280 V AC	3...32 V DC	RSR75-24D15-H	RSR75-24D25-H
24...660 V AC	4...32 V DC	RSR75-60D15-H	RSR75-60D25-H

Load voltage

	RSR75-24...	RSR75-60...
Rated load voltage	240 V AC	600 V AC
Rated range of load voltage	24...280 V AC	24...660 V AC
Blocking voltage	800 V _{pk}	1200 V _{pk}
Rated frequency	47...63 Hz	47...63 Hz
Power factor	0,5 240 V AC	0,5 600 V AC

Control input

zero-crossing

	RSR75-24D...	RSR75-60D...
Control voltage range	3...32 V DC	4...32 V DC
Must turn-on voltage	3 V DC	4 V DC
Must turn-off voltage	1 V DC	1 V DC
Maximum input current	20 mA 32 V DC	20 mA 32 V DC
Response time pick-up	≤ 1/2 cycle + 1 ms	≤ 1/2 cycle + 1 ms
Response time drop-out	≤ 1/2 cycle + 1 ms	≤ 1/2 cycle + 1 ms
Breakdown voltage of internal TVS	480 V	1 100 V

Output circuit

	RSR75-...15...	RSR75-...25...
Rated load current	15 A	25 A
Maximum surge current	300 A 10 ms	400 A 10 ms
I ² t for fusing	450 A ² s 10 ms	800 A ² s 10 ms
Max. operational current AC-51 rating	15 A	25 A
Max. operational current AC-53 rating	5 A	5 A
Min. operational current	100 mA	100 mA
Maximum off-state leakage current (at rated load voltage)	3 mA	3 mA
Maximum on-state voltage drop (at rated current)	1,5 V _{rms}	1,5 V _{rms}
Minimum off-state dV/dt (at max. rated voltage)	1 000 V/μs	1 000 V/μs


General data

	RSR75-...
Dielectric strength	input - output: 4 000 V _{rms} 50/60 Hz
Minimum insulation resistance	1 000 MΩ 500 V DC
Ambient temperature (non-condensation and/or icing)	storage: -30...+100 °C operating: -30...+80 °C

❶ Data given for ambient temperature ≤ 25 °C. Above 25 °C the maximum current decreases - see "Thermal derating curves", page 3.

Mechanical data

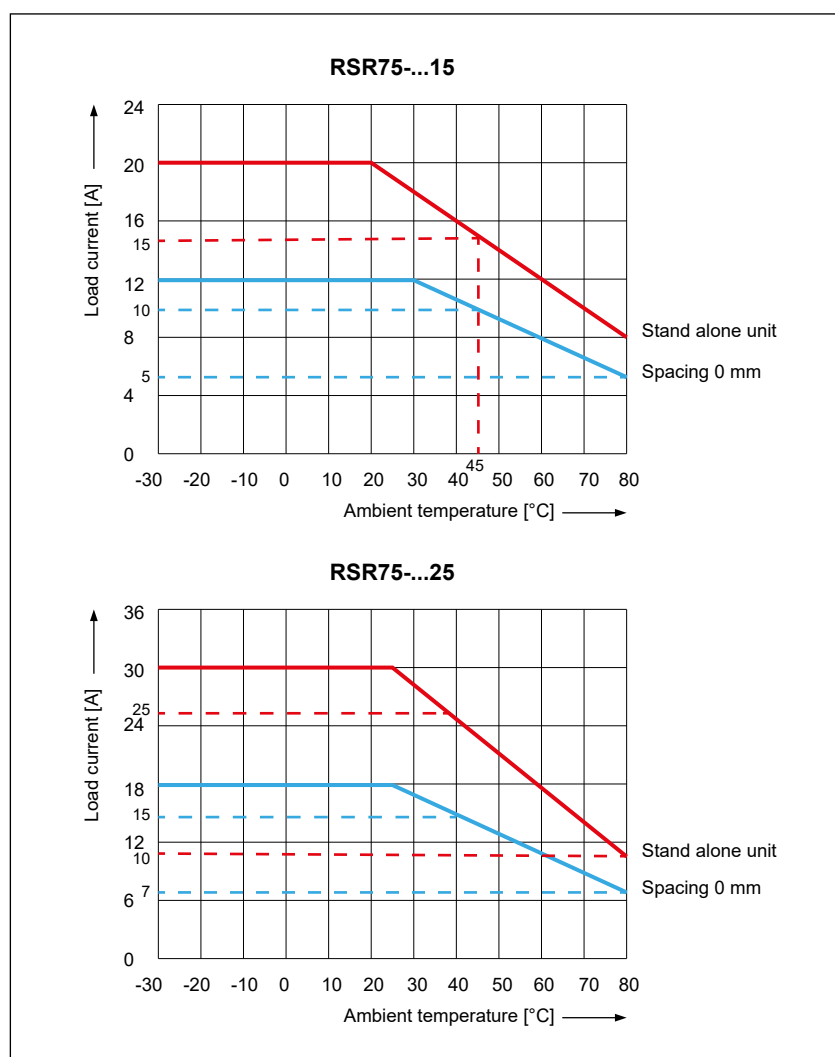
	RSR75-...15...	RSR75-...25...
Dimensions (L x W x H)	114,5 x 17,8 x 105 mm	114,5 x 17,8 x 145 mm
Weight (typical)	190 g	260 g
Protection category EN 60529	IP 20	IP 20
Connection mode	input: screws M3  tightening moment: 0,5 N•m output: screws M4  tightening moment: 1 N•m	input: screws M3  tightening moment: 0,5 N•m output: screws M4  tightening moment: 1 N•m
Mounting on 35 mm rail mount	integrated with heatsink	integrated with heatsink

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

Mounting, accessories for relays

Relays **RSR75** integrated with heatsinks are designed for direct mounting on 35 mm rail mount acc. to EN 60715.

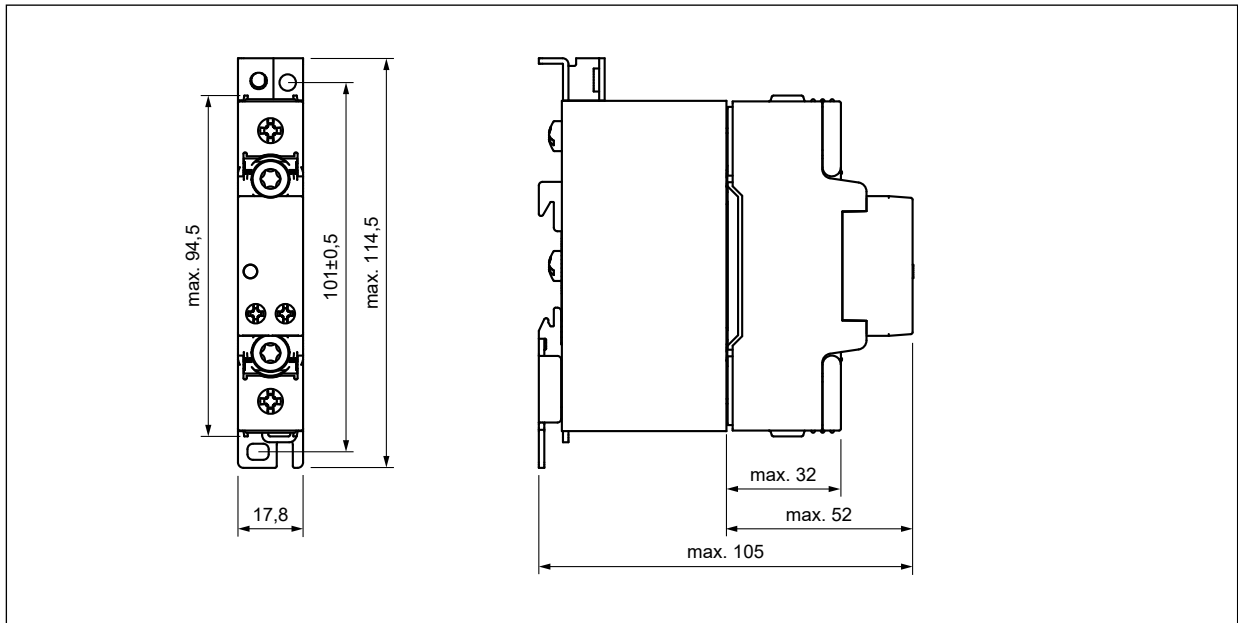
Thermal derating curves



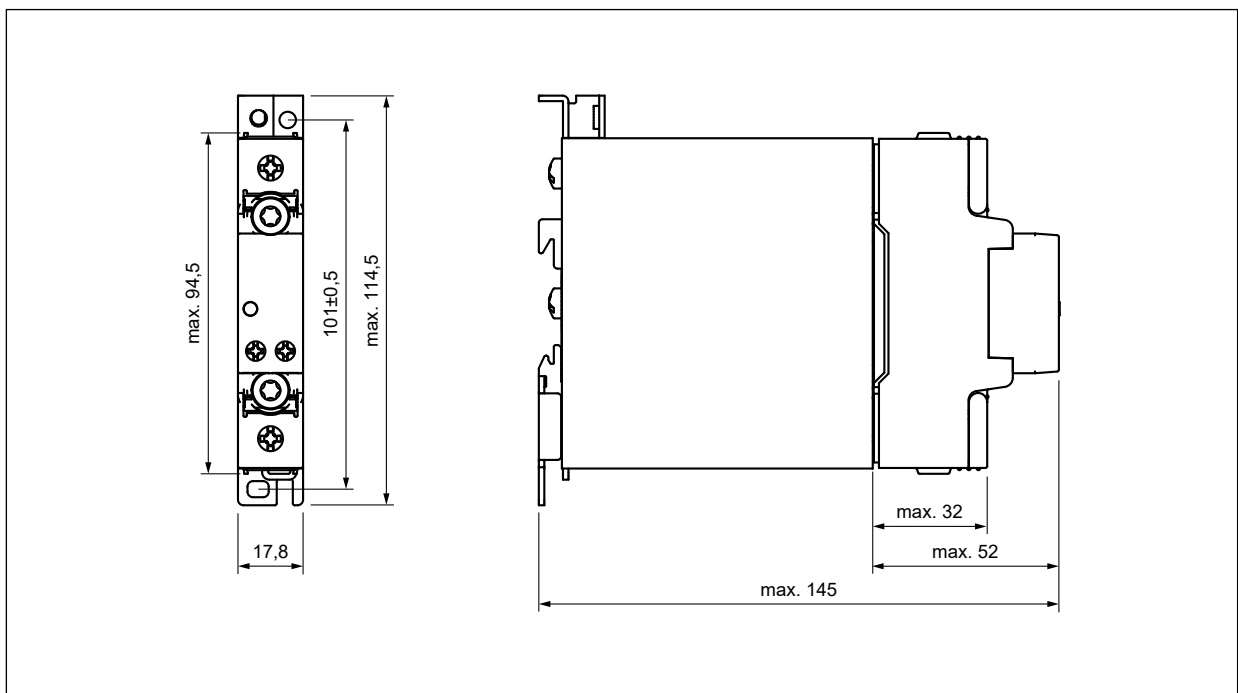
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Dimensions



Solid state relay **RSR75-...15-H**

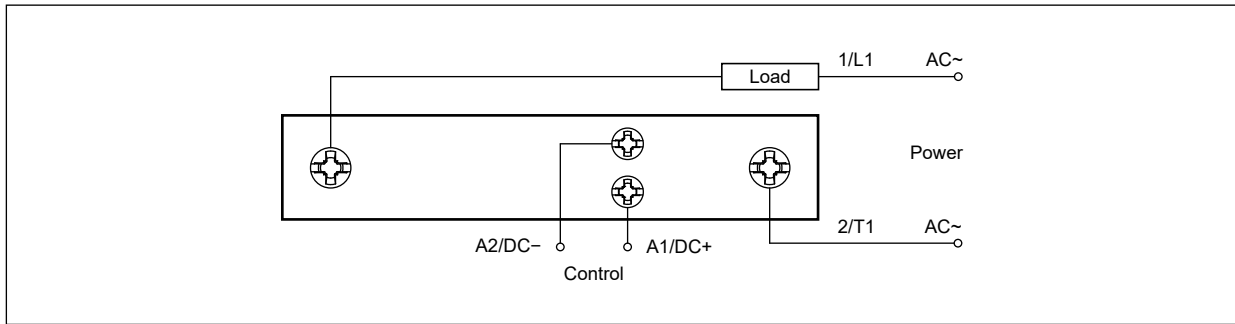


Solid state relay **RSR75-...25-H**

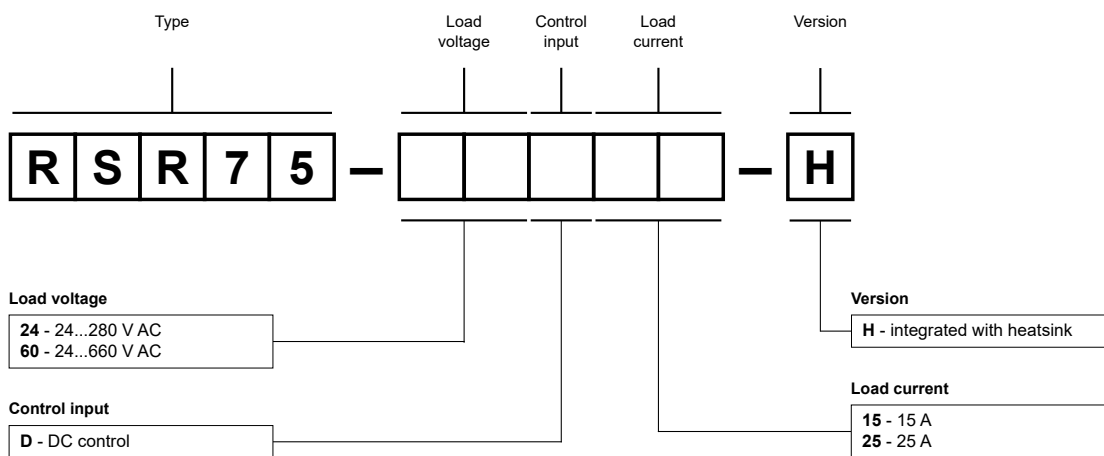
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Connection diagram



Ordering codes



Examples of ordering codes ④:

RSR75-24D15-H relay **RSR75**, integrated with heatsink, zero-crossing switching, DC control, load voltage 24...280 V AC (single-phase), load current 15 A

RSR75-60D25-H relay **RSR75**, integrated with heatsink, zero-crossing switching, DC control, load voltage 24...660 V AC (single-phase), load current 25 A

④ Ordering codes **RSR75** are specified in table "Type" on page 1.