

RSR62

three-phase solid state relays, industrial



NEW

- Zero-crossing or random-on switching • AC or DC control input
- SCR output (thyristors) • Load current 25...80 A
- Load voltage 480, 600 V AC (three-phase)
- Dielectric strength 4 000 Vrms (opto-isolation)
- RC/MOV protection (built-in resistor, capacitor, varistor)
- LED indicators (red) • Screw terminals • Mounting on heatsinks
- Applications: three phase motor control, temperature control, large oven
- Recognitions, certifications, directives: RoHS, REACH,    

Input data ①

Control voltage range	RSR62-...A... RSR62-...D...	AC control DC control	90...280 V AC 50 Hz 4...32 V DC
Must turn-on voltage		AC control DC control	90 V AC 4 V DC
Must turn-off voltage		AC control DC control	15 V AC 1 V DC
Maximum reverse voltage		DC control	32 V DC
Maximum input current		AC control DC control	30 mA 280 V AC, 50 Hz 35 mA 32 V DC

Output data ①

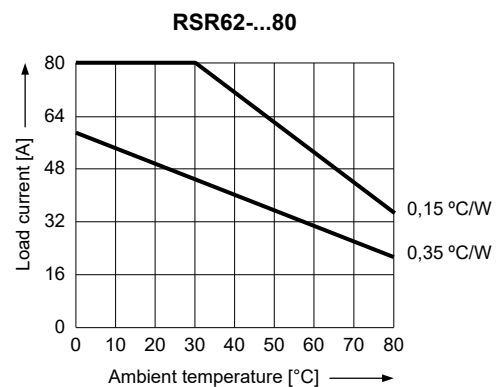
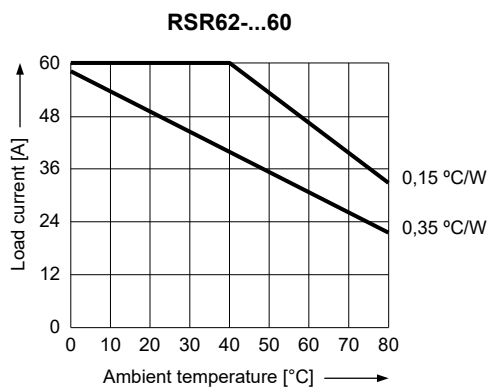
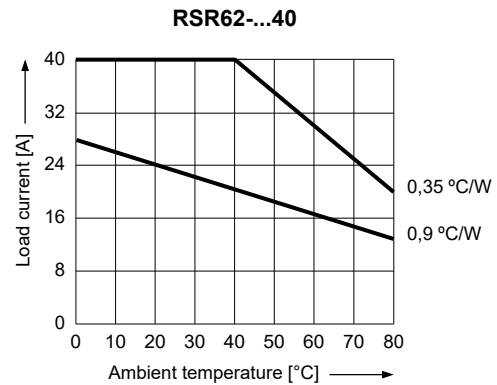
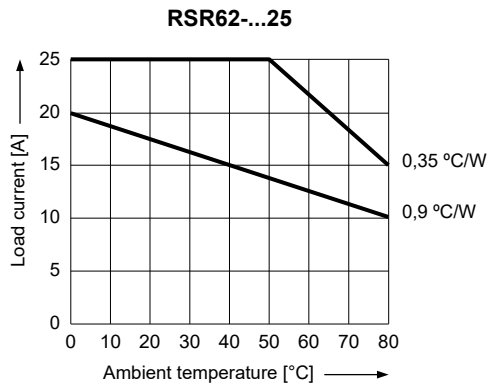
Operational voltage range	RSR62-48... RSR62-60...	480 V AC 600 V AC	24...530 V AC 24...660 V AC
Blocking voltage		480 V AC 600 V AC	1 200 V _{pk} 1 600 V _{pk}
Response time pick-up		AC control DC control (zero-crossing) DC control (random-on)	≤ 40 ms ≤ 1/2 cycle + 1 ms ≤ 1 ms
Response time drop-out		AC control DC control	≤ 40 ms ≤ 1/2 cycle + 1 ms
Maximum surge current	RSR62-...25 RSR62-...40 RSR62-...60 RSR62-...80	25 A 40 A 60 A 80 A	300 A 10 ms 500 A 10 ms 600 A 10 ms 1 000 A 10 ms
Maximum I ² t for fusing		25 A 40 A 60 A 80 A	450 A ² s 10 ms 1 250 A ² s 10 ms 1 800 A ² s 10 ms 5 000 A ² s 10 ms
Maximum off-state leakage current		10 mA at rated load voltage	
Maximum on-state voltage drop		1,6 Vrms at rated current	
Minimum off-state dV/dt		500 V/μs at max. rated voltage	

General data ①

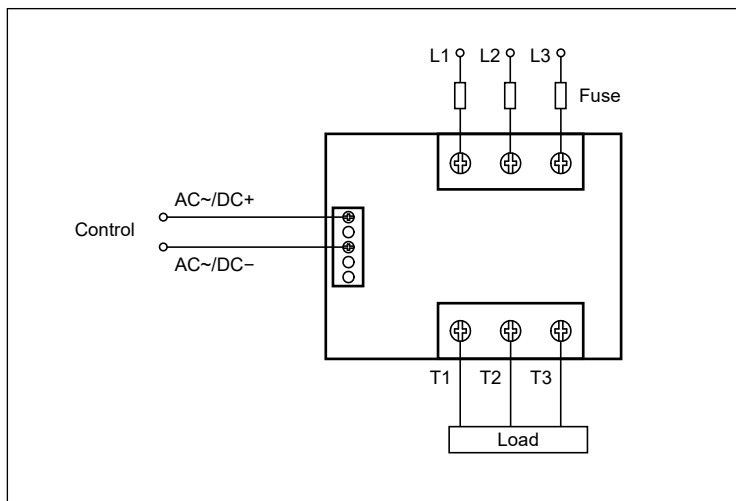
Dielectric strength	• input - output • input, output - base	4 000 Vrms 50/60 Hz 2 500 Vrms 50/60 Hz
Minimum insulation resistance		1 000 MΩ 500 V DC
Dimensions (L x W x H)		105 x 78 x 38 mm
Weight (typical)		25 A, 40 A 385 g 60 A, 80 A 530 g
Ambient temperature	• storage (non-condensation and/or icing) • operating	-30...+100 °C -30...+80 °C
Cover protection category		IP 20 EN 60529

① 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



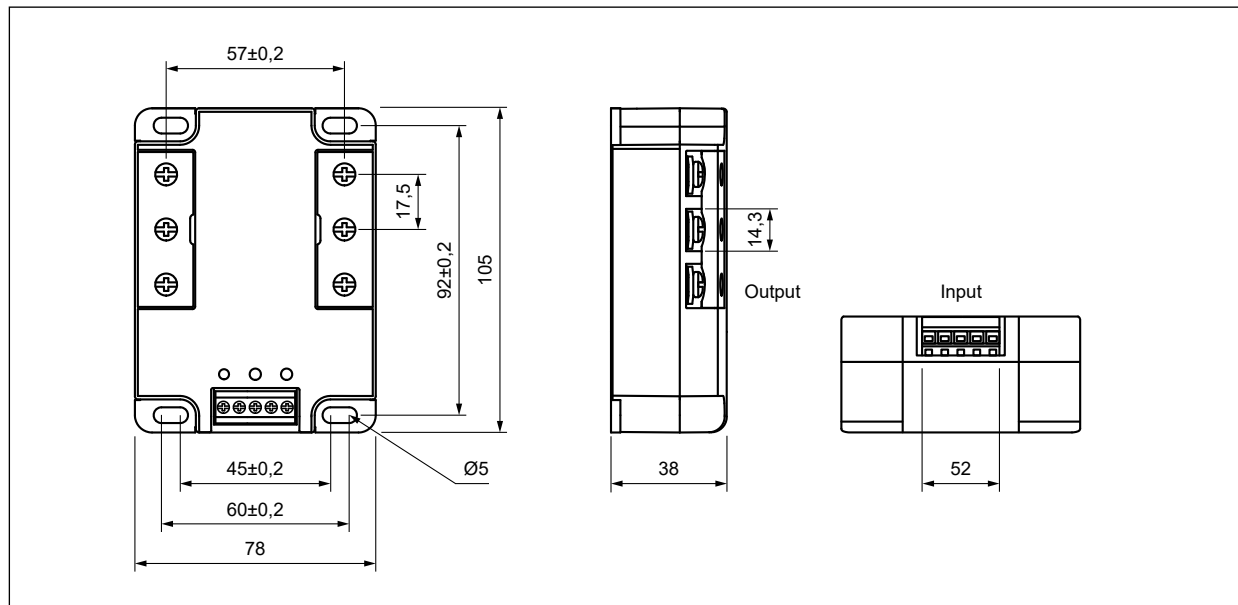
Connection diagram



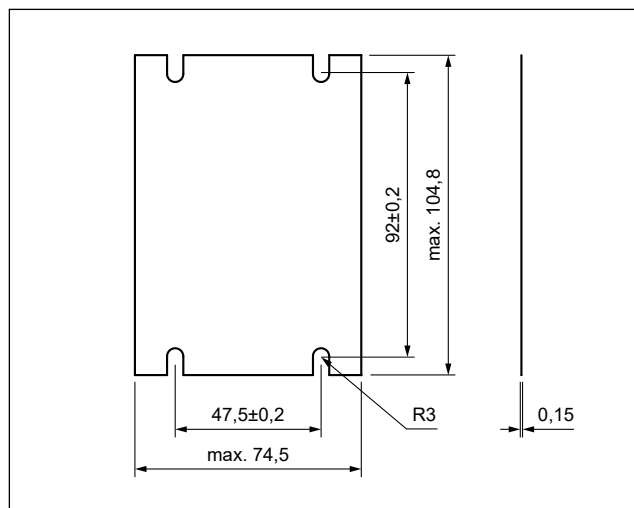
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Dimensions



Solid state relay **RSR62**



Thermal pad **RTP-30**

RH

Heatsinks
for RSR52, RSR62

NEW

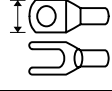
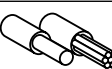


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Mounting, accessories for relays

Relays **RSR62** are designed for mounting on heatsinks **RH** (see www.relpol.com.pl).
For **RSR62** relays we offer thermal pads **RTP-30**.

Mounting on heatsink ②			
Screws		M4	
Tightening moment		0,98...1,37 N•m	
Screw length		12 mm	
Switching terminals ③			
		Input	Output
Screws		M3 (pluggable connector)	M4
Tightening moment		0,58...0,98 N•m	0,98...1,37 N•m
Stripping length		7 mm	12 mm
Aperture for termination lug		—	12 mm
Cross section of the cables			
		Input	Output
Rigid (solid & stranded)		1 x 1,5...2 mm ² (1 x 16...14 AWG)	1 x 2,5...6 mm ² (1 x 14...10 AWG) 2 x 2,5...6 mm ² (2 x 14...10 AWG)
Flexible with end sleeve		1 x 1,5...2 mm ² (1 x 16...14 AWG)	1 x 1...4 mm ² (1 x 18...12 AWG) 2 x 1...2,5 mm ² (2 x 18...14 AWG) 2 x 2,5...4 mm ² (2 x 14...12 AWG)
Flexible without end sleeve		—	1 x 1...6 mm ² (1 x 18...10 AWG) 2 x 1...2,5 mm ² (2 x 18...14 AWG) 2 x 2,5...6 mm ² (2 x 14...10 AWG)

② Relay must be mounted to proper sized heatsink, based on "Thermal derating curves". Between relay and heatsink must be used thermal pad.
③ When connection cables to relay: please ensure, screws are torqued down properly.

RH

Thermal resistance	RH11	1,1 °C/W
	RH09	0,9 °C/W
	RH04A-F	0,4 °C/W
	RH08	0,8 °C/W
	RH08-F	0,35 °C/W
	RH04B	0,4 °C/W
	RH04B-F	0,15 °C/W

RTP-30

Material	graphite	
Color	black	
Dimensions (L x W x H)	104,8 x 74,5 x 0,15 mm	
Weight (typical)	0,9 g	
Thermal resistance	0,1 °C/W ④	
Flammability class	V-0	
Temperature range	continuous	-60...+180 °C
Storage conditions	temperature	+23...+27 °C
	humidity	65±20% HR

④ This value is provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.



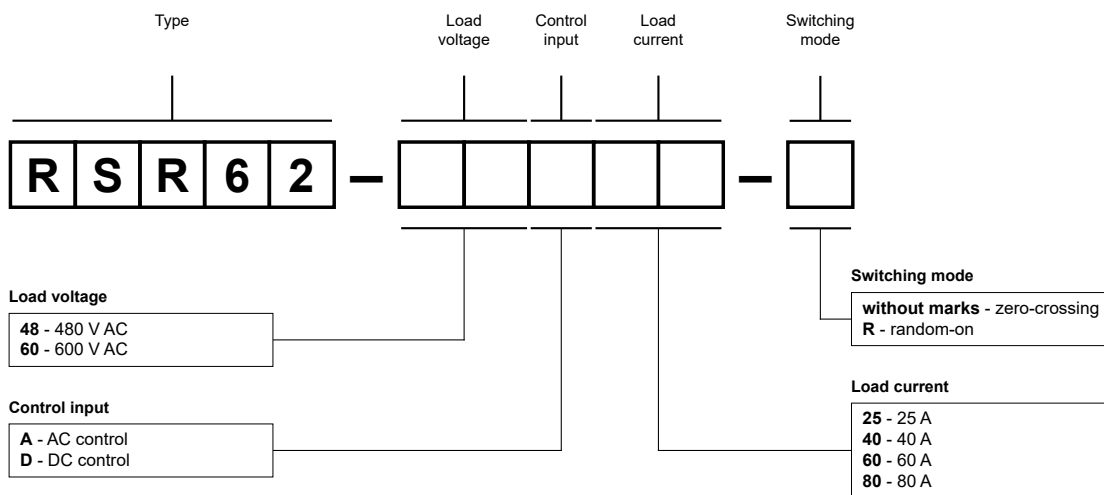
RTP-30

Table of codes

Table 1

zero-crossing switching, AC control	zero-crossing switching, DC control	random-on switching, DC control
RSR62-48A25	RSR62-48D25	–
RSR62-48A40	RSR62-48D40	–
RSR62-48A60	RSR62-48D60	–
RSR62-48A80	RSR62-48D80	–
RSR62-60A25	RSR62-60D25	RSR62-60D25-R
RSR62-60A40	RSR62-60D40	RSR62-60D40-R
RSR62-60A60	RSR62-60D60	RSR62-60D60-R
RSR62-60A80	RSR62-60D80	RSR62-60D80-R

Ordering codes



Examples of ordering codes ⑤:

- RSR62-48A25** relay **RSR62**, zero-crossing switching, AC control, load voltage 480 V AC (three-phase), load current 25 A
- RSR62-48D80** relay **RSR62**, zero-crossing switching, DC control, load voltage 480 V AC (three-phase), load current 80 A
- RSR62-60D60-R** relay **RSR62**, random-on switching, DC control, load voltage 600 V AC (three-phase), load current 60 A

⑤ Ordering codes **RSR62** are specified in Table 1.