





# RSR62

## three-phase solid state relays, industrial



- 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

Control voltage range	RSR62-...A...	AC control	90...280 V AC (50 Hz)
	RSR62-...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 reverse voltage		DC control	32 V DC
Maximum input current		AC control	30 mA (@ 280 V AC, 50 Hz)
		DC control	35 mA (@ 32 V DC)

### Output data

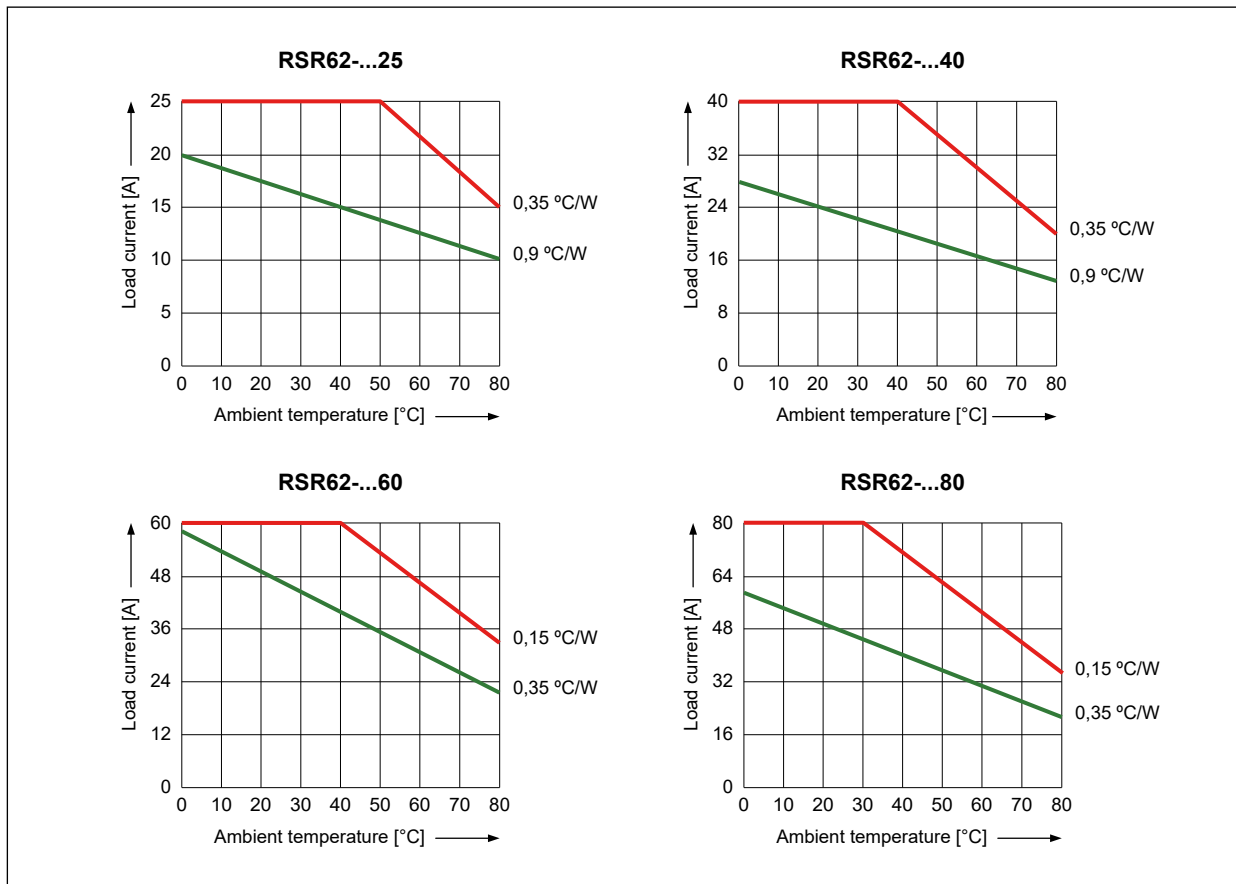
Operational voltage range	RSR62-48...	480 V AC	24...530 V AC
	RSR62-60...	600 V AC	24...660 V AC
Blocking voltage		480 V AC	1 200 V <sub>pk</sub>
		600 V AC	1 600 V <sub>pk</sub>
Response time pick-up		AC control	≤ 40 ms
		DC control (zero-crossing)	≤ 1/2 cycle + 1 ms
		DC control (random-on)	≤ 1 ms
Response time drop-out		AC control	≤ 40 ms
		DC control	≤ 1/2 cycle + 1 ms
Maximum surge current (@ 10 ms)	RSR62-...25	25 A	300 A
	RSR62-...40	40 A	500 A
	RSR62-...60	60 A	600 A
	RSR62-...80	80 A	1 000 A
Maximum I <sup>2</sup> t for fusing (@ 10 ms)		25 A	450 A <sup>2</sup> s
		40 A	1 250 A <sup>2</sup> s
		60 A	1 800 A <sup>2</sup> s
		80 A	5 000 A <sup>2</sup> 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

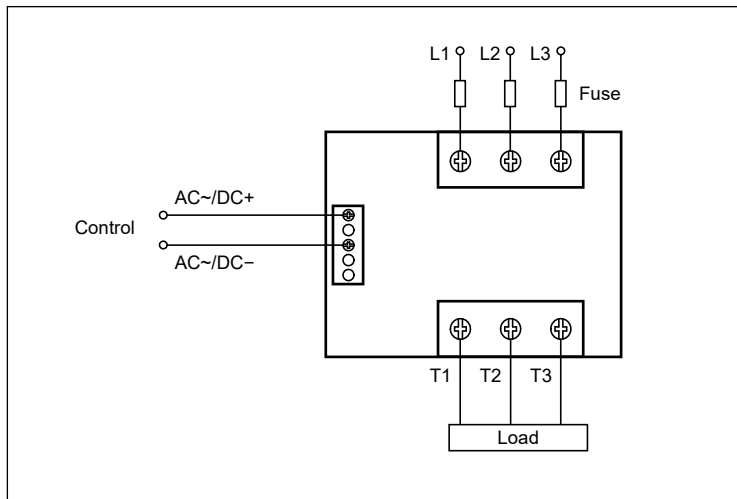
Dielectric strength (50/60 Hz)	input - output	4 000 Vrms
	input, output - base	2 500 Vrms
Minimum insulation resistance (@ 500 V DC)	1 000 MΩ	
Dimensions (L x W x H)	105 x 78 x 38 mm	
Weight (typical)	25 A, 40 A	385 g
	60 A, 80 A	530 g
Ambient temperature (non-condensation and/or icing)	storage	-30...+100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



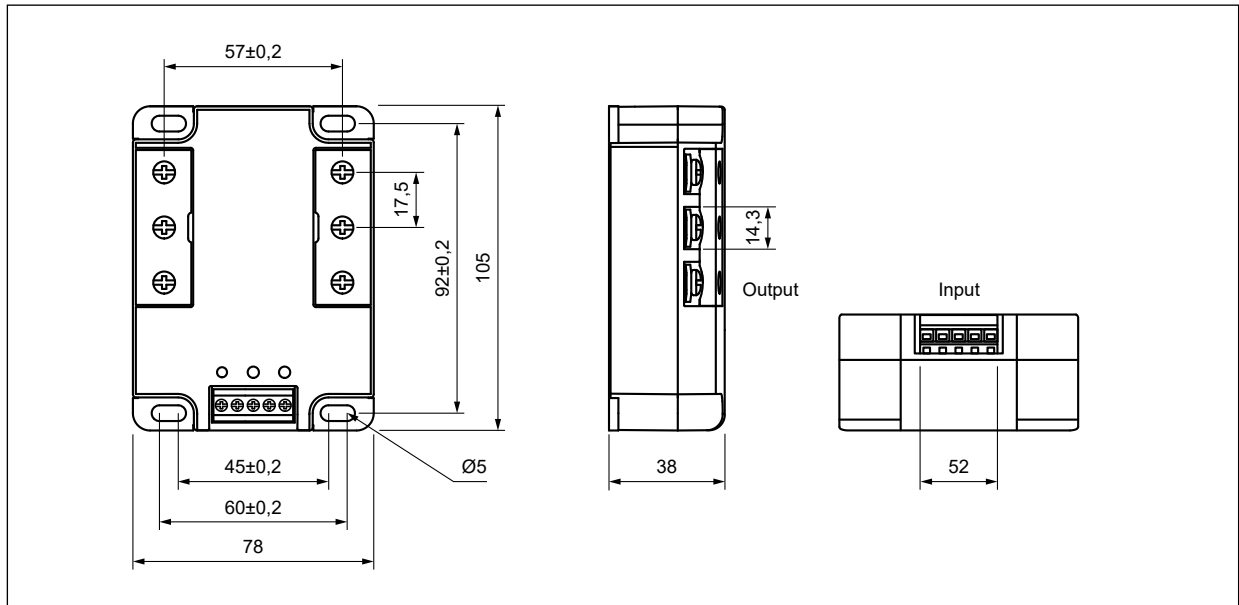
## Connection diagram



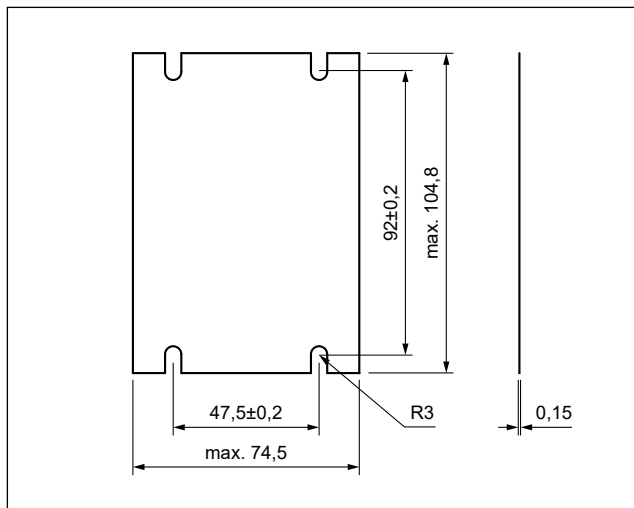
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## Dimensions



Solid state relay **RSR62**



Thermal pad **RTP-30**

## RH

Heatsinks  
for RSR52, RSR62  
- see [www.relpol.com.pl](http://www.relpol.com.pl)

NEW






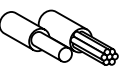




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### Mounting, accessories for relays

Relays **RSR62** are designed for mounting on heatsinks **RH** (see [www.relpol.com.pl](http://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 <sup>2</sup> (1 x 16...14 AWG)	1 x 2,5...6 mm <sup>2</sup> (1 x 14...10 AWG) 2 x 2,5...6 mm <sup>2</sup> (2 x 14...10 AWG)
Flexible with end sleeve		1 x 1,5...2 mm <sup>2</sup> (1 x 16...14 AWG)	1 x 1...4 mm <sup>2</sup> (1 x 18...12 AWG) 2 x 1...2,5 mm <sup>2</sup> (2 x 18...14 AWG) 2 x 2,5...4 mm <sup>2</sup> (2 x 14...12 AWG)
Flexible without end sleeve		–	1 x 1...6 mm <sup>2</sup> (1 x 18...10 AWG) 2 x 1...2,5 mm <sup>2</sup> (2 x 18...14 AWG) 2 x 2,5...6 mm <sup>2</sup> (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 (UL 94)	
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.



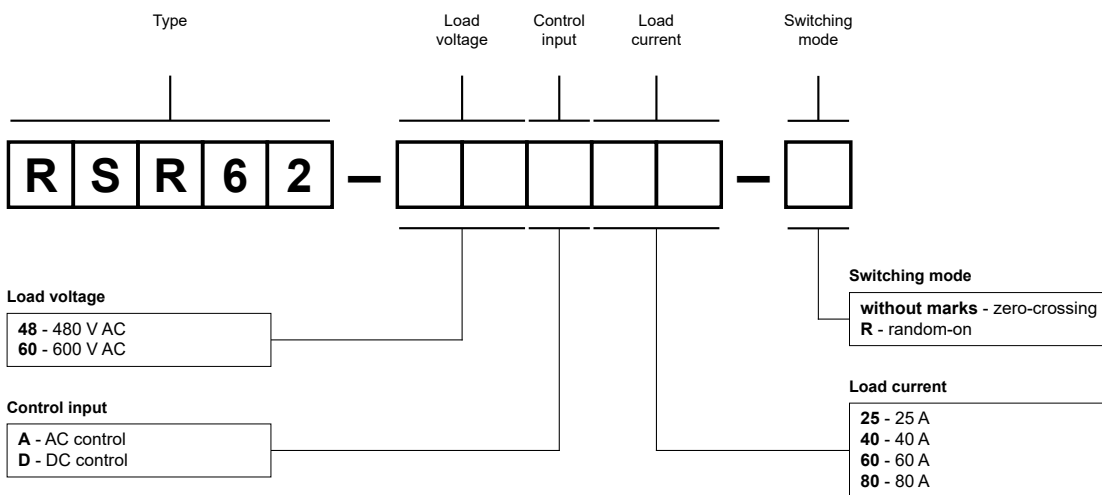
**RTP-30**

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 ⑥:

- 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

⑥ Ordering codes **RSR62** are specified in Table 1.