




# RSR89...NC

single-phase solid state relays, miniature



- DC control input
- Triac output - normally closed type • Load current 5 A
- Max. load voltage 280 V AC (single-phase)
- Dielectric strength 2 500 Vrms (photoelectric-isolation)
- RC protection (built-in resistor, capacitor)
- LED indicator (red)
- Flat insert connectors - faston 187 (4,8 x 0,5 mm)
- For plug-in sockets: on 35 mm rail mount acc. to EN 60715; on panel mounting
- Recognitions, certifications, directives: RoHS, REACH,   

## Applications

Suitable for lighting control, motor control, vending machine control, medical device control, valve control and etc.



## Basic technical data

Load voltage: 24...280 V AC

Control input: DC

Load current: 5 A

Type		zero-crossing
Load voltage	Control voltage	Load current
24...280 V AC	4...32 V DC	5 A
		<b>RSR89-24D5-NC</b>

## Load voltage

	<b>RSR89-24...</b>
Rated load voltage	240 V AC
Rated range of load voltage	24...280 V AC
Blocking voltage	600 V <sub>pk</sub>
Rated frequency	47...63 Hz
Power factor	0,5

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## Control input

zero-crossing

	RSR89...D...
Control voltage range	4...32 V DC
Must turn-on voltage	1 V DC
Must turn-off voltage	4 V DC
Zero voltage turn-on	≤ 20 V
Maximum input current	18 mA 32 V DC
Response time pick-up	≤ 1/2 cycle + 1 ms
Response time drop-out	≤ 1/2 cycle + 1 ms

## Output circuit

	RSR89...5...
Rated load current	5 A
Rated load range	0,1...5 A
Maximum surge current	250 A 10 ms
I <sup>2</sup> t for fusing	312 A <sup>2</sup> s 10 ms
Max. operational current AC-51 rating	5 A
Max. operational current AC-53 rating	1,5 A
Min. operational current	100 mA
Maximum off-state leakage current (at rated load voltage)	5 mA
Maximum on-state voltage drop (at rated current)	1,5 V <sub>rms</sub>
Minimum off-state dV/dt (at max. rated voltage)	200 V/μs

## General data

	RSR89...
Dielectric strength	input - output: 2 500 V <sub>rms</sub> 50/60 Hz
Minimum insulation resistance	input - output: 1 000 MΩ 500 V DC
Ambient temperature (non-condensation and/or icing)	storage: -30...+100 °C operating: -30...+80 °C

## Mechanical data

	RSR89...	RSR89... with socket GZMA
Dimensions (L x W x H)	32 x 13 x 43 mm	77 x 16 x 64 mm
Weight (typical)	20 g	50 g
Protection category EN 60529	IP 00	IP 20
Mounting on 35 mm rail mount	with socket GZMA	direct

❶ Data given for ambient temperature ≤ 25 °C. Above 25 °C the maximum current decreases - see "Thermal derating curves", page 4.

# RSR89...NC

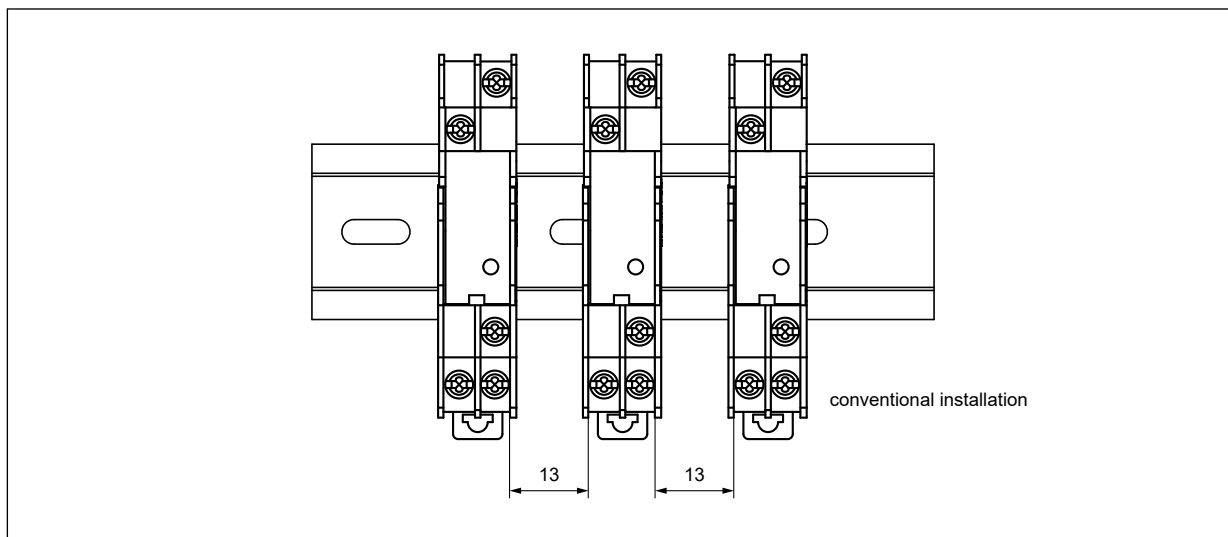
single-phase solid state relays, miniature

## Mounting

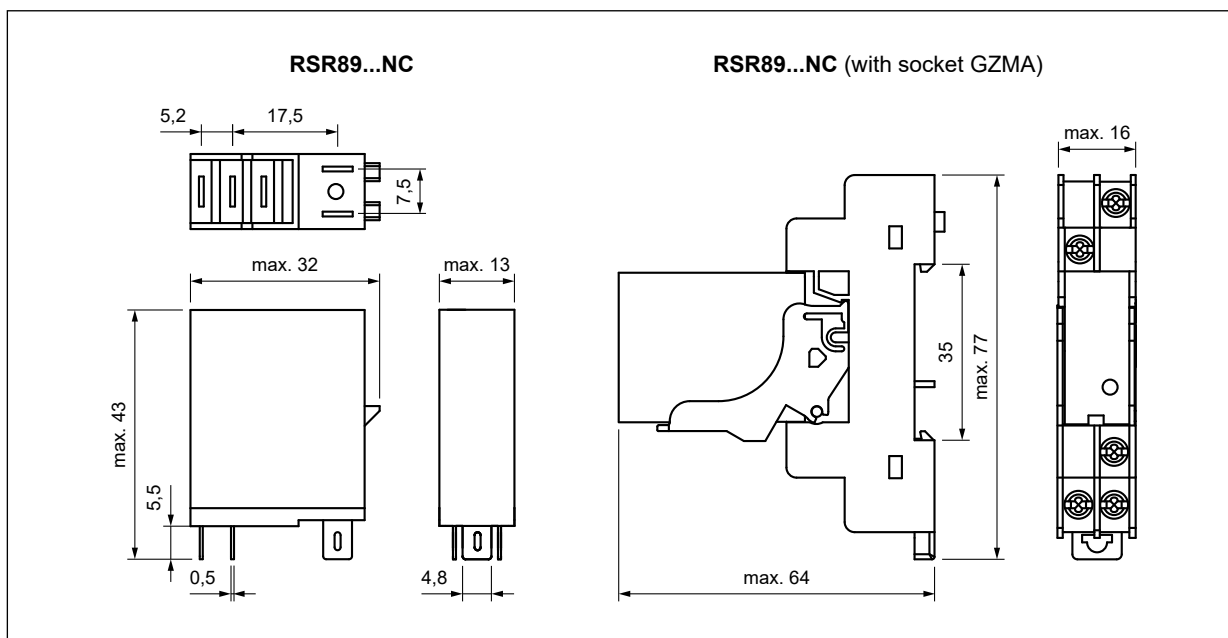
Relays **RSR89...NC** are designed for mounting in plug-in sockets **GZMA**.  
For conventional installation, the recommended minimum distance is 13 mm.

Sockets for RSR89...NC	Accessories
	Retainer / retractor clips
<b>Screw terminals sockets, 35 mm rail mount (acc. to EN 60715) or on panel mounting (one M3 screw)</b>	
GZMA	②

② Retainer / retractor clips are supplied complete with a GZMA socket.



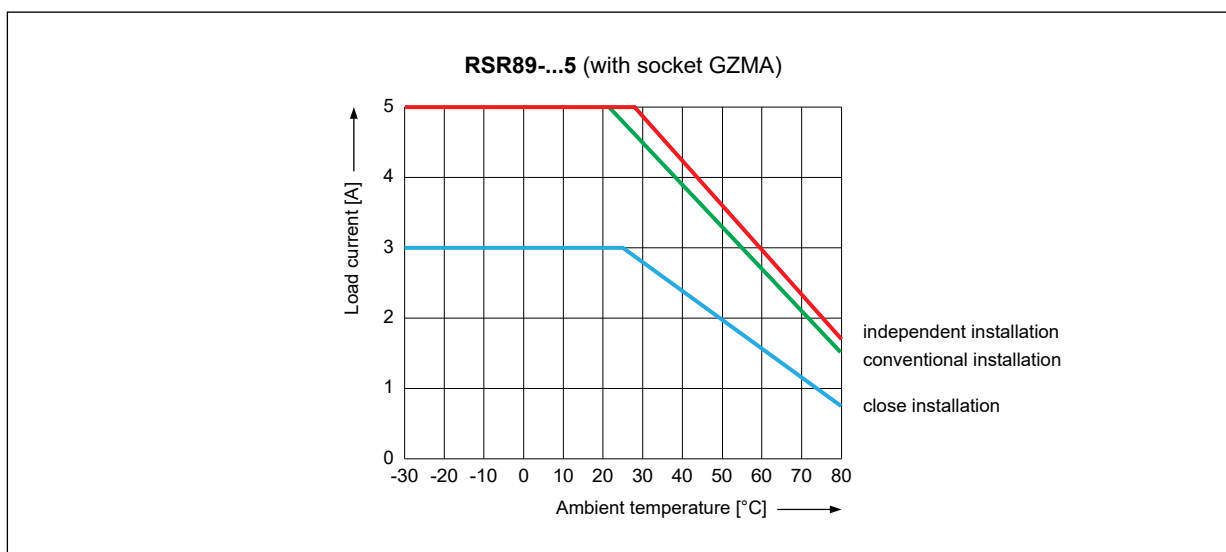
## Dimensions



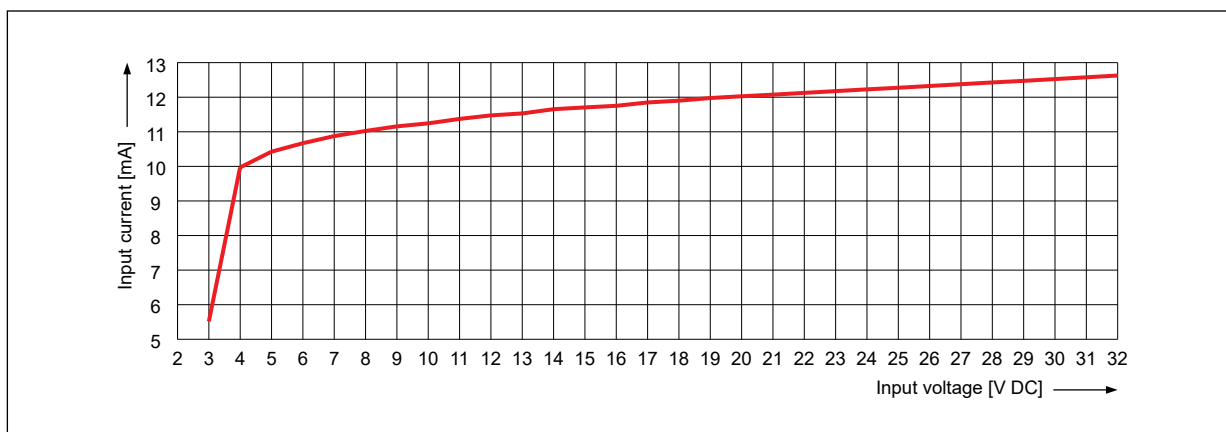
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## Thermal derating curves

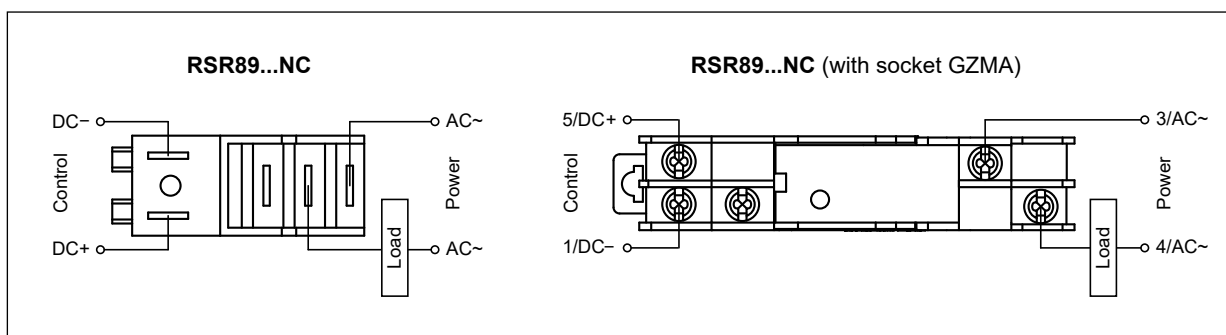


## Input characteristic



⊗ The input curve is measured at ambient temperature 25 °C.

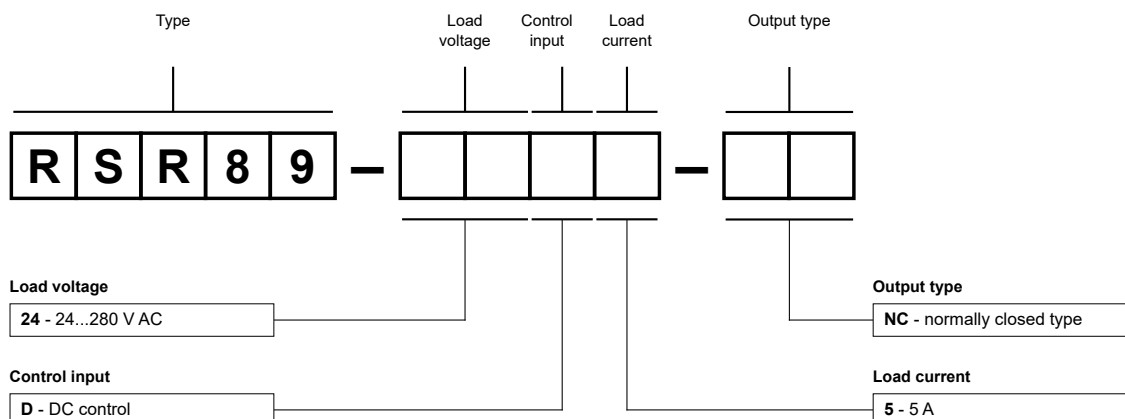
## Connection diagrams



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## Ordering codes



Example of ordering codes:

**RSR89-24D5-NC**

relay **RSR89...NC**, miniature for plug-in sockets, zero-crossing switching, DC control, load voltage 24...280 V AC (single-phase), load current 5 A, normally closed type

## GZMA

Screw terminals  
plug-in sockets  
for RSR88, RSR89

**NEW**

