

# R20

## industrial relays of small dimensions

version 1 NO



version 2 NO



- High switching capacity up to 30 A
- "Bridge" type contacts which open the circuit with double break
- Flat insert connectors - faston faston 250 (6,3 x 0,8 mm)
- High resistance to interference • High strength of insulation
- Applications: household equipment; air-conditioning and ventilation systems; audio equipment; control devices; automation systems; photoelectric systems; etc.
- Recognitions, certifications, directives: RoHS,

### Contact data

Number and type of contacts	1 NO, 2 NO	
Contact material	<b>AgSnO<sub>2</sub></b>	
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage	10 V	
Rated load	AC1	1 NO: 30 A / 250 V AC      2 NO: 25 A / 250 V AC
Min. switching current	10 mA	
Rated current	1 NO: 30 A      2 NO: 25 A	
Max. breaking capacity	AC1	1 NO: 7 000 VA      2 NO: 6 250 VA
Min. breaking capacity	0,1 W	
Contact resistance	≤ 100 mΩ	

### Coil data

Rated voltage	50/60 Hz AC	24, 48, 115, 230 V
	DC	12, 24, 110 V
Must release voltage	DC: ≥ 0,1 U <sub>n</sub>	
Operating range of supply voltage	see Tables 1, 2	
Rated power consumption	AC	1,7 VA 24, 48 V      2,5 VA 115, 230 V
	DC	1,9 W

### Insulation according to EN 60664-1

Insulation rated voltage	250 V AC	
Dielectric strength	4 000 V AC      type of insulation: reinforced	
• between coil and contacts	2 000 V AC      type of clearance: full-disconnection	
• contact clearance		
Contact - coil distance	≥ 9 mm	
• clearance	≥ 11 mm	
• creepage		

### General data

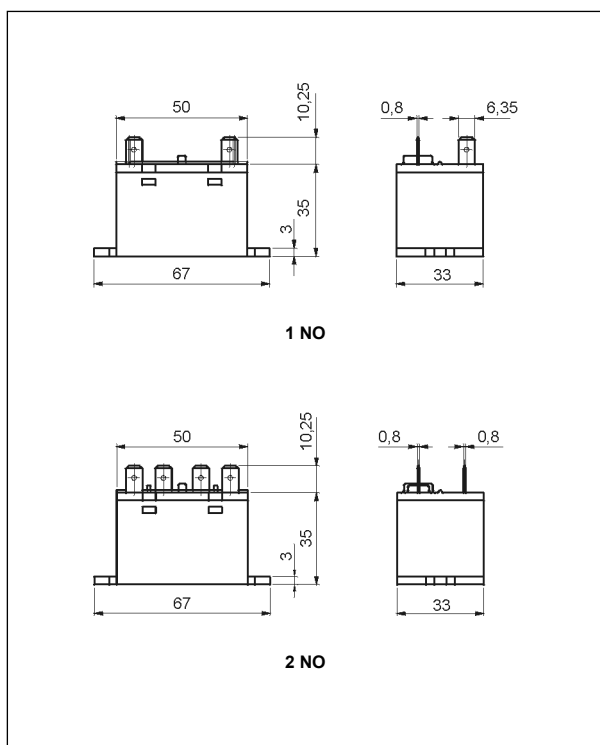
Operating / release time (typical values)	30 ms / 30 ms	
Electrical life		
• resistive AC1	1 200 cycles/hour	10 <sup>5</sup> 1Z: 30 A, 250 V AC      2Z: 25 A, 250 V AC
Mechanical life (cycles)	> 10 <sup>7</sup>	
Dimensions (L x W x H)	67 x 33 x 35 mm	
Weight	90 g	
Ambient temperature	-25...+75 °C	
(non-condensation and/or icing)	• operating	
Cover protection category	IP 50      EN 60529	
Environmental protection	RTI      EN 61810-7	
Shock resistance	10 g	
Vibration resistance	1,5 mm DA (constant amplitude)      10...55 Hz	

The data in bold type relate to the standard versions of the relays.

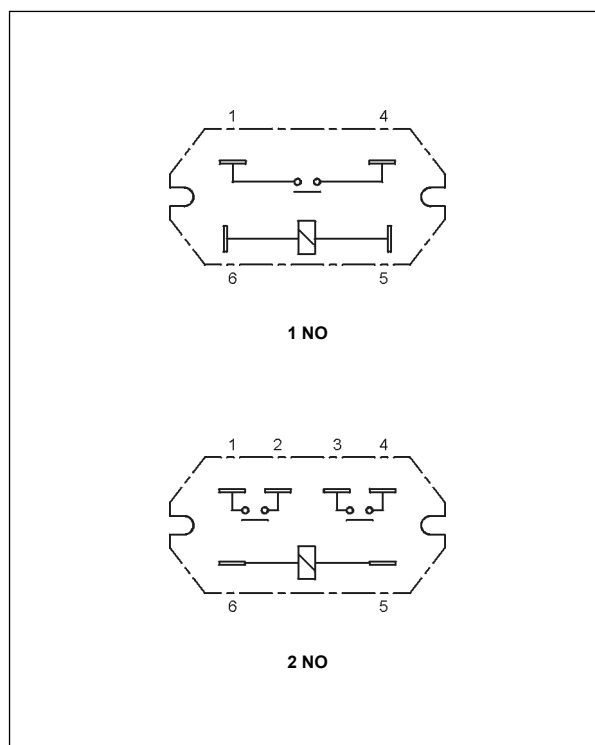
# R20

industrial relays of small dimensions

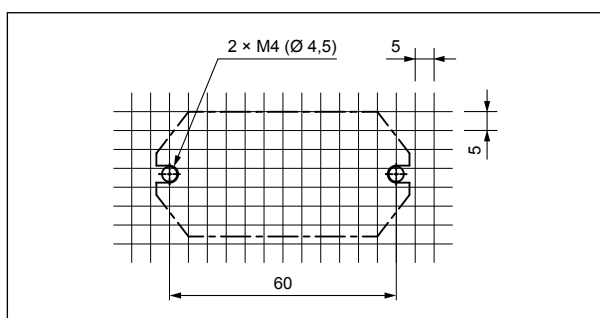
## Dimensions



## Connection diagrams (pin side view)



## Pinout



## Mounting

Relays **R20** are designed for flat insert connectors - faston 250 (6,3 x 0,8 mm), relays are direct on panel mounting with two M4 screws.

# R20

industrial relays of small dimensions

Coil data - DC voltage version

Table 1

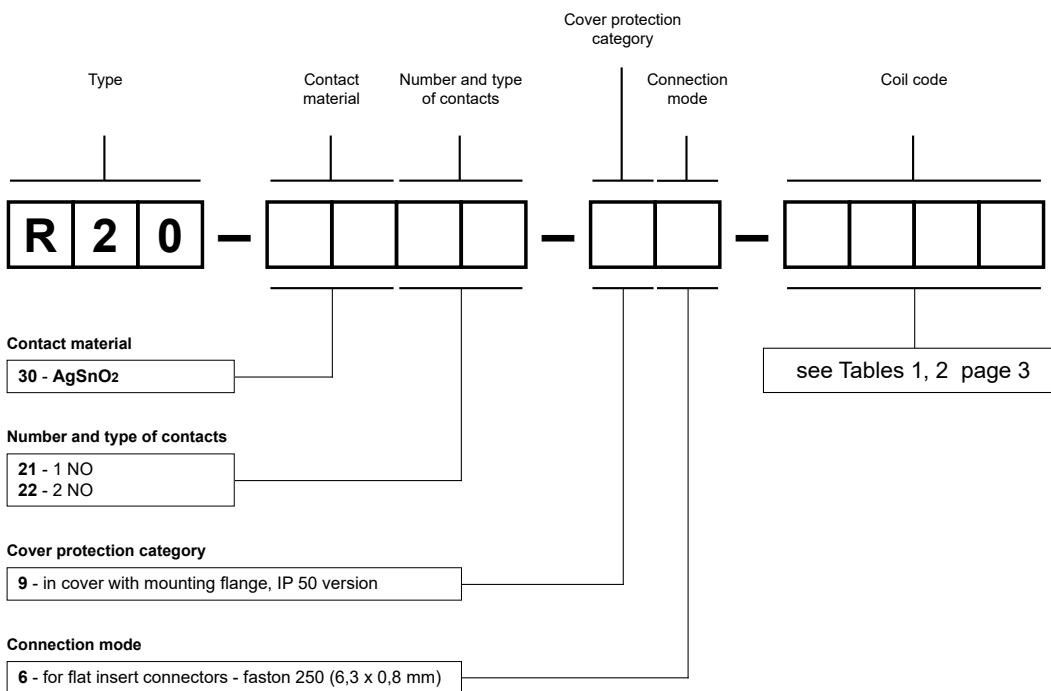
Coil code	Rated voltage V DC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC	
				min. (at 20 °C)	max. (at 20 °C)
1012	12	75,8	± 10%	9,0	13,2
1024	24	303	± 10%	18,0	26,4
1110	110	6 400	± 10%	82,5	121,0

Coil data - AC 50/60 Hz voltage version

Table 2

Coil code	Rated voltage V AC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V AC	
				min. (at 20 °C)	max. (at 20 °C)
5024	24	338	± 10%	18,0	26,4
5048	48		± 10%	36,0	52,8
5115	115	5 260	± 10%	86,3	126,5
5230	230	21 000	± 10%	172,5	253,0

## Ordering codes



Example of ordering code:

**R20-3021-96-1012** relay **R20**, for flat insert connectors - faston 250 (6,3 x 0,8 mm), one normally open contact, contact material AgSnO<sub>2</sub>, coil voltage 12 V DC, in cover with mounting flange IP 50

### PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.