




R Y2

miniature industrial relays



- Relays of general application
- For plug-in sockets: 35 mm rail mount acc. to PN-EN 60715; on panel mounting
- For direct mounting on panel - cover with mounting flange
- Flat insert connectors - faston 187 (4,8 x 0,5 mm)
- Recognitions, certifications, directives: RoHS,  

Contact data

Number and type of contacts		2 CO
Contact material		AgNi , AgCdO
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		5 V AgNi, 10 V AgCdO
Rated load	AC1	12 A / 250 V AC
	DC1	12 A / 30 V DC
Min. switching current		5 mA AgNi, 10 mA AgCdO
Max. inrush current		20 A
Rated current		12 A
Max. breaking capacity	AC1	3 000 VA
Min. breaking capacity		0,3 W AgNi, 1 W AgCdO
Contact resistance		≤ 100 mΩ
Max. operating frequency		
• at rated load	AC1	1 200 cycles/hour
• no load		18 000 cycles/hour
Coil data		
Rated voltage	50/60 Hz AC	6 ... 240 V
	DC	5 ... 220 V
Must release voltage		AC: ≥ 0,2 U _n DC: ≥ 0,1 U _n
Operating range of supply voltage		see Tables 1, 2
Rated power consumption	AC	1,6 VA
	DC	0,9 W
Insulation according to PN-EN 60664-1		
Insulation rated voltage		250 V AC
Rated surge voltage		4 000 V 1,2 / 50 μs
Overvoltage category		III
Insulation pollution degree		3
Dielectric strength		
• between coil and contacts	2 500 V AC	type of insulation: basic
• contact clearance	1 000 V AC	type of clearance: micro-disconnection
• pole - pole	2 500 V AC	type of insulation: basic
Contact - coil distance		
• clearance		≥ 2,6 mm
• creepage		≥ 4 mm
General data		
Operating / release time (typical values)		15 ms / 10 ms
Electrical life		
• resistive AC1	> 10 ⁵	12 A, 250 V AC
• cosφ	see Fig. 2	
Mechanical life (cycles)	> 10 ⁷	
Dimensions (L x W x H)		27,5 x 21,1 x 34,5 mm 
Weight		35 g
Ambient temperature	• storage	-40...+70 °C
	• operating	-40...+55 °C
Cover protection category		IP 40 PN-EN 60529
Shock resistance		10 g
Vibration resistance		5 g 15...150 Hz

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

 For plug-in sockets version: standard

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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 55 °C)
1005	5	28	$\pm 10\%$	4,0	5,5
1006	6	40	$\pm 10\%$	4,8	6,6
1012	12	160	$\pm 10\%$	9,6	13,2
1024	24	640	$\pm 10\%$	19,2	26,4
1048	48	2 600	$\pm 10\%$	38,4	52,8
1060	60	4 000	$\pm 10\%$	48,0	66,0
1080	80	7 100	$\pm 10\%$	64,0	88,0
1110	110	13 600	$\pm 10\%$	88,0	121,0
1125	125	16 000	$\pm 10\%$	100,0	137,5
1220	220	54 000	$\pm 10\%$	176,0	242,0

Coil data - AC 50/60 Hz voltage version

Table 2

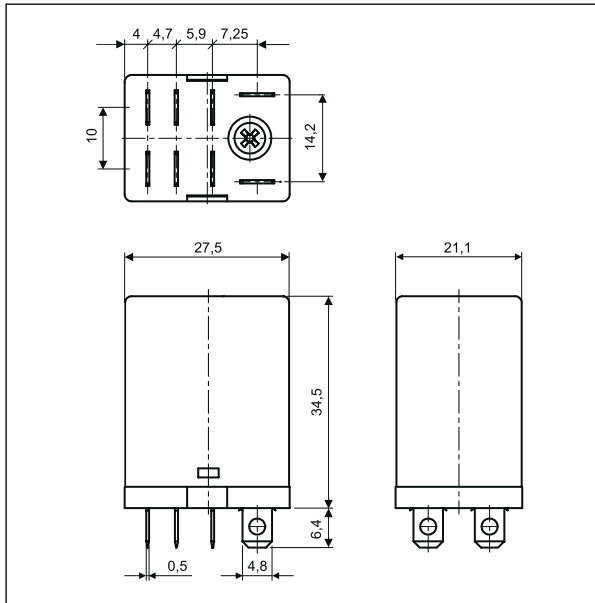
Coil code	Rated voltage V AC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V AC	
				min. (at 20 °C)	max. (at 55 °C)
5006	6	9,8	$\pm 10\%$	4,8	6,6
5012	12	39,5	$\pm 10\%$	9,6	13,2
5024	24	158	$\pm 10\%$	19,2	26,4
5042	42	470	$\pm 10\%$	33,6	46,2
5048	48	640	$\pm 10\%$	38,4	52,8
5060	60	930	$\pm 10\%$	48,0	66,0
5080	80	1 720	$\pm 10\%$	64,0	88,0
5110	110	3 450	$\pm 10\%$	88,0	121,0
5120	120	3 770	$\pm 10\%$	96,0	132,0
5127	127	4 000	$\pm 10\%$	101,6	139,7
5220	220	15 400	$\pm 10\%$	176,0	242,0
5230	230	16 100	$\pm 10\%$	184,0	253,0
5240	240	16 800	$\pm 10\%$	192,0	264,0

GZY2G

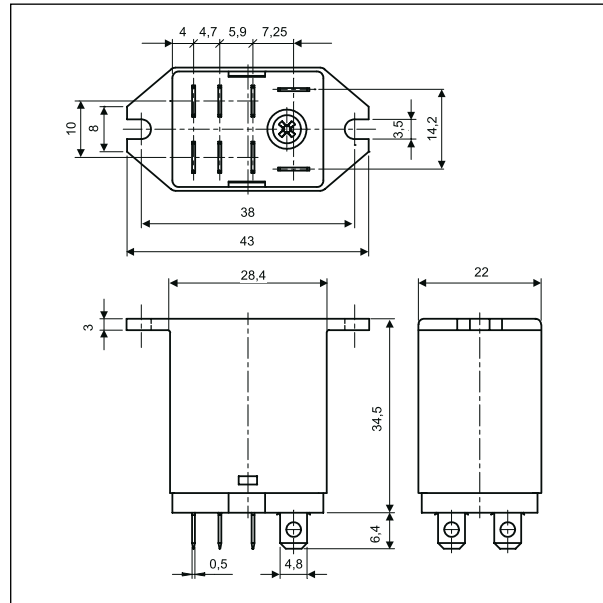
Screw terminals
plug-in sockets
for RY2
- see page 5.



Dimensions - plug-in version (standard)

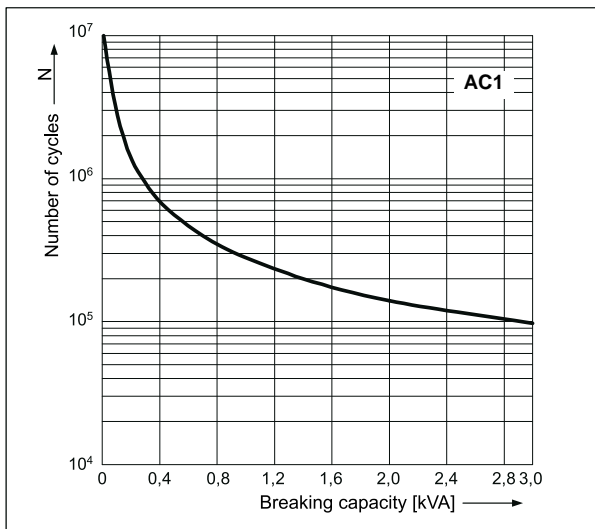


Dimensions - version with mounting flange in the upper wall of the cover



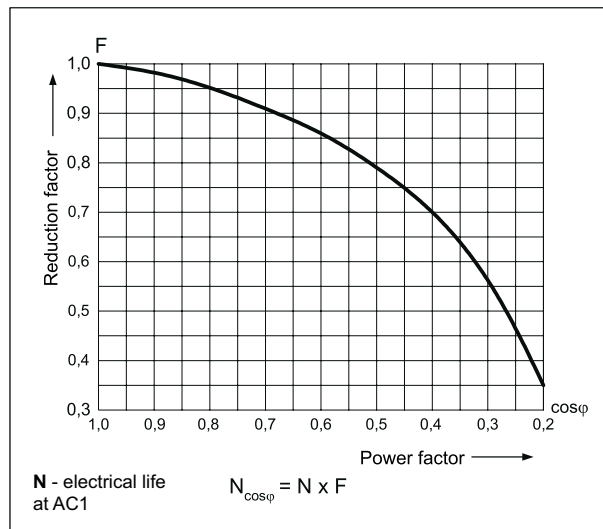
Electrical life at AC resistive load. Switching frequency: 1 200 cycles/hour

Fig. 1

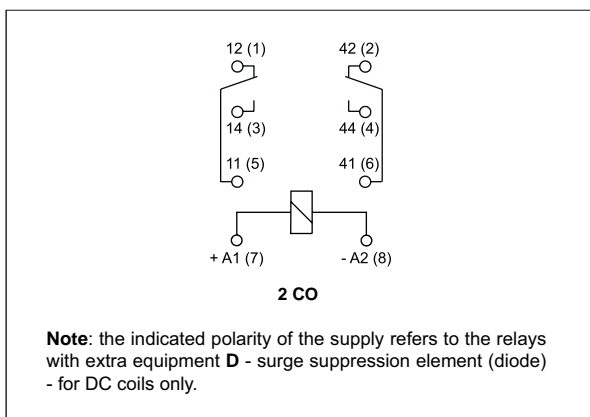


Electrical life reduction factor at AC inductive load

Fig. 2



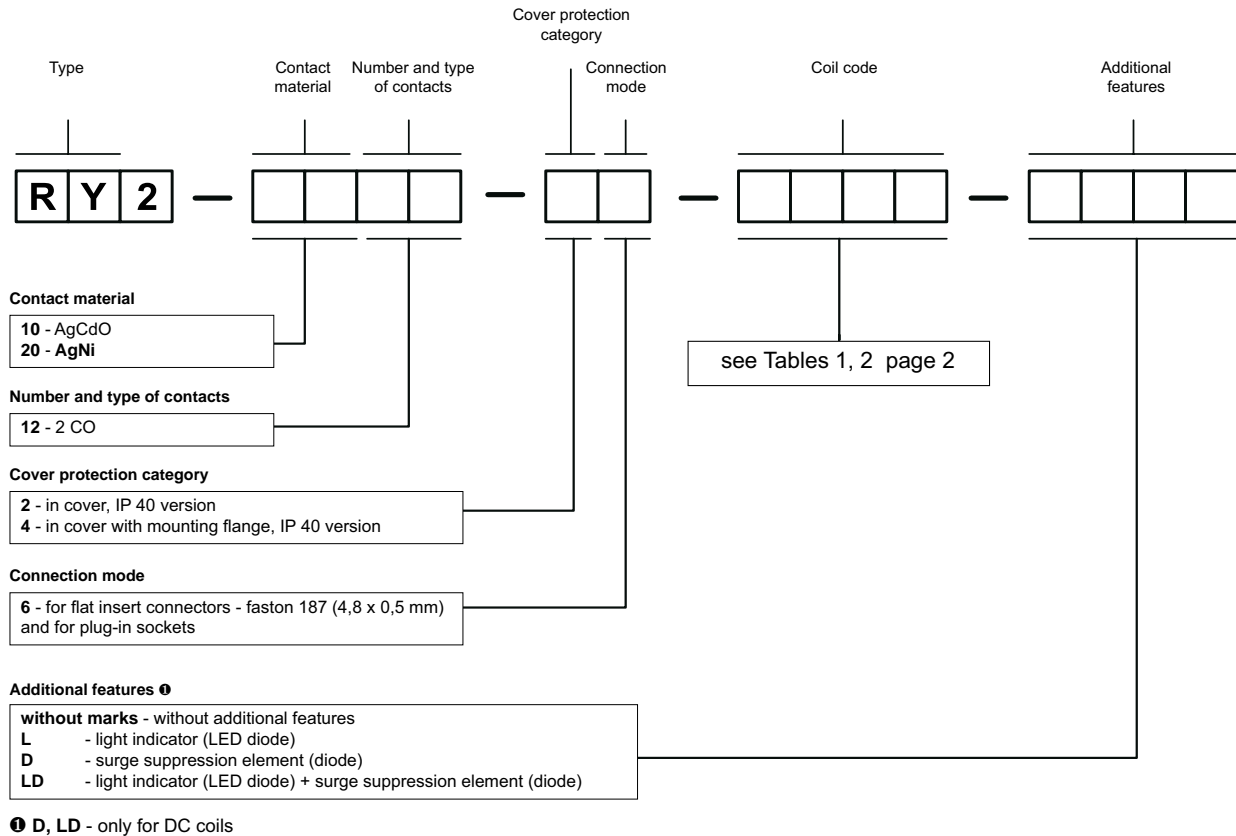
Connection diagram (pin side view)



Mounting

Relays RY2 are offered in versions: • standard, for plug-in sockets • with mounting flange in the upper wall of the cover. Relays RY2 are designed for: • screw terminals plug-in sockets **GZY2G**, 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with two M3 screws • flat insert connectors - faston 187 (4,8 x 0,5 mm), relays are direct on panel mounting with two M3 screws - cover with mounting flange.

Ordering codes



Note:

For relays with additional features **D** - surge suppression element (diode) (versions D and LD) - fixed supply polarity compulsory for the DC load of coils: +A1(7) / -A2(8). The polarity is indicated on the relay cover. For other versions of the relays with DC coils any polarity is possible.

Examples of ordering codes:

- RY2-2012-26-1024** relay RY2, for plug-in sockets, two changeover contacts, contact material AgNi, coil voltage 24 V DC, in cover IP 40
- RY2-2012-26-5230-L** relay RY2, for plug-in sockets, two changeover contacts, contact material AgNi, coil voltage 230 V AC 50/60 Hz, with light indicator (LED diode), in cover IP 40

Plug-in sockets and accessories

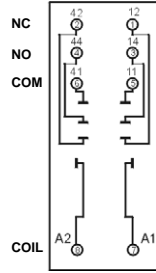
GZY2G

For RY2

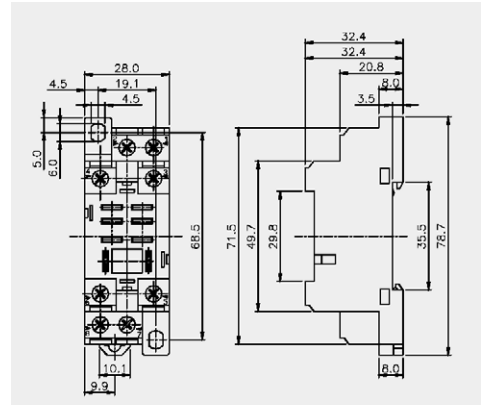
Screw terminals
Max. tightening moment
for the terminal: 0,7 Nm
35 mm rail mount
acc. to PN-EN 60715
or on panel mounting
78,7 x 28 x 32,4 mm
Two poles
12 A, 250 V AC



Connection diagram



Dimensions



Accessories

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.