





# RY2

## miniature industrial relays




- Relays of general application
- For plug-in sockets: on 35 mm rail mount acc. to 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)
- AC and DC coils, insulation class F: 155 °C
- Recognitions, certifications, directives: RoHS,   

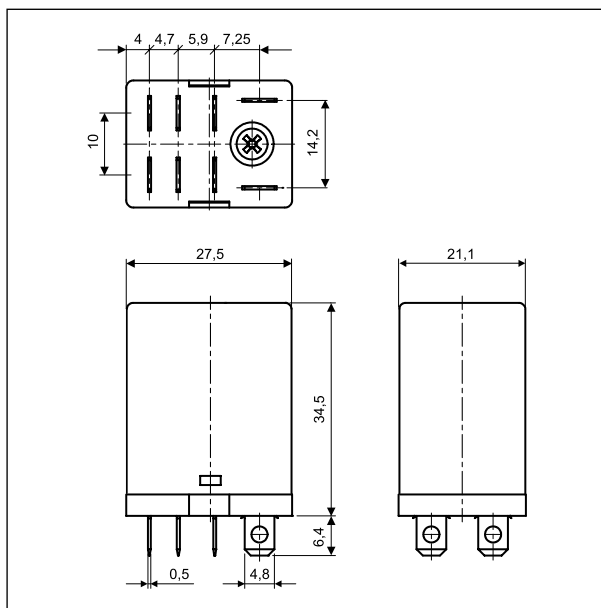
### Contact data

Number and type of contacts		2 CO
Contact material		<b>AgNi</b>
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		5 V
Rated load	AC1 DC1	12 A / 250 V AC 12 A / 30 V DC
Min. switching current		5 mA
Max. inrush current		20 A
Rated current		12 A
Max. breaking capacity	AC1	3 000 VA
Min. breaking capacity		0,3 W
Contact resistance		≤ 100 mΩ
Max. operating frequency		
• at rated load	AC1	1 200 cycles/hour
• no load		18 000 cycles/hour
<b>Coil data</b>		
Rated voltage	50/60 Hz AC DC	6, 12, 24, 42, 48, 60, 80, 110, 120, 127, 220, 230, 240 V 5, 6, 12, 24, 48, 60, 80, 110, 125, 220 V
Must release voltage		AC: ≥ 0,2 U <sub>n</sub> DC: ≥ 0,1 U <sub>n</sub>
Operating range of supply voltage		see Tables 1, 2
Rated power consumption	AC DC	1,6 VA 0,9 W
<b>Insulation</b> according to 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
<b>General data</b>		
Operating / release time (typical values)		15 ms / 10 ms
Electrical life		
• resistive AC1		> 10 <sup>5</sup> 12 A, 250 V AC
• cosφ		see Fig. 2
Mechanical life (cycles)		> 10 <sup>7</sup>
Dimensions (L x W x H)		27,5 x 21,1 x 34,5 mm 
Weight		35 g
Ambient temperature	• storage (non-condensation and/or icing)	-40...+70 °C
	• operating	-40...+55 °C
Cover protection category		IP 40 EN 60529
Environmental protection		RTI EN 61810-7
Shock resistance		10 g
Vibration resistance		5 g 15...150 Hz

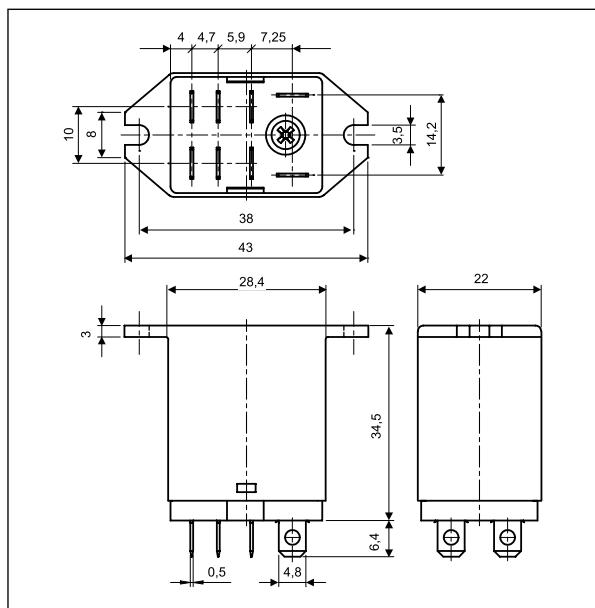
The data in bold type relate to the standard versions of the relays.

 For plug-in sockets version: standard

## Dimensions - plug-in version (standard)

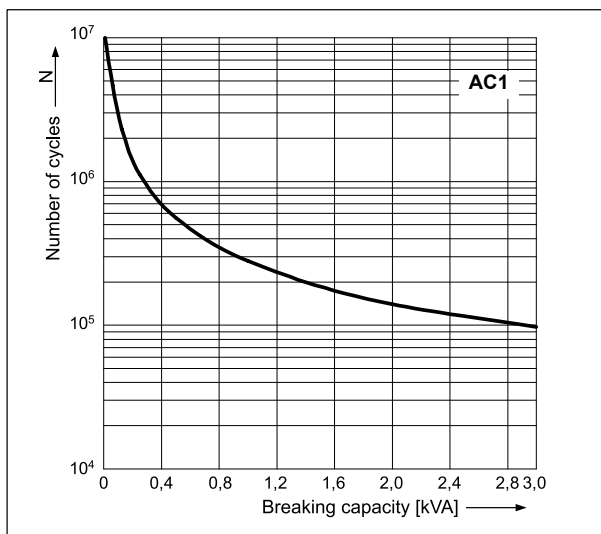


## Dimensions - version with mounting flange in the upper wall of the cover



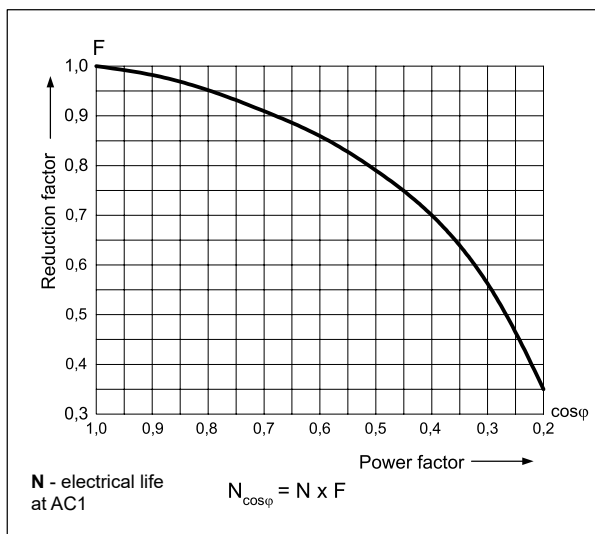
## Electrical life at AC resistive load. Switching frequency: 1 200 cycles/hour

Fig. 1



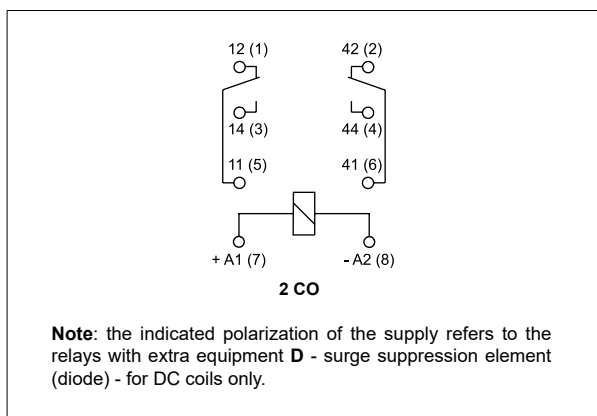
## Electrical life reduction factor at AC inductive load

Fig. 2




$N_{\cos\varphi} = N \times F$

## Connection diagram (pin side view)



## Mounting, sockets and accessories for relays

Sockets for RY2	<b>Accessories</b>
	Spring wire clips
<b>Screw terminals sockets,</b> 35 mm rail mount (acc. to EN 60715) or on panel mounting (two M3 screws)	
GZY2G	GZY2G-0041 

Relays **RY2** are offered in versions: • standard, for plug-in sockets • with mounting flange in the upper wall of the cover, on panel mounting with two M3 screws, flat insert connectors - faston 187 (4,8 x 0,5 mm).

 For each GZY2G socket a set GZY2G-0041 shall be ordered.

## Coil data - DC voltage version

Table 1

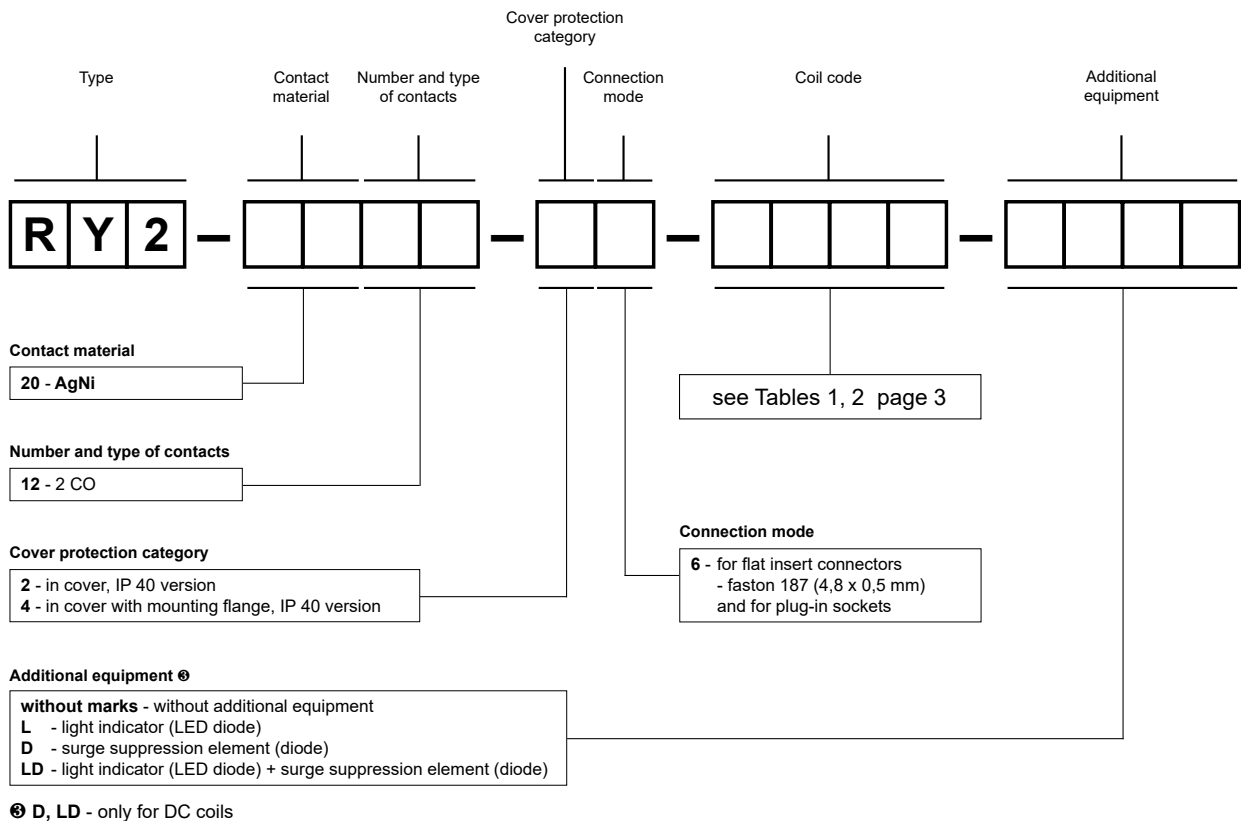
Coil code	Rated voltage V DC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC	
				min. (at 20 °C)	max. (at 55 °C)
1005	5	28	± 10%	4,0	5,5
1006	6	40	± 10%	4,8	6,6
1012	12	160	± 10%	9,6	13,2
1024	24	640	± 10%	19,2	26,4
1048	48	2 600	± 10%	38,4	52,8
1060	60	4 000	± 10%	48,0	66,0
1080	80	7 100	± 10%	64,0	88,0
1110	110	13 600	± 10%	88,0	121,0
1125	125	16 000	± 10%	100,0	137,5
1220	220	54 000	± 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	± 10%	4,8	6,6
5012	12	39,5	± 10%	9,6	13,2
5024	24	158	± 10%	19,2	26,4
5042	42	470	± 10%	33,6	46,2
5048	48	640	± 10%	38,4	52,8
5060	60	930	± 10%	48,0	66,0
5080	80	1 720	± 10%	64,0	88,0
5110	110	3 450	± 10%	88,0	121,0
5120	120	3 770	± 10%	96,0	132,0
5127	127	4 000	± 10%	101,6	139,7
5220	220	15 400	± 10%	176,0	242,0
5230	230	16 100	± 10%	184,0	253,0
5240	240	16 800	± 10%	192,0	264,0

## Ordering codes



### Note:

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

### GZY2G

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



# Sockets and accessories

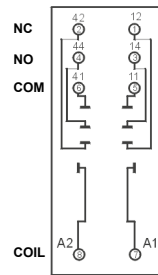
## GZY2G

For RY2

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



### Connection diagram

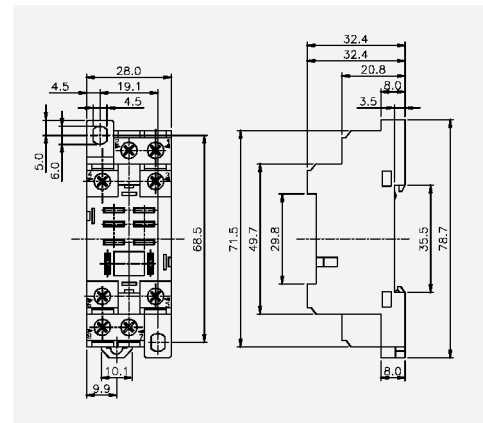


### Accessories

GZY2G-0041

### Dimensions

CE EAC



### 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.