






# R15 - 4 CO

## industrial relays of small dimensions



- Relays of general application
- For plug-in sockets: 35 mm rail mount acc. to PN-EN 60715; on panel mounting; solder terminals
- Coils AC and DC
- Recognitions, certifications, directives: RoHS,     

### Contact data

Number and type of contacts		4 CO
Contact material		<b>AgCdO</b> , AgCdO/Au 0,2 µm, AgCdO/Au 5 µm
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		10 V AgCdO, 10 V AgCdO/Au 0,2 µm, 5 V AgCdO/Au 5 µm
Rated load (capacity)	AC1	10 A / 250 V AC 10 A / 277 V AC UL 508
	AC15	3 A / 120 V 1,5 A / 240 V (B300)
	AC3	370 W (single-phase motor; 0,5 HP / 240 V AC UL 508)
	DC1	10 A / 24 V DC (see Fig. 3)
	DC13	0,22 A / 120 V 0,1 A / 250 V (R300)
Min. switching current		10 mA AgCdO, 10 mA AgCdO/Au 0,2 µm, 5 mA AgCdO/Au 5 µm
Max. inrush current		20 A
Rated current		10 A
Max. breaking capacity	AC1	2 500 VA
Min. breaking capacity		0,5 W AgCdO, 0,5 W AgCdO/Au 0,2 µm, 0,05 W AgCdO/Au 5 µm
Contact resistance		≤ 100 mΩ
Max. operating frequency	AC1	• at rated load
		• no load
		1 200 cycles/hour 12 000 cycles/hour

### Coil data

Rated voltage	50 Hz, 60 Hz AC	6 ... 240 V
	DC	6 ... 220 V
Must release voltage		AC: ≥ 0,15 U <sub>n</sub> DC: ≥ 0,1 U <sub>n</sub>
Operating range of supply voltage		see Tables 1, 2, 3
Rated power consumption	AC	2,8 VA 50 Hz 2,5 VA 60 Hz
	DC	1,5 W

### Insulation according to PN-EN 60664-1

Insulation rated voltage	250 V AC	
Rated surge voltage	2 500 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	1 500 V AC type of clearance: micro-disconnection
	• pole - pole	2 000 V AC type of insulation: basic
Contact - coil distance	• clearance	≥ 3 mm
	• creepage	≥ 3,2 mm

### General data

Operating / release time (typical values)	AC: 12 ms / 10 ms DC: 18 ms / 7 ms	
Electrical life	• resistive AC1	> 2 x 10 <sup>5</sup> 10 A, 250 V AC
	• cosφ	see Fig. 2
Mechanical life (cycles)	> 2 x 10 <sup>7</sup>	
Dimensions (L x W x H)	35 x 42,5 x 54,5 mm	
Weight	95 g	
Ambient temperature	• storage	-40...+85 °C
	• operating	AC: -40...+55 °C DC: -40...+70 °C
Cover protection category	IP 40 PN-EN 60529	
Environmental protection	RTI PN-EN 116000-3	
Shock resistance	10 g	
Vibration resistance	5 g 10...150 Hz	
Solder bath temperature	max. 270 °C	
Soldering time	max. 5 s	

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

# R15 - 4 CO

## 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 55 °C)
1006	6	28	± 10%	4,8	6,6
<b>1012</b>	<b>12</b>	<b>110</b>	<b>± 10%</b>	<b>9,6</b>	<b>13,2</b>
<b>1024</b>	<b>24</b>	<b>430</b>	<b>± 10%</b>	<b>19,2</b>	<b>26,4</b>
1048	48	1 750	± 10%	38,4	52,8
1060	60	2 700	± 10%	48,0	66,0
1110	110	9 200	± 10%	88,0	121,0
1120	120	11 000	± 10%	96,0	132,0
<b>1220</b>	<b>220</b>	<b>37 000</b>	<b>± 10%</b>	<b>176,0</b>	<b>242,0</b>

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

**Coil data - AC 50 Hz voltage version, basic**
**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)
3006	6	4,8	± 15%	4,8	6,6
3012	12	20	± 15%	9,6	13,2
3024	24	72	± 15%	19,2	26,4
3048	48	360	± 15%	38,4	52,8
3060	60	520	± 15%	48,0	66,0
3115	115	2 100	± 15%	92,0	126,5
3120	120	2 300	± 15%	96,0	132,0
3220	220	7 000	± 15%	176,0	242,0
3230	230	7 900	± 15%	184,0	253,0
3240	240	8 300	± 15%	192,0	264,0

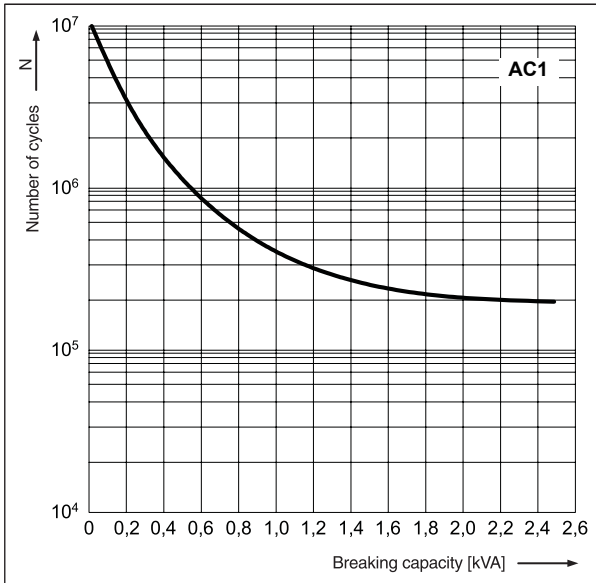
**Coil data - AC 60 Hz voltage version, special**
**Table 3**

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)
6006	6	4,8	± 15%	4,8	6,6
6012	12	17	± 15%	9,6	13,2
6024	24	65	± 15%	19,2	26,4
6048	48	310	± 15%	38,4	52,8
6060	60	490	± 15%	48,0	66,0
6110	110	1 760	± 15%	88,0	121,0
6120	120	2 000	± 15%	96,0	132,0
6220	220	6 900	± 15%	176,0	242,0
6230	230	7 000	± 15%	184,0	253,0
6240	240	7 100	± 15%	192,0	264,0

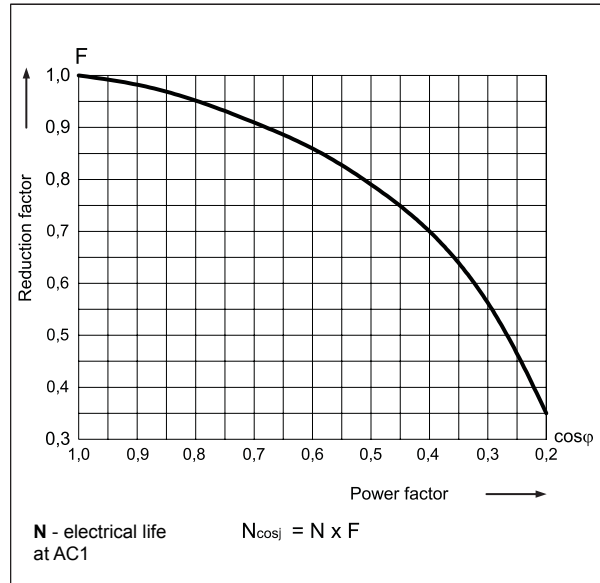
# R15 - 4 CO

industrial relays of small dimensions

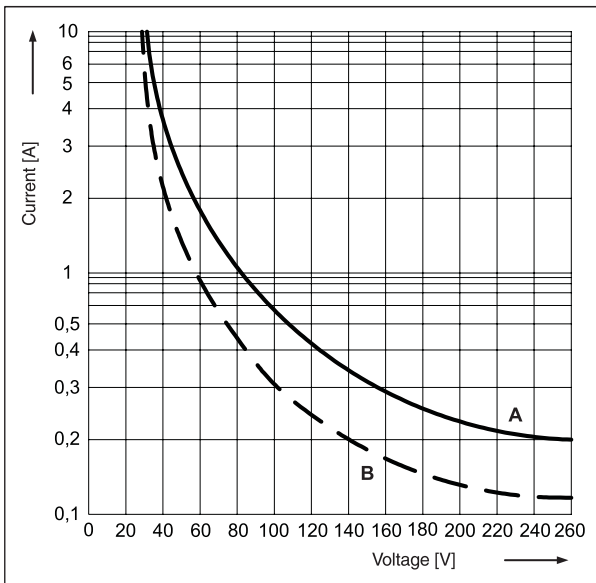
**Electrical life at AC resistive load.**  
Switching frequency: 1 200 cycles/hour Fig. 1



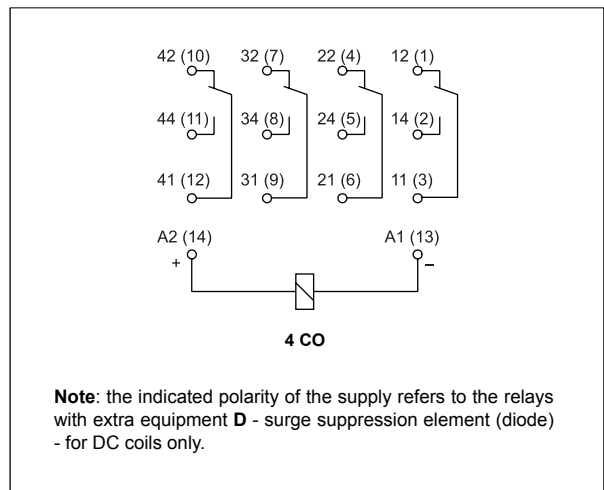
**Electrical life reduction factor at AC inductive load** Fig. 2



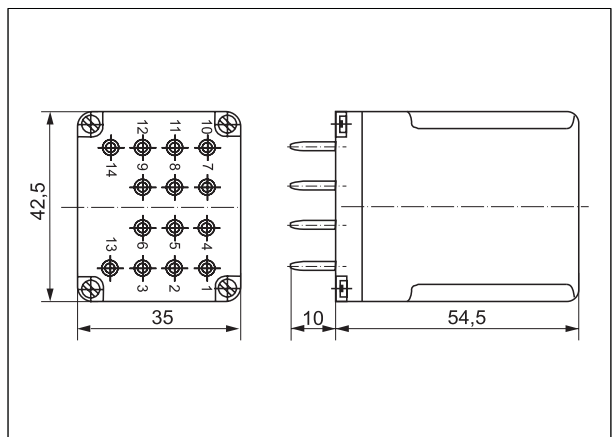
**Max. DC breaking capacity**  
**A - resistive load DC1** Fig. 3  
**B - inductive load L/R = 40 ms**



**Connection diagram (pin side view)**



**Dimensions**



# R15 - 4 CO

## industrial relays of small dimensions

### Mounting

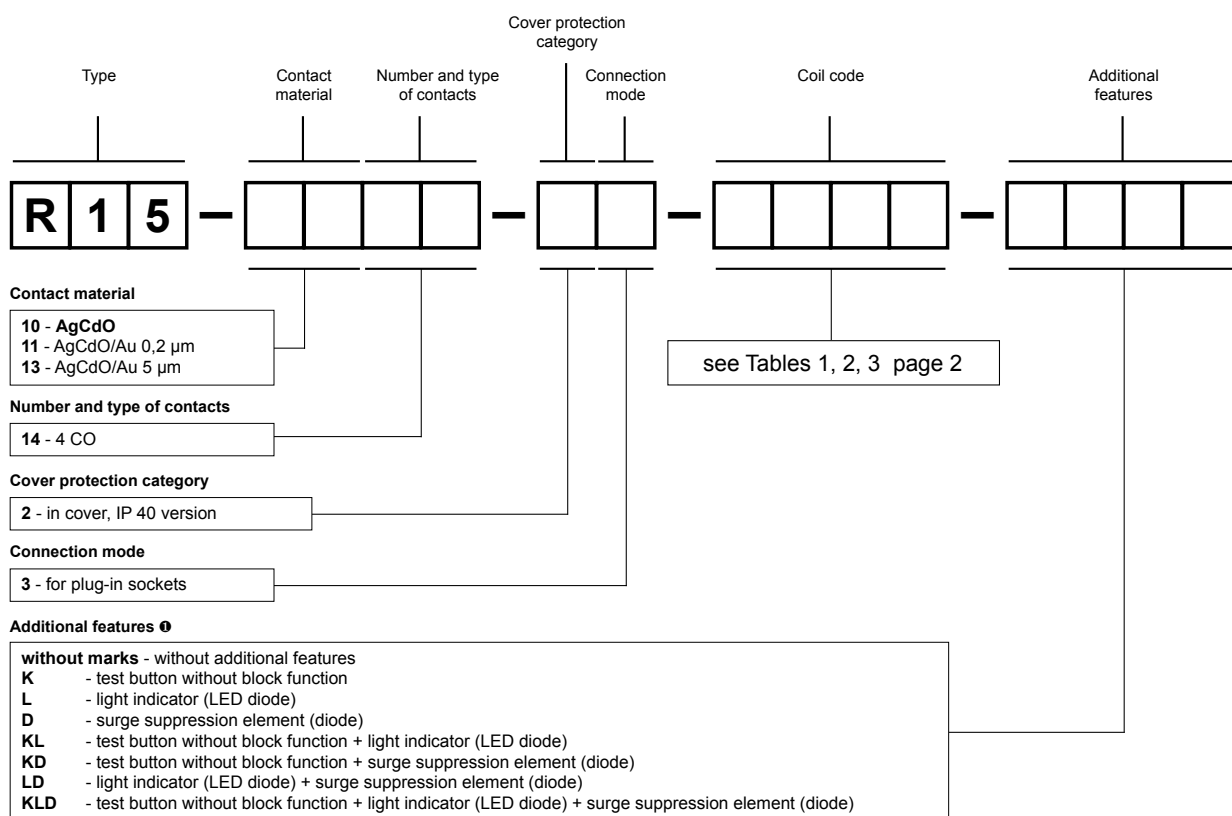
Relays **R15 4 - CO** are designed for: • screw terminals plug-in sockets **GZ14U** with clip **GZ14 0737**, 35 mm rail mount acc. to PN-EN 60715 • screw terminals plug-in sockets **GZ14** with clip **GZ14 0737**, on panel mounting with two M3 screws • screw terminals plug-in sockets **GZ14Z** with clip **GZ14 0737**, on panel mounting with two M3 screws • solder terminals sockets **GOP14** with clip **R15 0736** and spring clamp **R15 5922**.

### GZ14Z

Screw terminals plug-in socket for R15 - 4 CO **to be mounted behind the assembly panel** - see page 6.



### Ordering codes



ⓘ D, KD, LD, KLD - only for DC coils

### Note:

For relays with additional features **D** - surge suppression element (diode) (versions D, KD, LD, KLD) - fixed supply polarity compulsory for the DC load of coils: -A1(13) / +A2(14). 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:

#### R15-1014-23-1024-KD

relay **R15**, for plug-in sockets, four changeover contacts, contact material AgCdO, coil voltage 24 V DC, with test button without block function and surge suppression element (diode), in cover IP 40

#### R15-1114-23-3230-KL

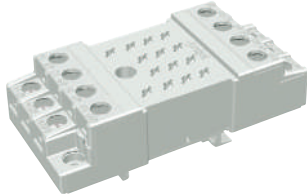
relay **R15**, for plug-in sockets, four changeover contacts, contact material AgCdO/Au 0,2 µm, coil voltage 230 V AC 50 Hz, with test button without block function and light indicator (LED diode), in cover IP 40

# Plug-in sockets and accessories

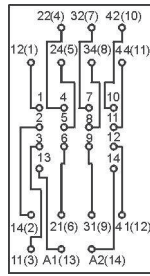
## GZ14U

For R15 - 4 CO

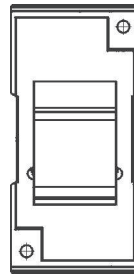
Screw terminals  
 Max. tightening moment  
 for the terminal: 0,7 Nm  
 35 mm rail mount  
 acc. to PN-EN 60715  
 96,8 x 46,4 x 33,3 mm  
 Four poles  
 10 A, 250 V AC



### Connection diagram



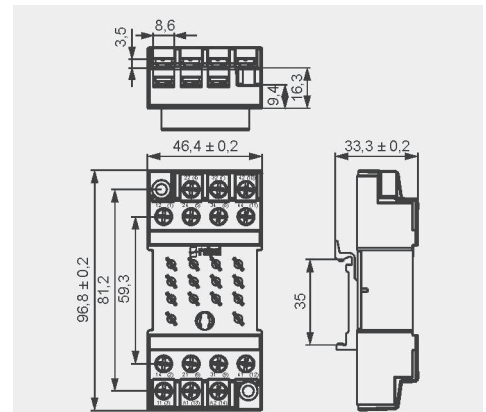
### Adaptor



GZ14 0737

### Accessories

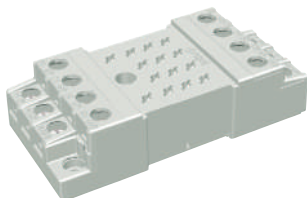
### Dimensions



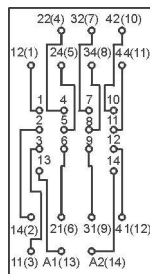
## GZ14

For R15 - 4 CO

Screw terminals  
 Max. tightening moment  
 for the terminal: 0,7 Nm  
 On panel mounting  
 96,8 x 46,4 x 24,5 mm  
 Four poles  
 10 A, 250 V AC



### Connection diagram



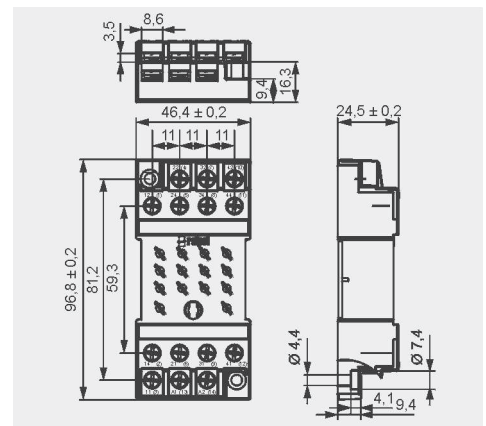
### Mounting dimensions



GZ14 0737

### Accessories

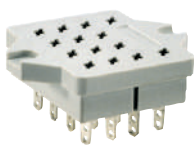
### Dimensions



## GOP14

For R15 - 4 CO

Solder terminals  
 50 x 42 x 23 mm  
 Four poles  
 10 A, 250 V AC



### Accessories

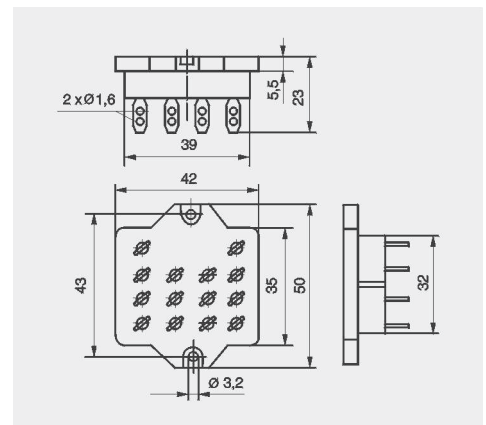


R15 0736



R15 5922

### Dimensions



# Plug-in sockets and accessories

## GZ14Z

For R15 - 4 CO

Screw terminals

Max. tightening moment  
for the terminal: 0,7 Nm

**On panel mounting, behind**

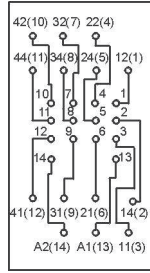
92,2 x 46 x 23 mm

Four poles

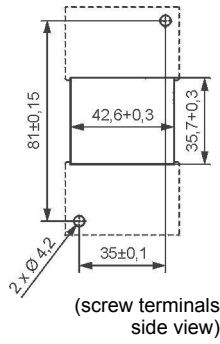
10 A, 250 V AC



### Connection diagram

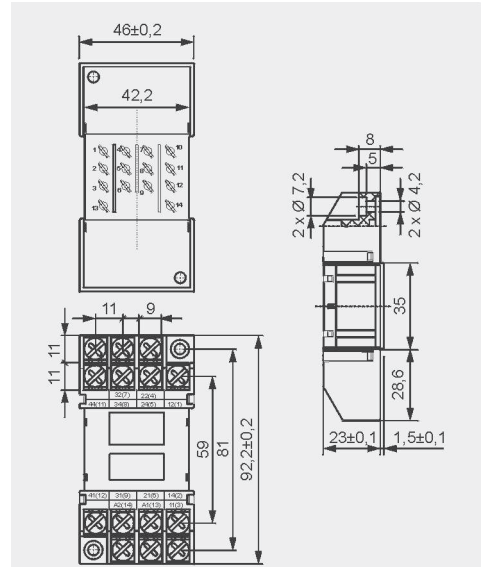


### Mounting dimensions



GZ14 0737

### 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, 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.