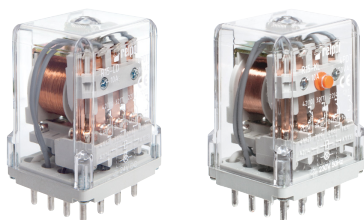


R15 - 4 CO

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	(AgCdO, AgCdO/Au flash gold plating, AgCdO/Au hard gold plating) ①
Rated / max. switching voltage	AC 250 V / 440 V
Min. switching voltage	10 V AgCdO, 10 V AgCdO/Au flash gold plating 5 V AgCdO/Au hard gold plating
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 flash gold plating 5 mA AgCdO/Au hard gold plating
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 flash gold plating 0,05 W AgCdO/Au hard gold plating
Contact resistance	≤ 100 mΩ
Max. operating frequency	
• at rated load	AC1 1 200 cycles/hour
• no load	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 _n DC: ≥ 0,1 U _n
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 ⁵ 10 A, 250 V AC • cosφ see Fig. 2
Mechanical life (cycles)	> 2 x 10 ⁷
Dimensions (L x W x H) / Weight	35 x 42,5 x 54,5 mm / 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

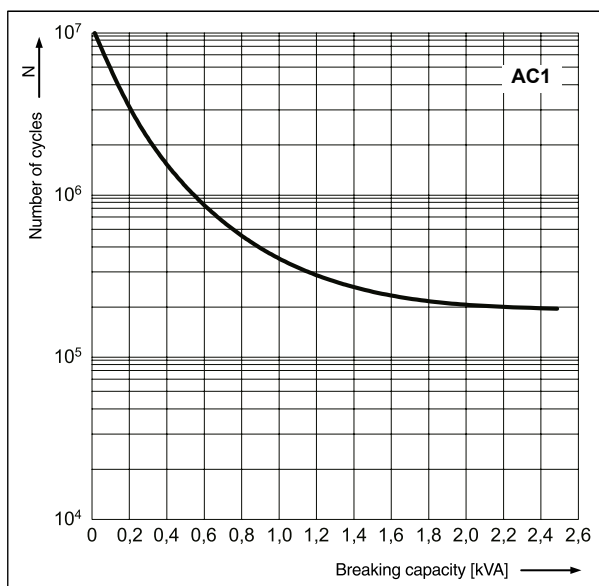
The data in bold type relate to the standard versions of the relays. ① AgCdO contact material in electrical contacts is only for use in electrical and electronic equipment (EEE) in compliance with directive RoHS2 2011/65/EU in restricted categories of EEE covered by this directive. Relpol S.A. is not responsible for usage relays with AgCdO contact material in categories of EEE where it is prohibited by the directive RoHS2 2011/65/EU.

R15 - 4 CO

industrial relays of small dimensions

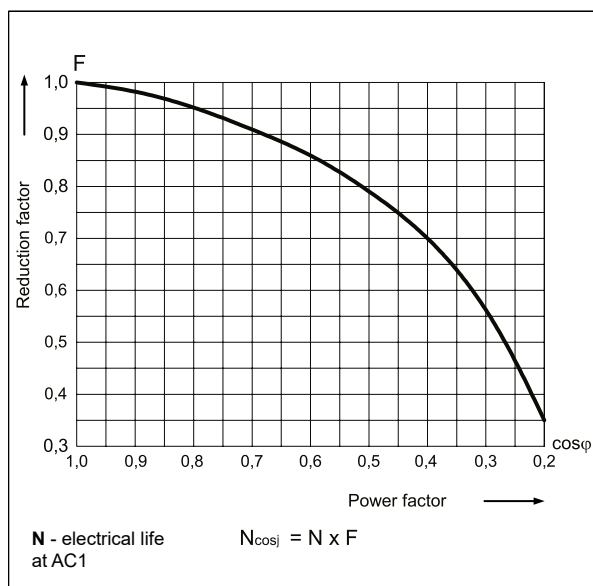
Electrical life at AC resistive load.
Switching frequency: 1 200 cycles/hour

Fig. 1



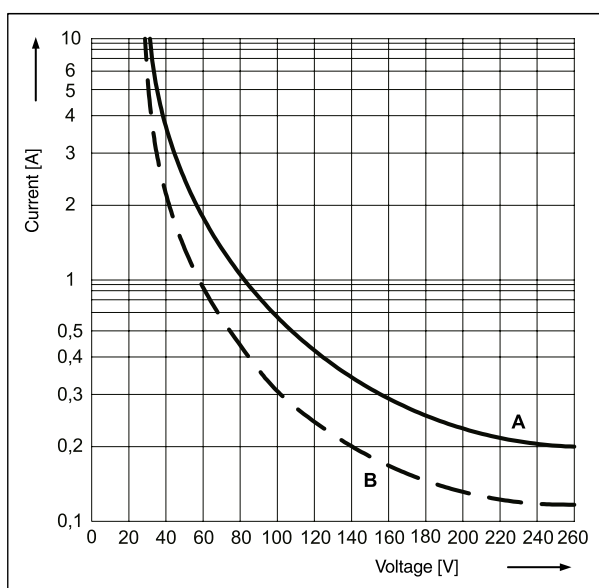
Electrical life reduction factor at AC inductive load

Fig. 2

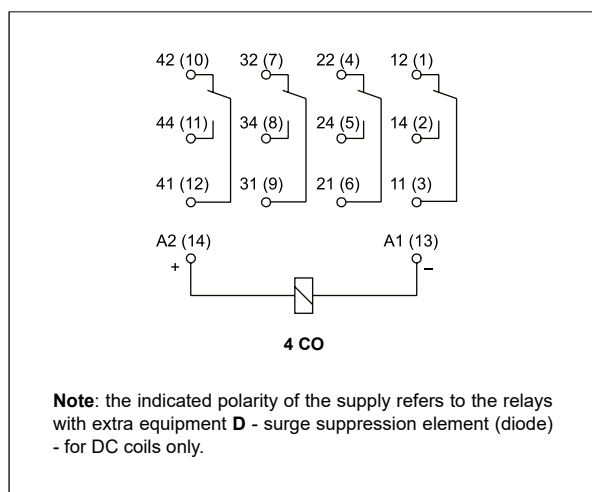


Max. DC breaking capacity
A - resistive load DC1
B - inductive load L/R = 40 ms

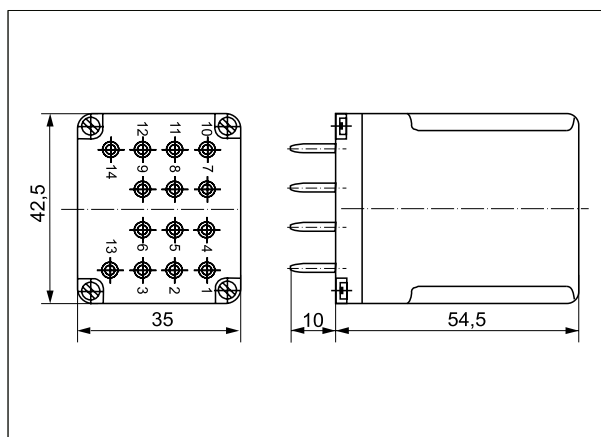
Fig. 3



Connection diagram (pin side view)



Dimensions



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 70 °C)
1006	6	28	$\pm 10\%$	4,8	6,6
1012	12	110	$\pm 10\%$	9,6	13,2
1024	24	430	$\pm 10\%$	19,2	26,4
1048	48	1 750	$\pm 10\%$	38,4	52,8
1060	60	2 700	$\pm 10\%$	48,0	66,0
1110	110	9 200	$\pm 10\%$	88,0	121,0
1120	120	11 000	$\pm 10\%$	96,0	132,0
1220	220	37 000	$\pm 10\%$	176,0	242,0

The data in bold type relate 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	$\pm 15\%$	4,8	6,6
3012	12	20	$\pm 15\%$	9,6	13,2
3024	24	72	$\pm 15\%$	19,2	26,4
3048	48	360	$\pm 15\%$	38,4	52,8
3060	60	520	$\pm 15\%$	48,0	66,0
3115	115	2 100	$\pm 15\%$	92,0	126,5
3120	120	2 300	$\pm 15\%$	96,0	132,0
3220	220	7 000	$\pm 15\%$	176,0	242,0
3230	230	7 900	$\pm 15\%$	184,0	253,0
3240	240	8 300	$\pm 15\%$	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	$\pm 15\%$	4,8	6,6
6012	12	17	$\pm 15\%$	9,6	13,2
6024	24	65	$\pm 15\%$	19,2	26,4
6048	48	310	$\pm 15\%$	38,4	52,8
6060	60	490	$\pm 15\%$	48,0	66,0
6110	110	1 760	$\pm 15\%$	88,0	121,0
6120	120	2 000	$\pm 15\%$	96,0	132,0
6220	220	6 900	$\pm 15\%$	176,0	242,0
6230	230	7 000	$\pm 15\%$	184,0	253,0
6240	240	7 100	$\pm 15\%$	192,0	264,0

R15 - 4 CO

industrial relays of small dimensions

Mounting

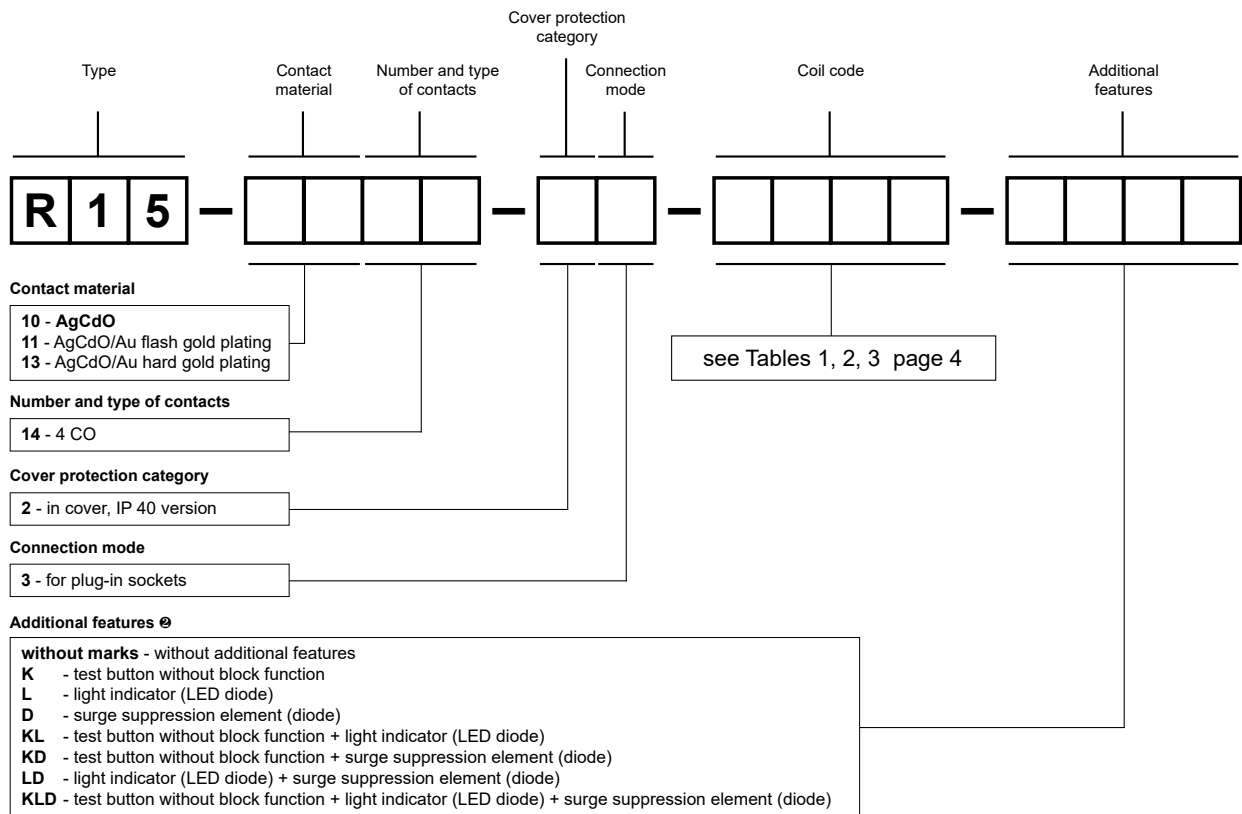
Relays **R15 4 - CO** are designed for: • screw terminals plug-in sockets **GZ14U** with clip **GZ14 0737**, 35 mm rail mount acc. to PN-EN 60715 • screw terminals plug-in sockets **GZ14** with clip **GZ14 0737**, on panel mounting with two M3 screws • screw terminals plug-in sockets **GZ14Z** with clip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

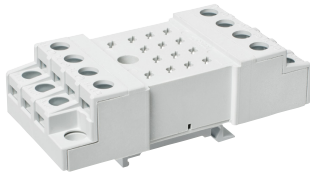
relay **R15**, for plug-in sockets, four changeover contacts, contact material AgCdO/Au flash gold plating, coil voltage 230 V AC 50 Hz, with test button without block function and light indicator (LED diode), in cover IP 40

Plug-in sockets and accessories

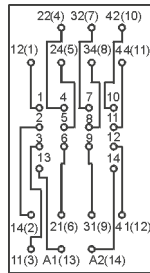
GZ14U

For R15 - 4 CO

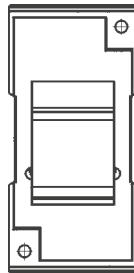
Screw terminals
Max. tightening moment
for the terminal: 0,7 Nm
35 mm rail mount
acc. to PN-EN 60715
96,8 x 46,4 x 33,3 mm
Four poles
10 A, 250 V AC



Connection diagram

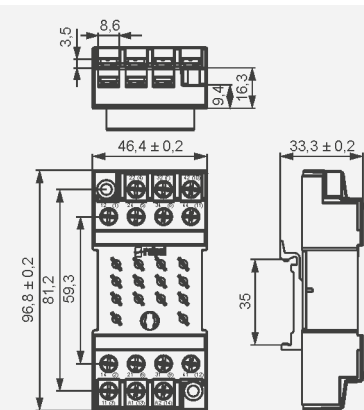


Adaptor



GZ14 0737

Dimensions



Accessories

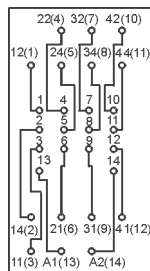
GZ14

For R15 - 4 CO

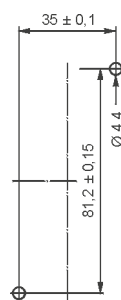
Screw terminals
Max. tightening moment
for the terminal: 0,7 Nm
On panel mounting
96,8 x 46,4 x 24,5 mm
Four poles
10 A, 250 V AC



Connection diagram

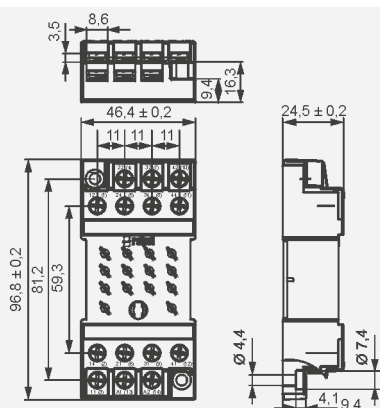


Mounting dimensions



GZ14 0737

Dimensions



Accessories

GZ14U

Screw terminals
plug-in sockets
for R15 - 4 CO



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

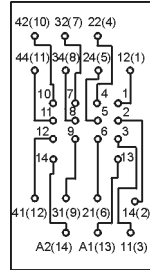
92,2 x 46 x 23 mm

Four poles

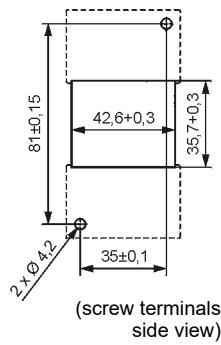
10 A, 250 V AC



Connection diagram



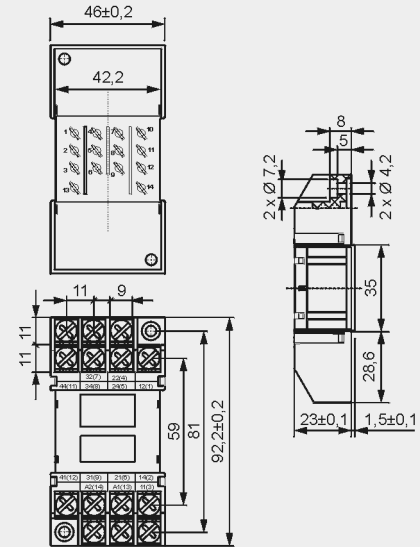
Mounting dimensions



GZ14 0737

Accessories

Dimensions



GOP14

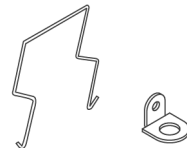
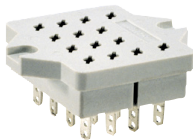
For R15 - 4 CO

Solder terminals

50 x 42 x 23 mm

Four poles

10 A, 250 V AC

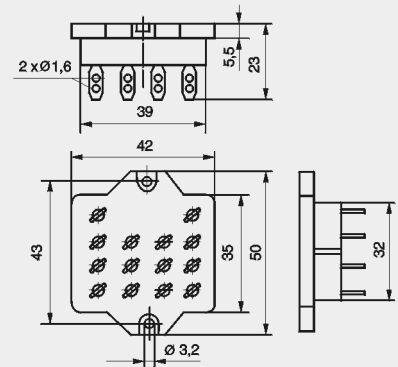


R15 0736

R15 5922

Accessories

Dimensions



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.