






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 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 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	
Overtoltage 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)	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.

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	$\pm 10\%$	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 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	$\pm 15\%$	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

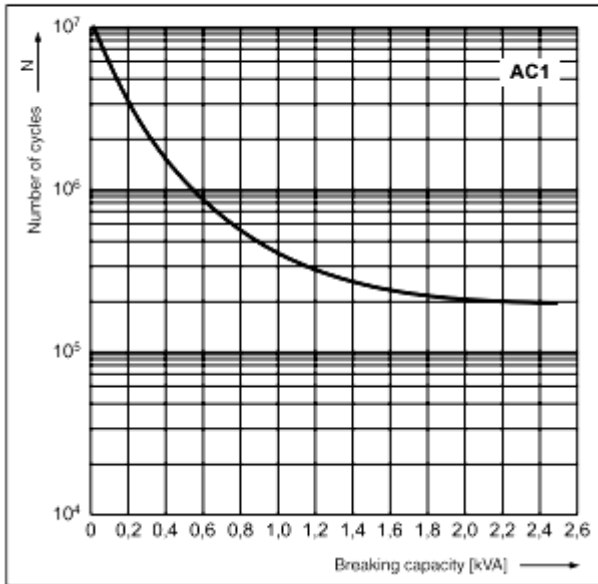
Coil data - AC 60 Hz voltage version, special

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

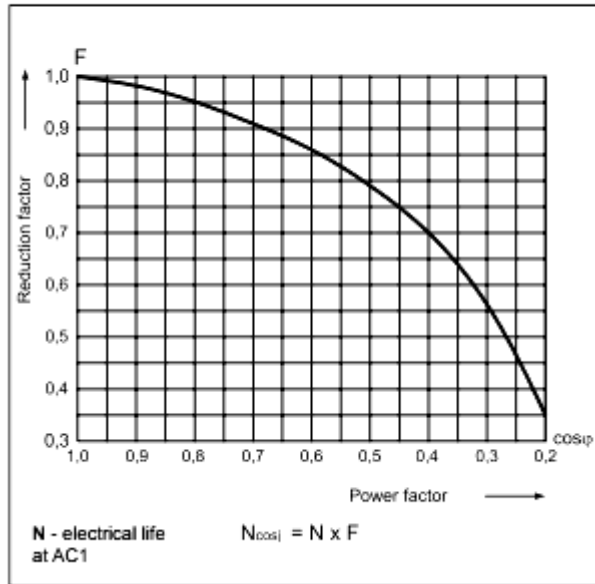
Electrical life at AC resistive load.
Switching frequency: 1 200 cycles/hour

Fig. 1



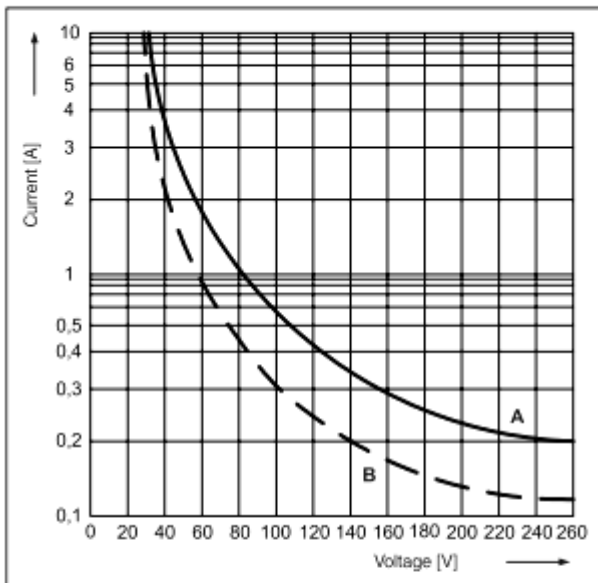
Electrical life reduction factor at AC inductive load

Fig. 2

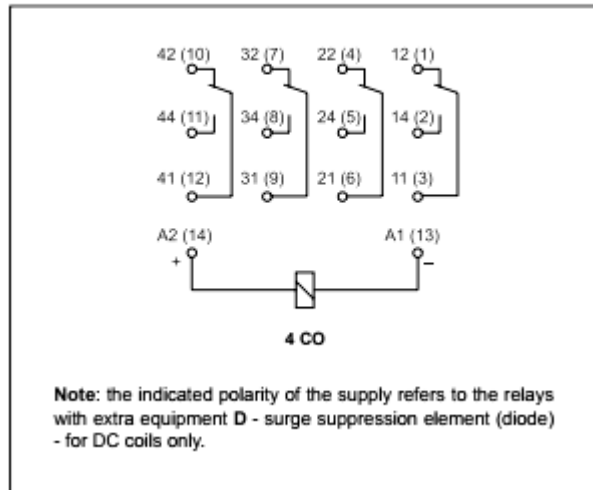


Max. DC breaking capacity
A - resistive load DC1
B - inductive load L/R = 40 ms

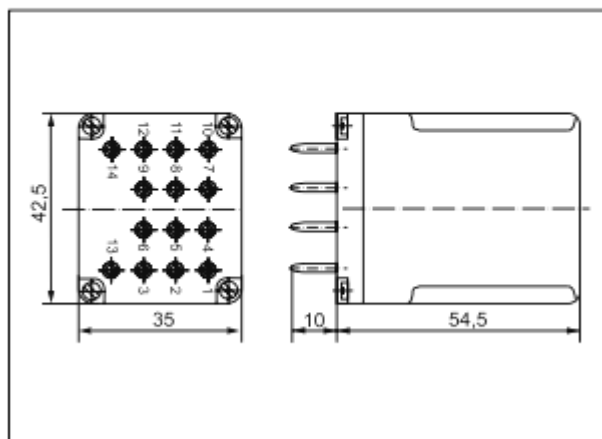
Fig. 3



Connection diagram (pin side view)



Dimensions



Mounting

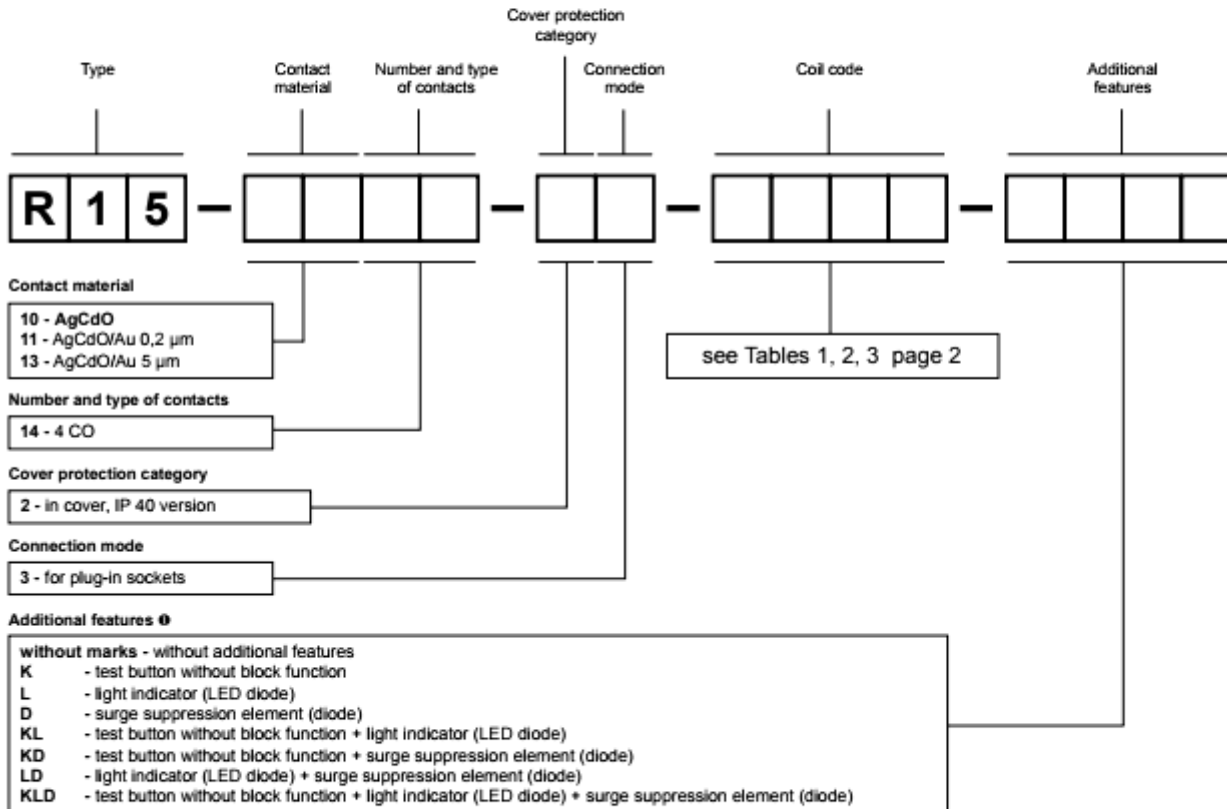
Relays **R15 4 - CO** are designed for: • screw terminals plug-in sockets **GZ14U** with clip **GZ14 0737**, 35 mm rail mount acc. to PN-EN 60715 • screw terminals plug-in sockets **GZ14** with clip **GZ14 0737**, on panel mounting with two M3 screws • screw terminals plug-in sockets **GZ14Z** with clip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