

- R15 2C/O, R15 3C/O - WT standard plug-in version with indicating flag and manual testing/latching lever
- Cadmium - free contacts available
- Wide range of accessories
- Current coil version available on request
- Maritime and rail-way version available
- Plug-in, solder, PCB, connector mounting

Contacts

Contact number & arrangement	2C/O, 3C/O, 4C/O
Contact material	2C/O, 3C/O: AgCdO; AgNi; AgNi/Au 0,2 µm; AgNi/Au 5 µm 4C/O: AgCdO; AgCdO/Au 0,2 µm; AgCdO/Au 5 µm
Voltage	
Max. switching voltage AC/DC	250 V / 250 V
Min. switching voltage	5 V (AgNi/Au 5 µm, AgCdO/Au 5 µm) 5 V (AgNi, AgNi/Au 0,2 µm) 10 V (AgCdO, AgCdO/Au 0,2 µm)
Current	
Rated load	AC1 DC1 10 A / 250 V AC 10 A / 24 V DC
Min. switching current	2 mA (AgNi/Au 5 µm, AgCdO/Au 5 µm) 5 mA (AgNi, AgNi/Au 0,2 µm) 10 mA (AgCdO, AgCdO/Au 0,2 µm)
Max. inrush current	20 A
Rated current	10 A
Max. breaking capacity	AC1 2 500 VA
Min. breaking capacity	0,05 W (AgNi/Au 5 µm, AgCdO/Au 5 µm) 0,3 W (AgNi, AgNi/Au 0,2 µm) 0,5 W (AgCdO, AgCdO/Au 0,2 µm)
Resistance	≤ 100 mΩ at 100 mA, 24 V
Max. operating frequency	AC1
• at rated load	1 200 cycles/hour
• no load	12 000 cycles/hour

Coil

Voltage	
Rated voltage	6...220 V DC 6...240 V AC 50 Hz, 50/60 Hz
Must release voltage	≥ 0,1 U _n DC; ≥ 0,15 U _n AC
Operating range of supply voltage	see Tables 1, 2, 3, 4
Rated power consumption	2,8 VA 50 Hz AC; 2,5 VA 60 Hz; 1,5 W DC

Insulation

Insulation category	C250
Voltage	
Insulation rated voltage	250 V AC
Dielectric strength	
• coil-contact	2 500 V AC
• contact-contact	1 500 V AC
• pole-pole	2 000 V AC
Contact-coil distance	
• clearance	2C/O, 3C/O, 4C/O: ≥ 3 mm
• creepage for	2C/O, 3C/O: ≥ 4,2 mm; 4C/O: ≥ 3,2 mm

General data

Operating time (typical value)	12 ms DC; 12 ms AC
Release time (typical value)	7 ms DC; 10 ms AC
Electrical life	
• resistive	≥ 2 x 10 ⁵ at 10 A, 250 V AC
• cos φ	see Fig. 2
Mechanical life (cycles)	≥ 2 x 10 ⁷
Dimensions (L x W x H)	2C/O, 3C/O: 35 x 35 x 54,4 mm 4C/O: 35 x 42,5 x 54,5 mm
Weight	2C/O, 3C/O: 83 g; 4C/O: 95 g
Ambient temperature	
• storing	-40...+85 °C
• operating	DC: -40...+70 °C; AC: -40...+55 °C
Cover protection category	IP 40
Shock resistance	10 g
Vibration resistance	5 g for 10...150 Hz
Solder bath temperature	max. 270 °C
Soldering time	max. 5 s
Approvals	B, UL, CSA, SEV, EZU, VDE, GOST

Coil data - DC version

Table 1

Coil code	Rated voltage U_n V DC	Coil resistance ($\pm 10\%$) at 20 °C Ω	Coil operating range V DC	
			min. (at 20 °C)	max. (at 55 °C)
1006	6	28	4,8	6,6
1012	12	110	9,6	13,2
1024	24	430	19,2	26,4
1048	48	1 750	38,4	52,8
1060	60	2 700	48,0	66,0
1110	110	9 200	88,0	121,0
1120	120	11 000	96,0	132,0
1220	220	37 000	176,0	242,0

Coil data - AC 50 Hz version

Table 2

Coil code	Rated voltage U_n V AC	Coil resistance ($\pm 15\%$) at 20 °C Ω	Coil operating range V AC	
			min. (at 20 °C)	max. (at 55 °C)
3006	6	5,3	4,8	6,6
3012	12	20,0	9,6	13,2
3024 for 2C/O, 3C/O	24	88,0	19,2	26,4
3024 for 4C/O	24	72,0	19,2	26,4
3048	48	360,0	38,4	52,8
3060	60	520,0	48,0	66,0
3110	110	2 000,0	88,0	121,0
3120	120	2 300,0	96,0	132,0
3220 for 2C/O, 3C/O	220	7 200,0	176,0	242,0
3220 for 4C/O	220	7 000,0	176,0	242,0
3230	230	7 900,0	184,0	253,0
3240	240	8 300,0	192,0	264,0

Coil data - AC 50/60 Hz version

Table 3

Coil code	Rated voltage U_n V AC	Coil resistance ($\pm 15\%$) at 20 °C Ω	Coil operating range V AC	
			min. (at 20 °C)	max. (at 55 °C)
5006	6	4,3	4,8	6,6
5012	12	18,5	9,6	13,2
5024	24	75,0	19,2	26,4
5048	48	305,0	38,4	52,8
5060	60	475,0	48,0	66,0
5110	110	1 700,0	88,0	121,0
5120	120	1 910,0	96,0	132,0
5220	220	6 980,0	176,0	242,0
5230	230	7 080,0	184,0	253,0
5240	240	7 760,0	192,0	264,0

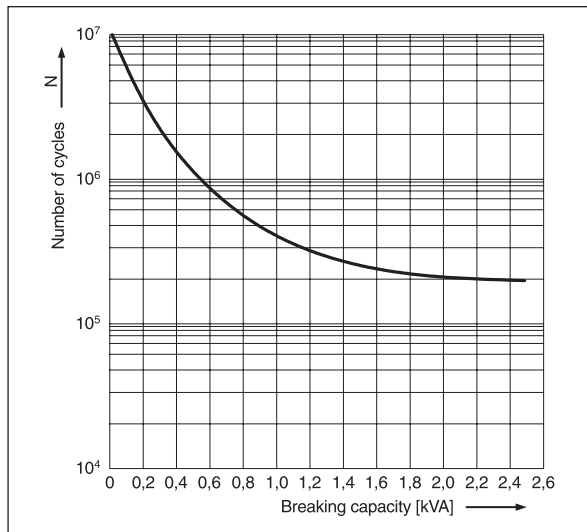
Coil data - AC 60 Hz version

Table 4

Coil code	Rated voltage U_n V AC	Coil resistance ($\pm 15\%$) at 20 °C	Coil operating range V AC	
			min. (at 20 °C)	max. (at 55 °C)
6006	6	4,8	4,8	6,6
6012	12	17,0	9,6	13,2
6024	24	75,0	19,2	26,4
6048	48	310,0	38,4	52,8
6060	60	490,0	48,0	66,0
6110	110	1 760,0	88,0	121,0
6120	120	2 000,0	96,0	132,0
6220	220	6 900,0	176,0	242,0
6230	230	7 000,0	184,0	253,0
6240	240	7 100,0	192,0	264,0

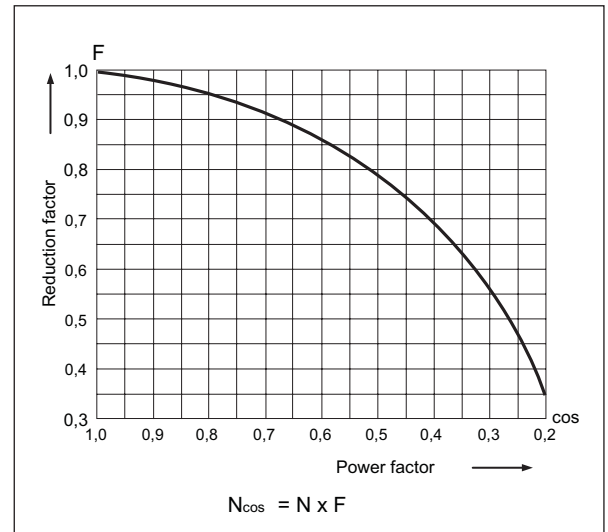
Electrical life at AC resistive load

Fig. 1



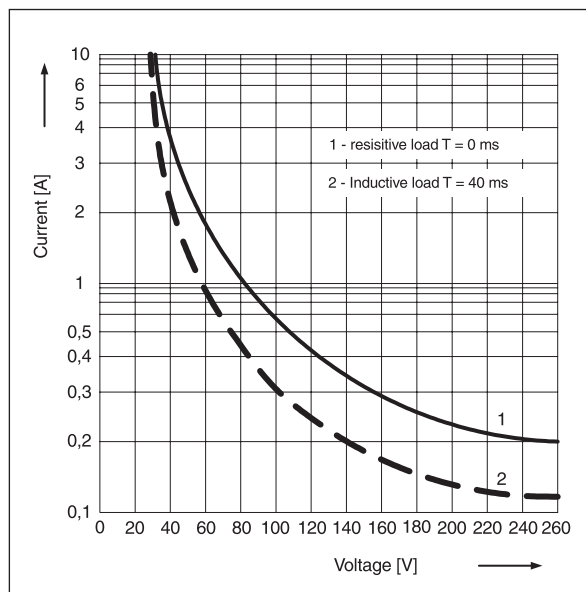
Electrical life reduction factor at AC inductive load

Fig. 2



Max. DC load breaking capacity

Fig. 3



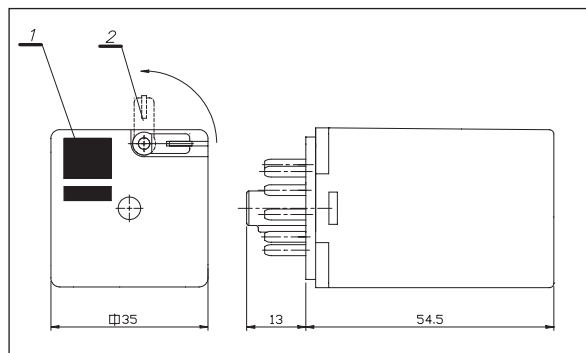
Mounting

Relays **R15** are designed for:

- screw terminals sockets:
R15 2P: PZ8, GZU8, GZ8
R15 3P: PS11, PZ11, GZU11, GZ11
R15 4P: GZ14U, GZ14
- solder terminals sockets:
R15 2P: GOP8
R15 3P: GOP11
R15 4P: GOP14
- direct PCB mounting:
R15 2P, R15 3P.

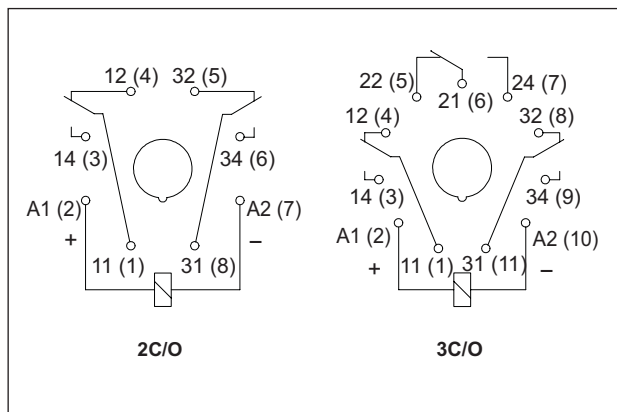
R15 2C/O, R15 3C/O

Dimensions - WT version

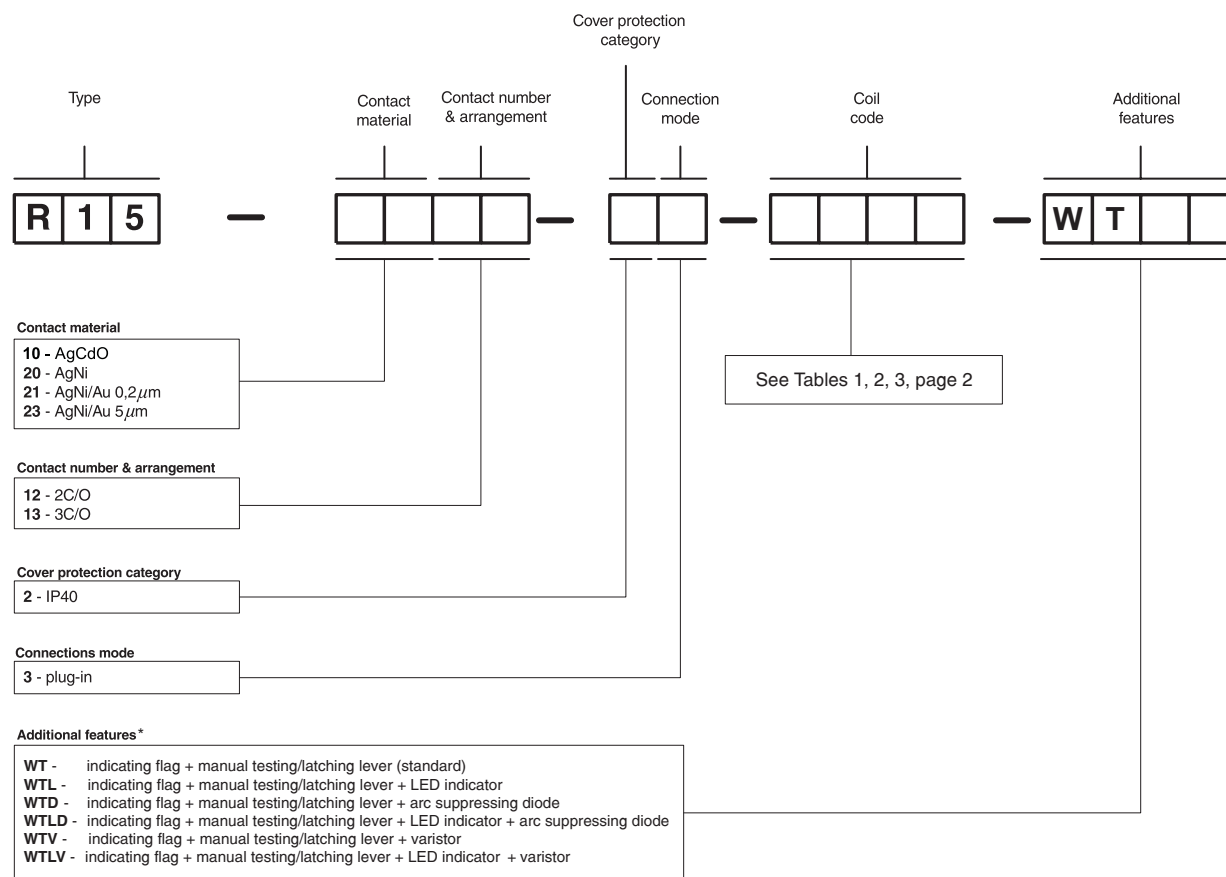


- 1 - indicating flag
2 - manual testing/latching lever

Connections diagram (pin side view)



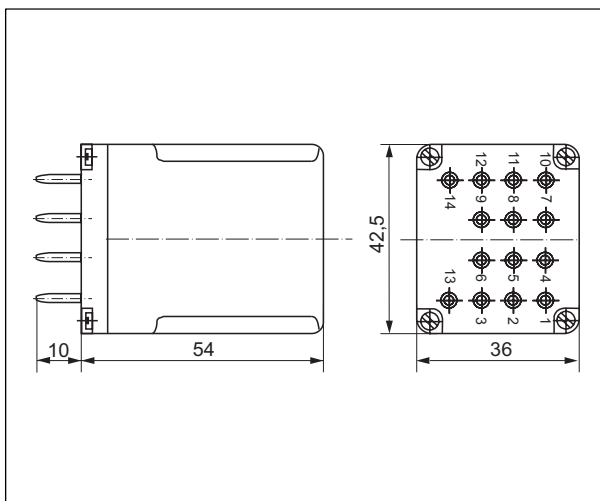
Ordering codes



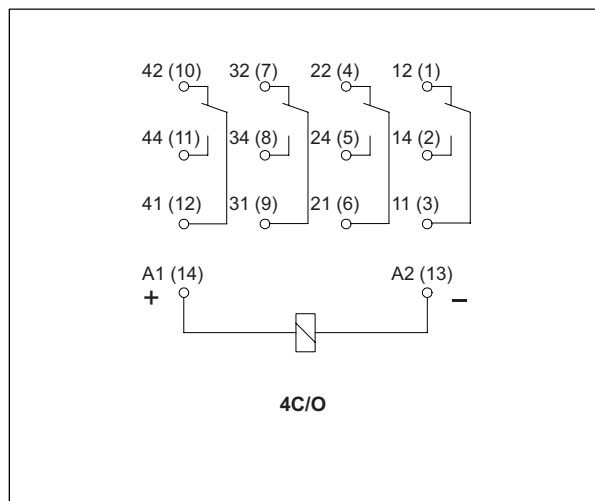
* **WTD, WTL D** - only DC coils
WTV, WTL V - only AC coils

R15 4C/O

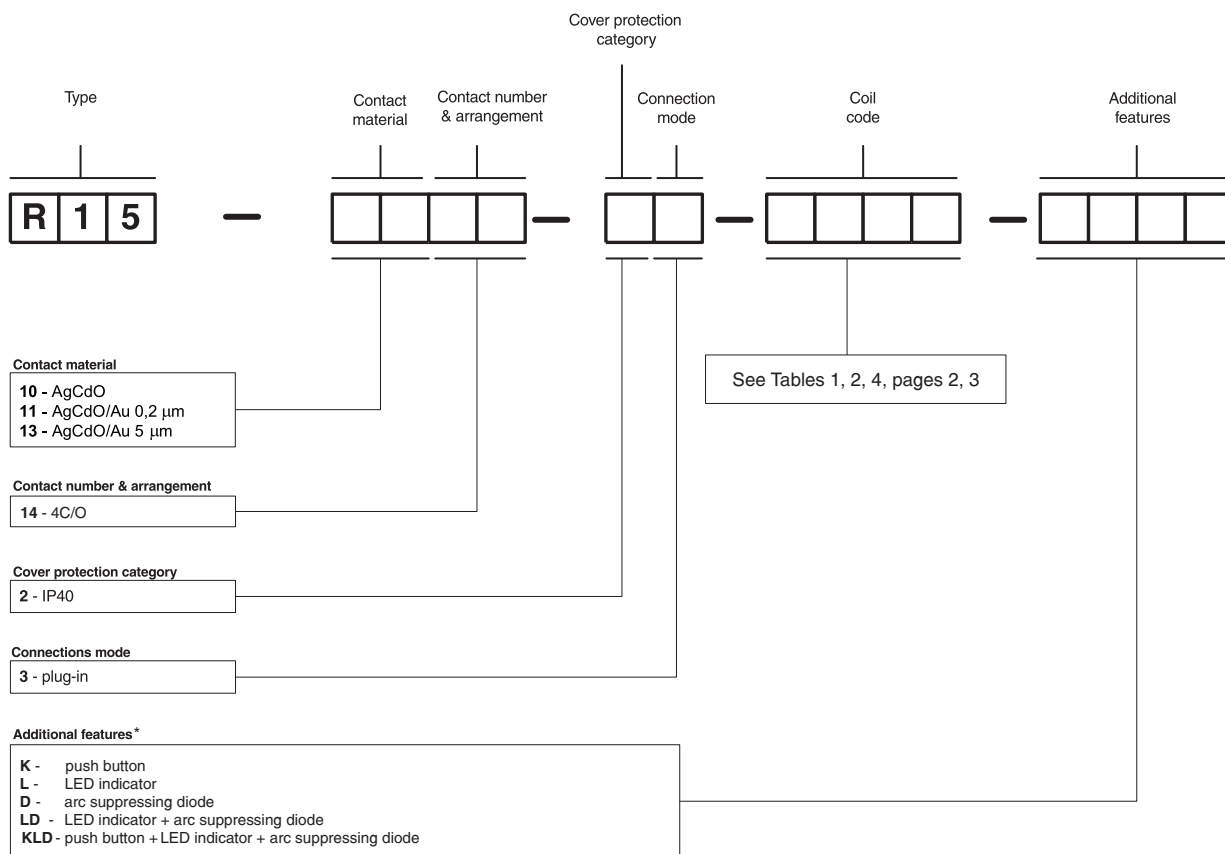
Dimensions



Connections diagram (pin side view)



Ordering codes



* D, LD, KLD - only DC coils