

- 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
<b>Voltage</b>		
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)
<b>Current</b>		
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
<b>Max. operating frequency</b>	AC1	1 200 cycles/hour 12 000 cycles/hour
• at rated load		
• no load		

### Coil

<b>Voltage</b>		
Rated voltage		6...220 V DC 6...240 V AC 50 Hz, 50/60 Hz
Must release voltage		≥ 0,1 U <sub>n</sub> DC; ≥ 0,15 U <sub>n</sub> 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
<b>Voltage</b>		
Insulation rated voltage		250 V AC
Dielectric strength		2 500 V AC
• coil-contact		1 500 V AC
• contact-contact		2 000 V AC
• pole-pole		
<b>Contact-coil distance</b>		
• 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
<b>Electrical life</b>		
• resistive		≥ 2 x 10 <sup>5</sup> at 10 A, 250 V AC
• cos φ		see Fig. 2
Mechanical life (cycles)		≥ 2 x 10 <sup>7</sup>
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
<b>Ambient temperature</b>		
• 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 $\Omega$	Coil operating range V DC	
			min. (at 20 °C)	max. (at 55 °C)
<b>1006</b>	6	28	4,8	6,6
<b>1012</b>	12	110	9,6	13,2
<b>1024</b>	24	430	19,2	26,4
<b>1048</b>	48	1 750	38,4	52,8
<b>1060</b>	60	2 700	48,0	66,0
<b>1110</b>	110	9 200	88,0	121,0
<b>1120</b>	120	11 000	96,0	132,0
<b>1220</b>	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 $\Omega$	Coil operating range V AC	
			min. (at 20 °C)	max. (at 55 °C)
<b>3006</b>	6	5,3	4,8	6,6
<b>3012</b>	12	20,0	9,6	13,2
<b>3024</b> for 2C/O, 3C/O	24	88,0	19,2	26,4
<b>3024</b> for 4C/O	24	72,0	19,2	26,4
<b>3048</b>	48	360,0	38,4	52,8
<b>3060</b>	60	520,0	48,0	66,0
<b>3110</b>	110	2 000,0	88,0	121,0
<b>3120</b>	120	2 300,0	96,0	132,0
<b>3220</b> for 2C/O, 3C/O	220	7 200,0	176,0	242,0
<b>3220</b> for 4C/O	220	7 000,0	176,0	242,0
<b>3230</b>	230	7 900,0	184,0	253,0
<b>3240</b>	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 $\Omega$	Coil operating range V AC	
			min. (at 20 °C)	max. (at 55 °C)
<b>5006</b>	6	4,3	4,8	6,6
<b>5012</b>	12	18,5	9,6	13,2
<b>5024</b>	24	75,0	19,2	26,4
<b>5048</b>	48	305,0	38,4	52,8
<b>5060</b>	60	475,0	48,0	66,0
<b>5110</b>	110	1 700,0	88,0	121,0
<b>5120</b>	120	1 910,0	96,0	132,0
<b>5220</b>	220	6 980,0	176,0	242,0
<b>5230</b>	230	7 080,0	184,0	253,0
<b>5240</b>	240	7 760,0	192,0	264,0

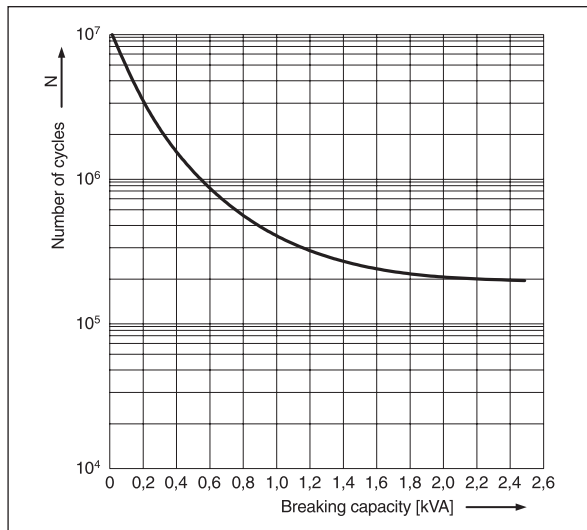
Coil data - AC 60 Hz version

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

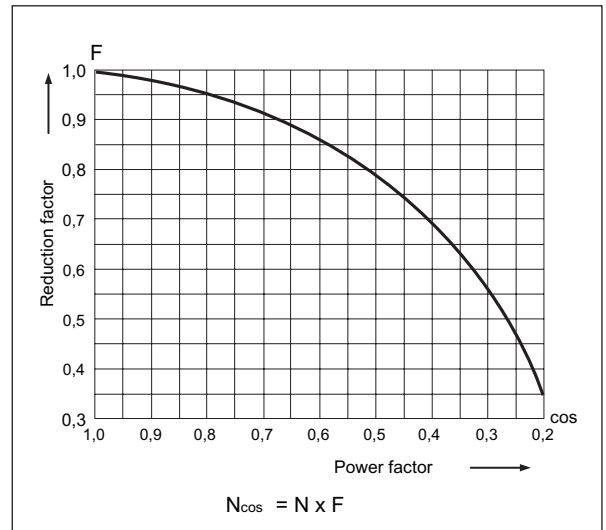
Electrical life at AC resistive load

Fig. 1



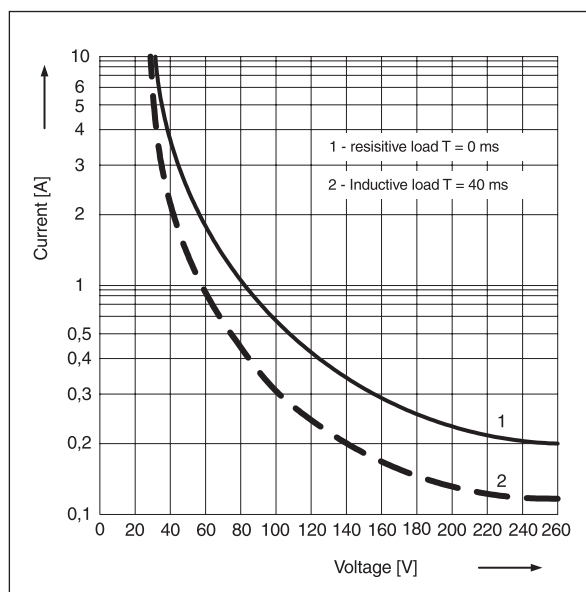
Electrical life reduction factor at AC inductive load

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

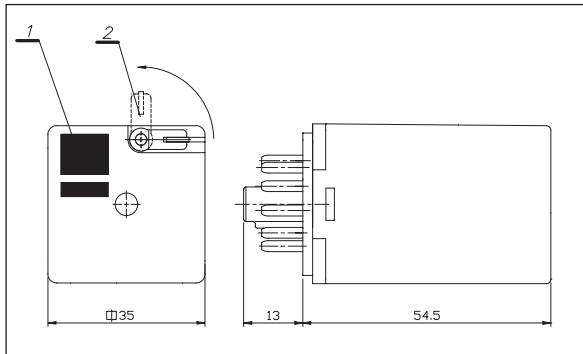
R15 4P: GOP14

• direct PCB mounting:

R15 2P, R15 3P.

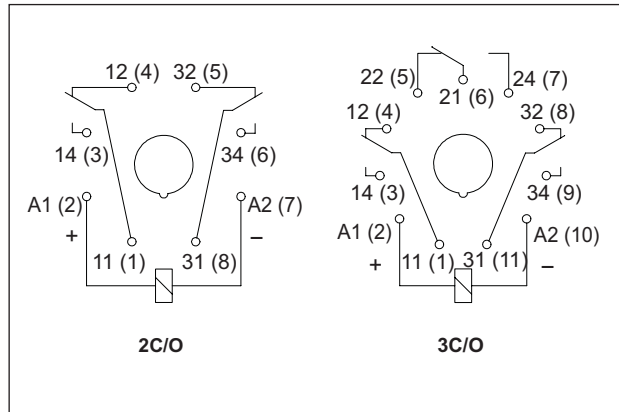
R15 2C/O, R15 3C/O

Dimensions - WT version

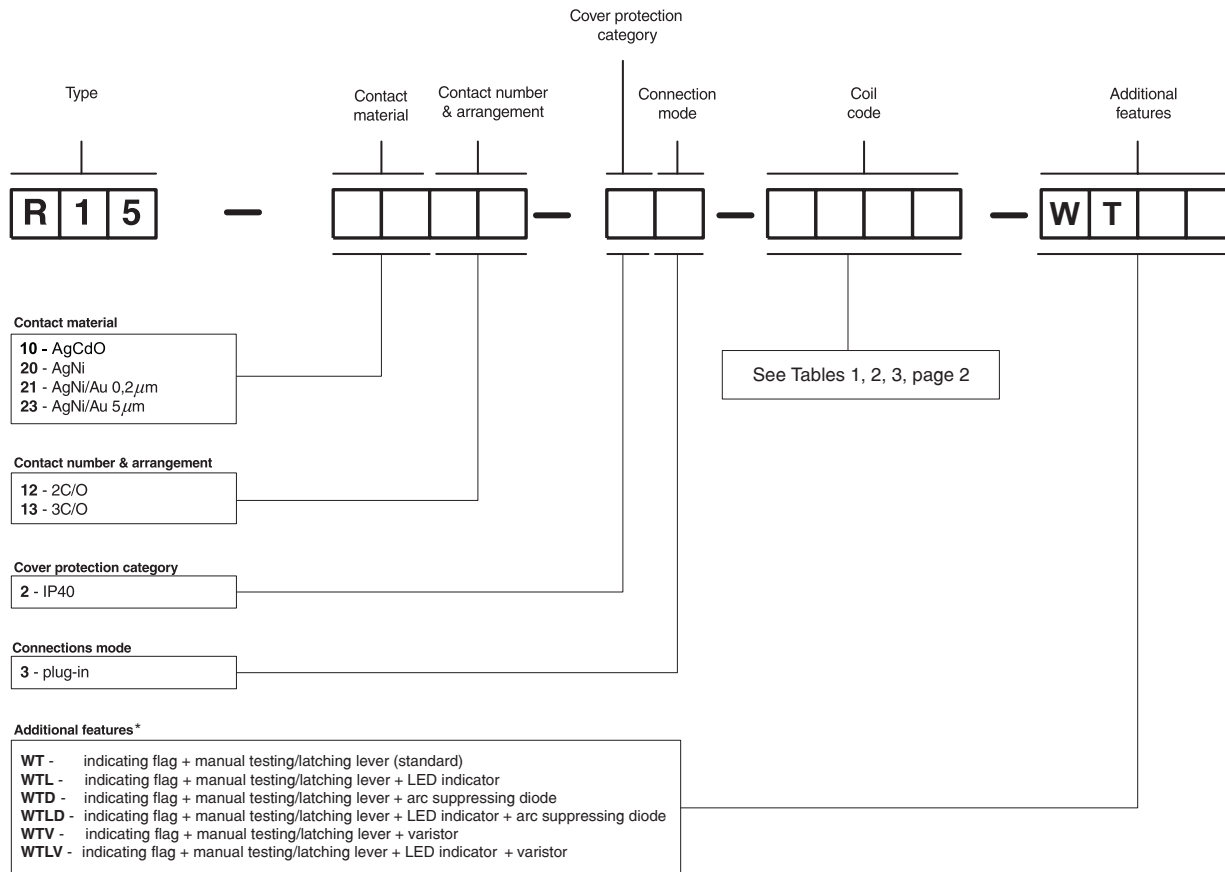


1 - indicating flag  
2 - manual testing/latching lever

Connections diagram (pin side view)



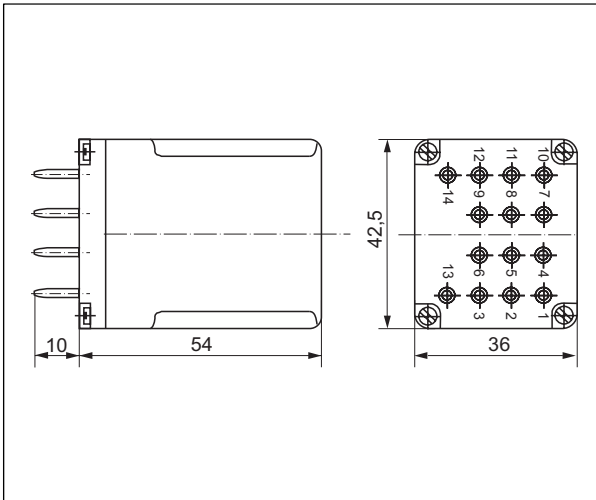
Ordering codes



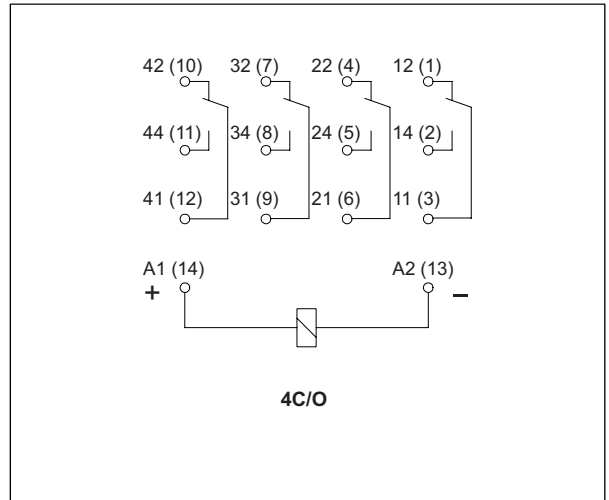
\* WTD, WTL D - only DC coils  
WTV, WTLV - only AC coils

R15 4C/O

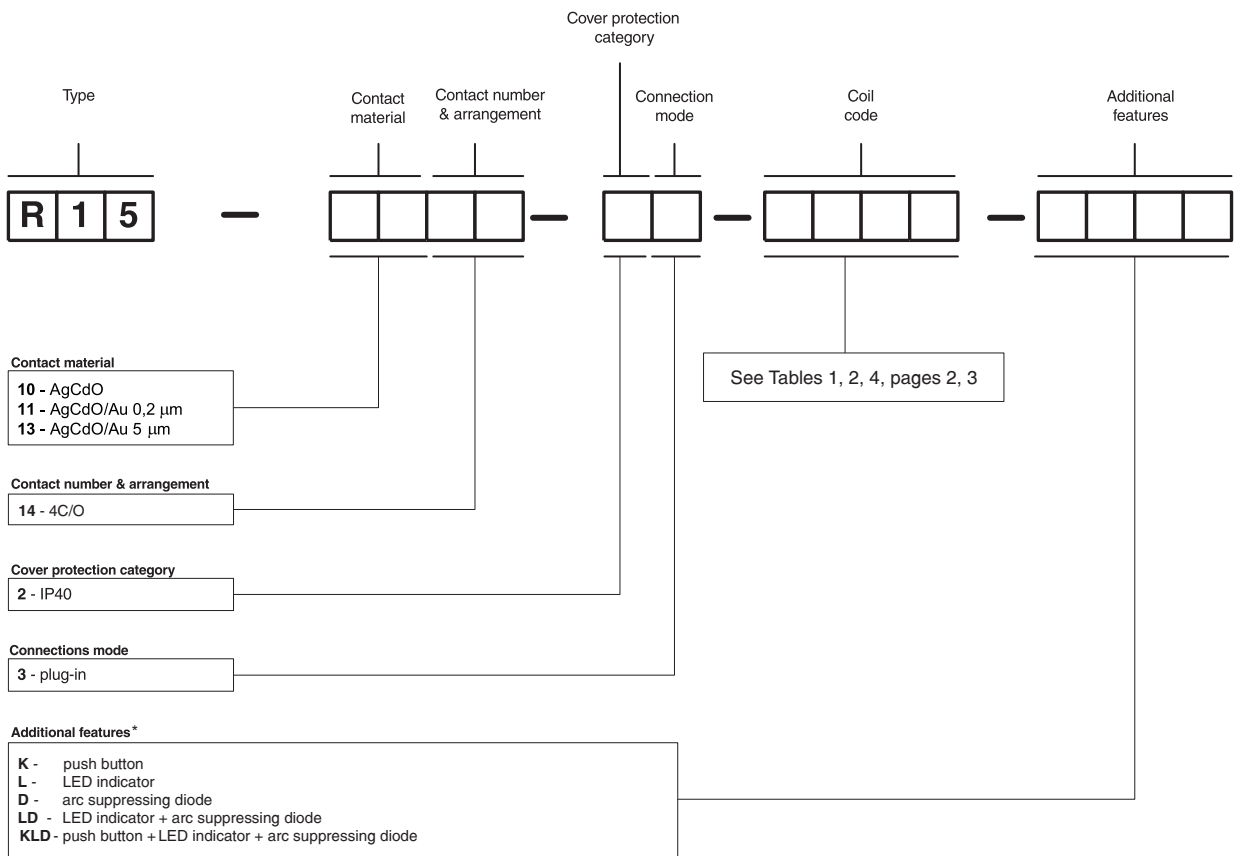
Dimensions



Connections diagram (pin side view)



Ordering codes



\* D, LD, KLD - only DC coils