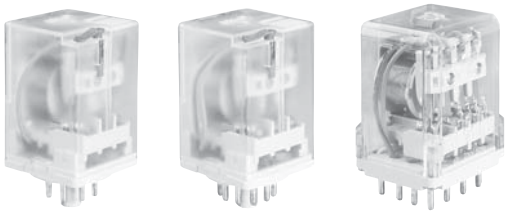


- Standard versions with push button and latching lever (WT), 2C/O and 3 C/O, plug-in relays DC and AC coils available
- Cadmium free contacts
- General purpose relays
- **Have obtained The Lloyd's Certificate „Register of shipping" - R15...WT 2C/O, R15...WT 3C/O**

Contacts

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

Coil

Rated voltage	2C/O, 3C/O: AC: 6...240 V 50/60 Hz, 4C/O: AC: 6...240 V 50 Hz	DC: 6...220 V
Must release voltage	AC: ≥ 0,15 U_n	DC: ≥ 0,1 U_n
Operating range of supply voltage	see Table 1, 2, 3, 4	
Rated power consumption	AC: 2,8 VA 50 Hz 2,5 VA 60 Hz	DC: 1,5 W

Insulation

Insulation category	2C/O, 3C/O: C250	4C/O: B250
Insulation rated voltage	250 V AC	
Dielectric strength • coil - contact • contact - contact • pole - pole	 2 500 V AC 1 500 V AC 2 000 V AC	
Contact - coil distance • clearance • creepage	 2C/O, 3C/O, 4C/O: ≥ 3 mm 2C/O, 3C/O: ≥ 4,2 mm, 4C/O: ≥ 3,2 mm	

General data

Operating time (typical value)	AC: 12 ms	DC: 18 ms
Release time (typical value)	AC: 10 ms	DC: 7 ms
Electrical life • resistive AC1 • cosϕ	 ≥ 2 x 10^5 10 A, 250 V AC 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 • operating	 -40...+85 °C AC: -40...+55 °C	 DC: -40...+70 °C
Cover protection category	IP 40	
Shock resistance	10 g	
Vibration resistance	5 g 10...150 Hz	
Solder bath temperature	max. 270 °C	
Soldering time	max. 5 s	

Standard contact material marked with bolt type.

Coil data - DC voltage version Table 1

Coil code	Rated voltage U_n V DC	Coil resistance ±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**

Standard coil rated voltages marked with bold type.

Coil data - AC 50/60 Hz voltage version (standard for R15 2C/O, R15 3C/O) Table 2

Coil code	Rated voltage U_n V AC	Coil resistance ±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

Standard coil rated voltages marked with bold type.

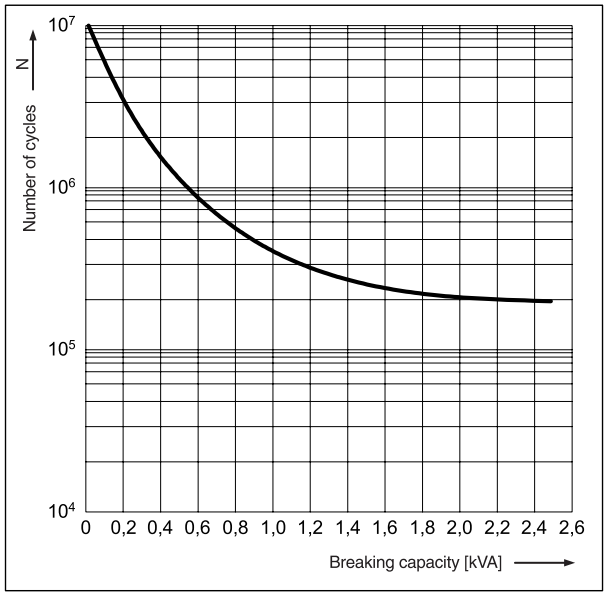
Coil data - AC 50 Hz voltage version (standard for R15 4C/O) Table 3

Coil code	Rated voltage U_n V AC	Coil resistance ±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	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	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

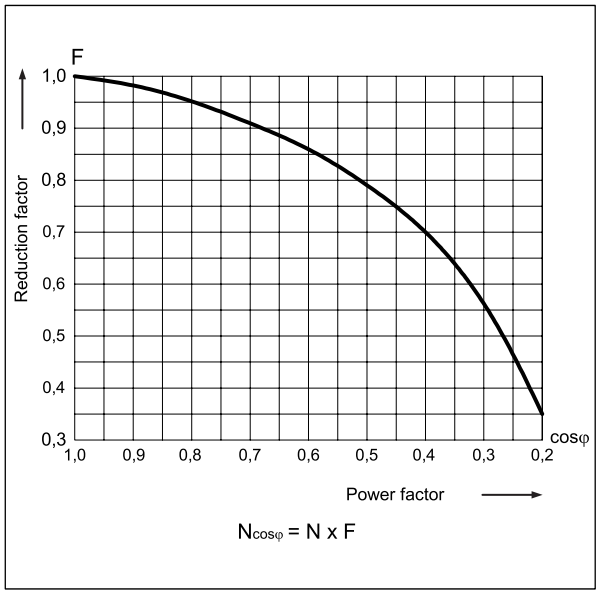
Coil data - AC 60 Hz voltage version (specjal for R15 4C/O) Table 4

Coil code	Rated voltage U_n V AC	Coil resistance ±15% at 20 °C Ω	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

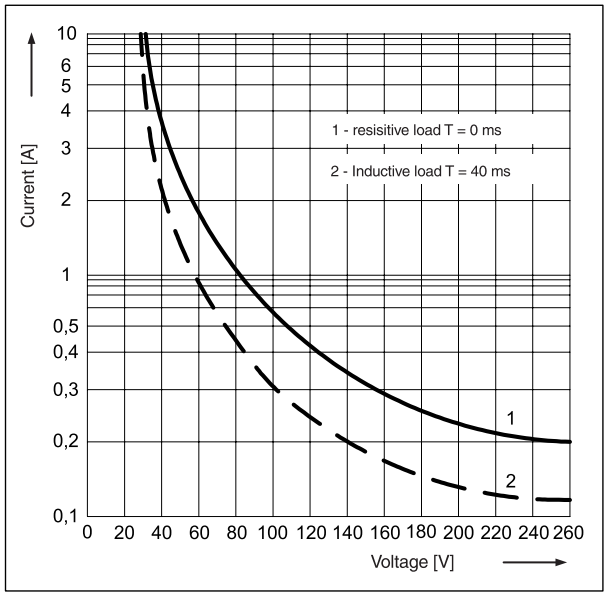
Electrical life at AC resistive load Fig. 1



Electrical life reduction factor at AC inductive load Fig. 2



Max. DC load breaking capacity Fig. 3



Mounting

Relays **R15 2C/O** are designed for: • screw terminals sockets **PZ8** with clip **PZ11 0031**, 35 mm DIN rail mount, EN 50022 or on panel mounting; **GZU8** with clip **GZU 1052**, 35 mm DIN rail mount, EN 50022; **GZ8** with clip **GZ 1050**, panel mounting • solder terminals sockets **GOP8** with clip **R159 1051** and spring clamp **R15 5922** • direct PCB mounting.

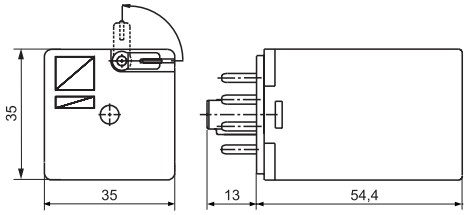
Relays **R15 3C/O** are designed for: • screw terminals sockets **PS11** and **PZ11** with clip **PZ11 0031**, 35 mm DIN rail mount, EN 50022 or on panel mounting; **GZU11** with clip **GZU 1052**, 35 mm DIN rail mount, EN 50022; **GZ11** with clip **GZ 1050**, panel mounting • solder terminals sockets **GOP11** with clip **R159 1051** and spring clamp **R15 5922** • direct PCB mounting.

Relays **R15 4C/O** are designed for: • screw terminals sockets **GZ14U** with clip **GZ14 0737**, 35 mm DIN rail mount, EN 50022; **GZ14** with clip **GZ14 0737**, panel mounting • solder terminals sockets **GOP14** with clip **R15 0736** and spring clamp **R15 5922**.

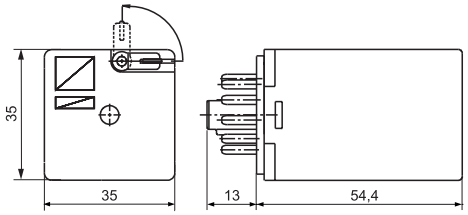
- **Have obtained The Lloyd's Certificate „Register of shipping"**
- Color of the button represents type of supply:
  - orange color - AC coil
  - green color - DC coil
- Relays may be provided with the P type test buttons as well as plugs instead for T type buttons - page 167

Dimensions - plug-in version (WT), with manual testing/latching lever type T

2C/O

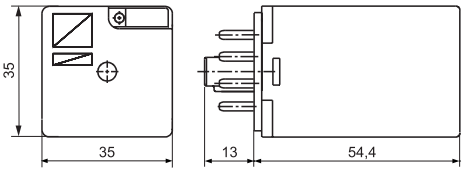


3C/O

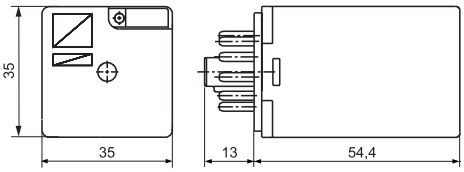


Dimensions - plug-in version (WT), with P type buttons and plugs or plugs

2C/O

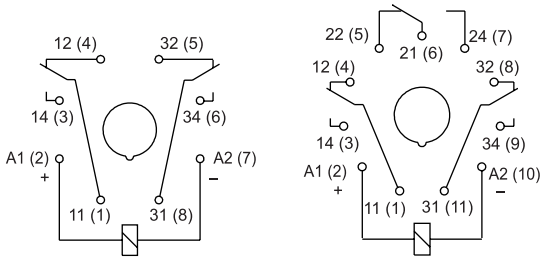


3C/O



P type buttons and plugs and plugs need to ordered saparately.
Exchange of the buttons is done by Customer.
Information on P type buttons and plugs and plugs on page 167.

Connections diagram (pin side view)



2C/O **3C/O**

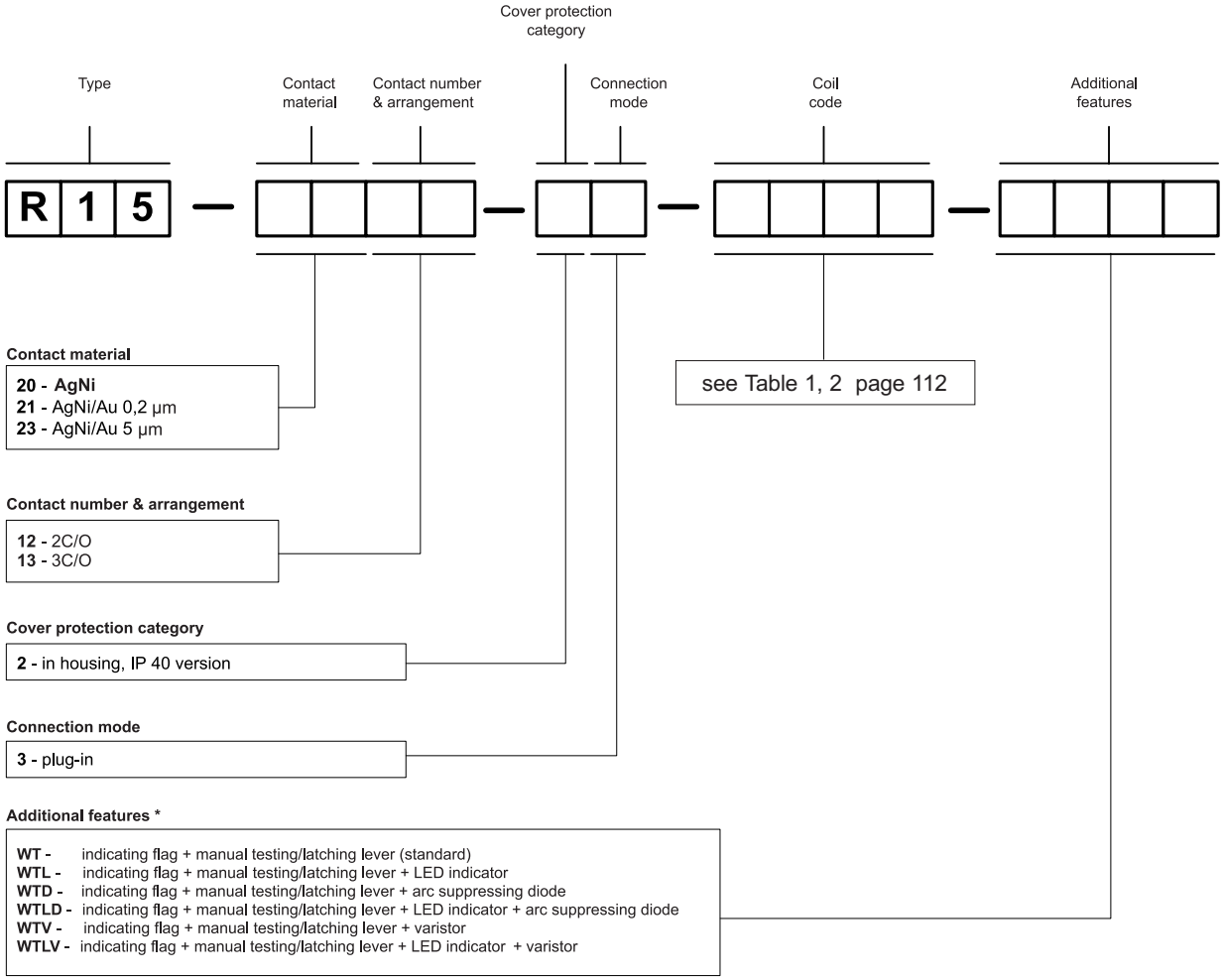
Note:
Mars "+" and "-" refer to versions with arc suppresing diode

Mounting

WT - flag indicator with test button, offer as standard option with plug-in, voltage versions of **R15 2C/O**, **R15 3C/O**; **W** - falg indicator of relay status; **T**- test button with latching function.

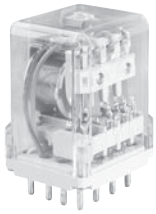
Customer may exchange T type button with P type button (no latching) or with plug (no mechanical operation). P type buttons and plugs and plugs need to ordered saparately.

Ordering codes - 2C/O, 3C/O for plug-in sockets

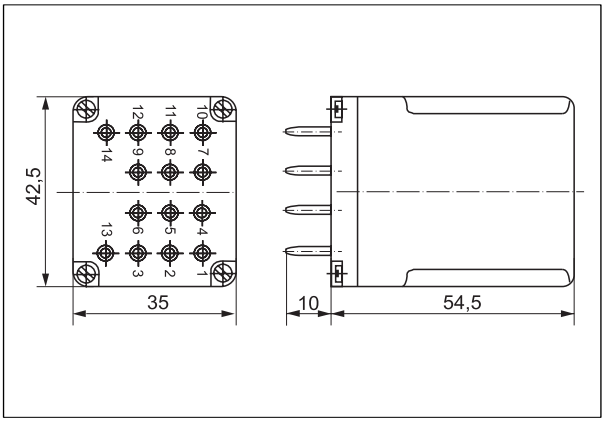


* **WT - standard features plug-in power relays**
WTD, WTLD - only for DC coils
WTV, WTLV - only for AC coils
P type buttons and plugs and plugs ordered separately for substition of T type button by Customers themselves:
- Button P R15WT AC - orange (coils AC)
- Button P R15WT DC - green (coils DC)
- Plug R15WT AC - orange (coils AC)
- Plug R15WT DC - green (coils DC)

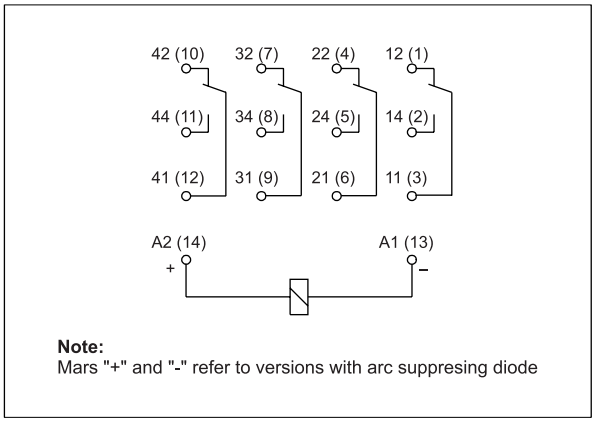
Information on P type buttons and plugs and plugs on page 167.



Dimensions



Connections diagram (pin side view)



Note:
Mars "+" and "-" refer to versions with arc suppresing diode

Ordering codes - 4C/O for plug-in sockets

Cover protection category

Type | Contact material | Contact number & arrangement | Connection mode | Coil code | Additional features

R 1 5 — — — — — — — —

Contact material

10 - AgCdO
11 - AgCdO/Au 0,2 µm
13 - AgCdO/Au 5 µm

see Table 1, 3, 4 page 112, 113

Contact number & arrangement

14 - 4C/O

Cover protection category

2 - in housing, IP 40 version

Connection mode

3 - plug-in

Additional features *

K - push button
L - LED indicator
D - arc suppressing diode
LD - LED indicator + arc suppressing diode
KLD - push button + LED indicator + arc suppressing diode

* D, LD, KLD - only for DC coils