- Height 16,2 mm • IP 40 and IP 67
- For PCB (1 C/O, 1 NO, 1 NC) and plug-in sockets (1 C/O)
- Accessories: sockets and modules for 1 C/O
- DC coils
- Recyclable packing
- Terminals: 3,2 mm for version 1 C/O,
  5,0 mm for version 1 NO and 1 NC
- Recognitions, certifications, directives: RoHS,

Contact data

Number and type of contacts		1 C/O, 1 NO, 1 NC
Contact material		**$AgSnO_2$**, $AgSnO_2$/Au 3 µm, AgCdO
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		10 V $AgSnO_2$, 5 V $AgSnO_2$/Au 3 µm, 10 V AgCdO
Rated load (capacity)	AC1	8 A / 250 V AC
	AC15	3 A / 120 V 1,5 A / 240 V (B300)
	AC3	370 W (single-phase motor, 1/2 HP / 250 V AC UL 508)
	DC1	8 A / 24 V DC (see Fig. 1)
	DC13	0,22 A / 120 V 0,1 A / 250 V (R300)
Min. switching current		10 mA $AgSnO_2$, 2 mA $AgSnO_2$/Au 3 µm, 5 mA AgCdO
Max. inrush current		15 A
Rated current		8 A
Max. breaking capacity	AC1	2 000 VA
Min. breaking capacity		1 W $AgSnO_2$, 0,05 W $AgSnO_2$/Au 3 µm, 0,5 W AgCdO
Contact resistance		≤ 100 mΩ
Max. operating frequency		
• at rated load	AC1	600 cycles/hour
• no load		72 000 cycles/hour

Coil data

Rated voltage	DC	5 ... 48 V
Must release voltage		DC: ≥ 0,1 U_n
Operating range of supply voltage		see Table 1
Rated power consumption	DC	0,22...0,3 W

Insulation according to PN-EN 60664-1

Insulation rated voltage	400 V AC
Rated surge voltage	4 000 V 1,2 / 50 µs
Overvoltage category	III
Insulation pollution degree	3
Dielectric strength	
• between coil and contacts	4 000 V AC type of insulation: reinforced
• contact clearance	1 000 V AC type of clearance: micro-disconnection
Contact - coil distance	
• clearance	≥ 8 mm
• creepage	≥ 8 mm

General data

Operating / release time (typical values)		10 ms / 5 ms
Electrical life		
• resistive AC1		> 10^5 8 A, 250 V AC
• cosϕ		see Fig. 3
Mechanical life (cycles)		> 2 x 10^7
Motor load according to UL 508		1/4 HP 120 V AC, single-phase motor
Dimensions (L x W x H)		1 C/O: 30 x 10 x 16,2 mm
		1 NO, 1 NC: 28 x 10 x 16,2 mm
Weight		11 g
Ambient temperature	• storage	-40...+85 °C
	• operating	-40...+80 °C
Cover protection category		IP 40 or **IP 67** PN-EN 60529
Environmental protection		RTII PN-EN 116000-3
Shock resistance		20 g
Vibration resistance		10 g 10...150 Hz
Solder bath temperature		max. 270 °C
Soldering time		max. 5 s

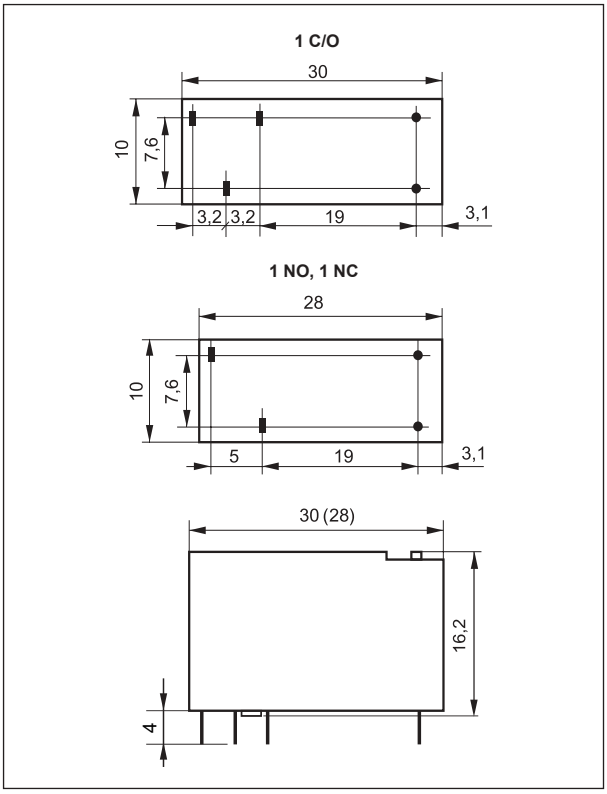
The data in bold type pertain to the standard versions of the relays.

Coil data - DC voltage version Table 1

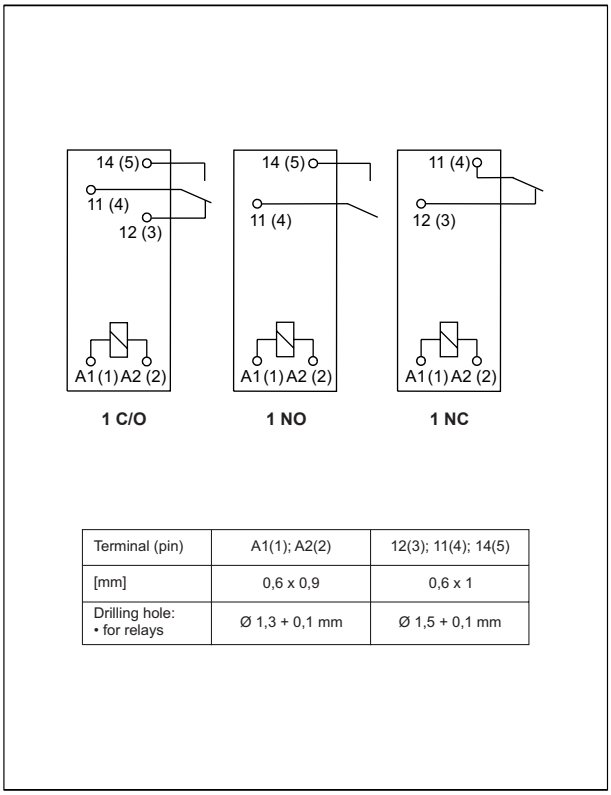
Coil code	Rated voltage V DC	Coil resistance ±10% at 20 °C Ω	Coil operating range at 20 °C V DC	
			min.	max.
1005	5	110	3,5	12,0
1006	6	160	4,2	14,5
1009	9	360	6,3	22,0
1012	**12**	**660**	**8,4**	**29,5**
1018	18	1 500	12,6	44,0
1024	**24**	**2 200**	**16,8**	**54,0**
1048	48	8 000	33,6	102,0

The data in bold type pertain to the standard versions of the relays.

Dimensions

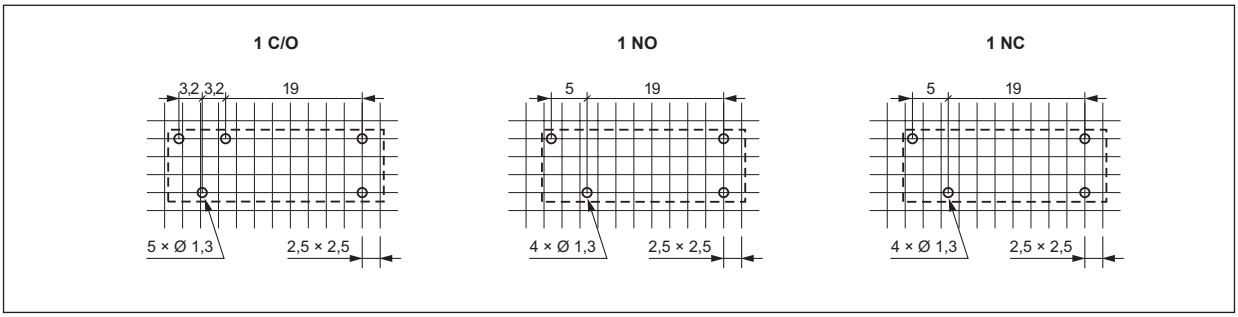


Connection diagrams (pin side view)



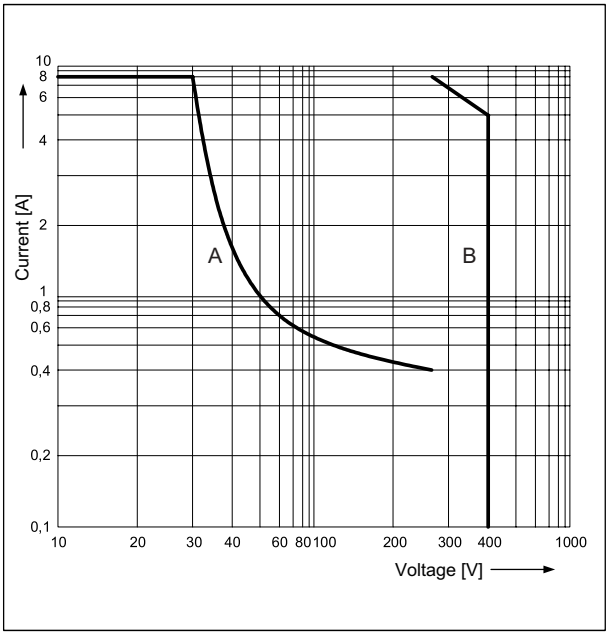
Terminal (pin)	A1(1); A2(2)	12(3); 11(4); 14(5)
[mm]	0,6 x 0,9	0,6 x 1
Drilling hole: • for relays	Ø 1,3 + 0,1 mm	Ø 1,5 + 0,1 mm

Pinout (solder side view)



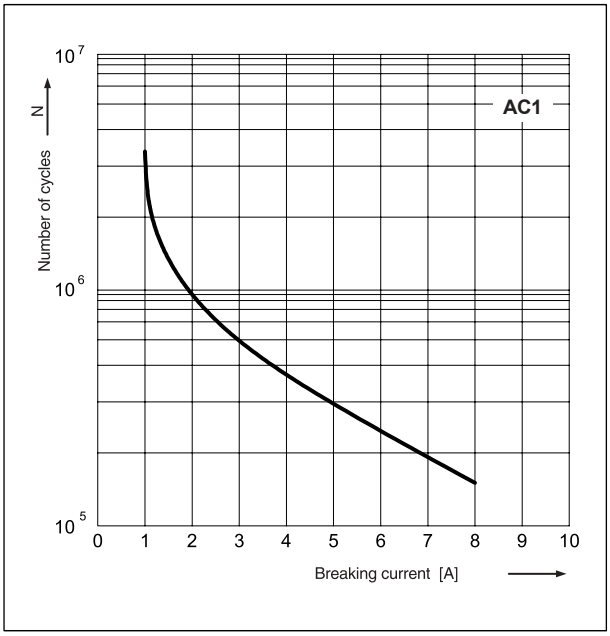
Max. breaking capacity
A - resistive load DC1
B - resistive load AC1

Fig. 1



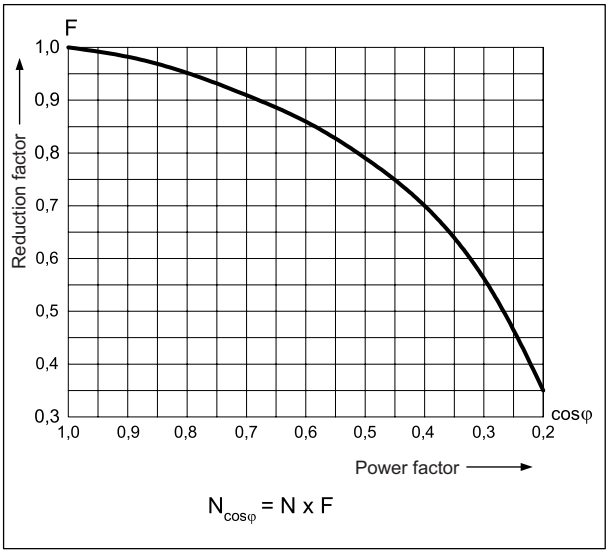
Electrical life at AC1 resistive load for version 1 NO

Fig. 2



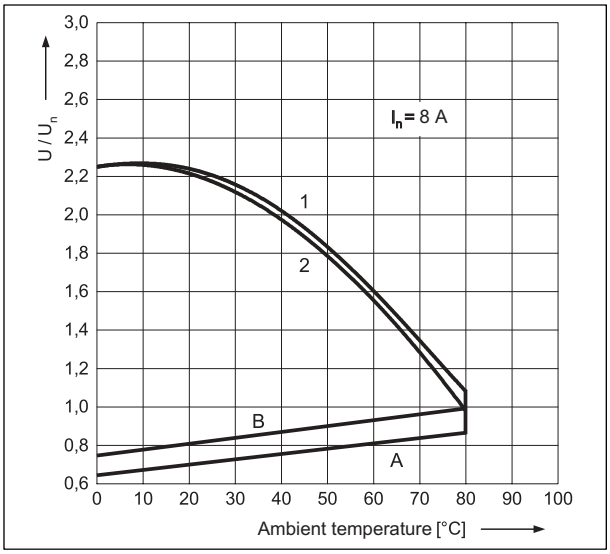
Electrical life reduction factor at AC inductive load

Fig. 3



Coil operating range - DC

Fig. 4



Description of Fig. 4

A - relations between make voltage and ambient temperature at no load on contacts. Coil temperature and ambient temperature are equal before coil energizing. Make voltage is not higher than the value read on Y axis (multiplication of rated voltage).
B - relations between make voltage and ambient temperature after initial coil heating up with 1,1 U_n, at continues load of I_n on contacts. Make voltage is not higher than the value read on Y axis (multiplication of rated voltage).
1, 2 - values on Y axis represent allowed overvoltage on coil at certain ambient temperature and contact load:
1 - no load
2 - rated load

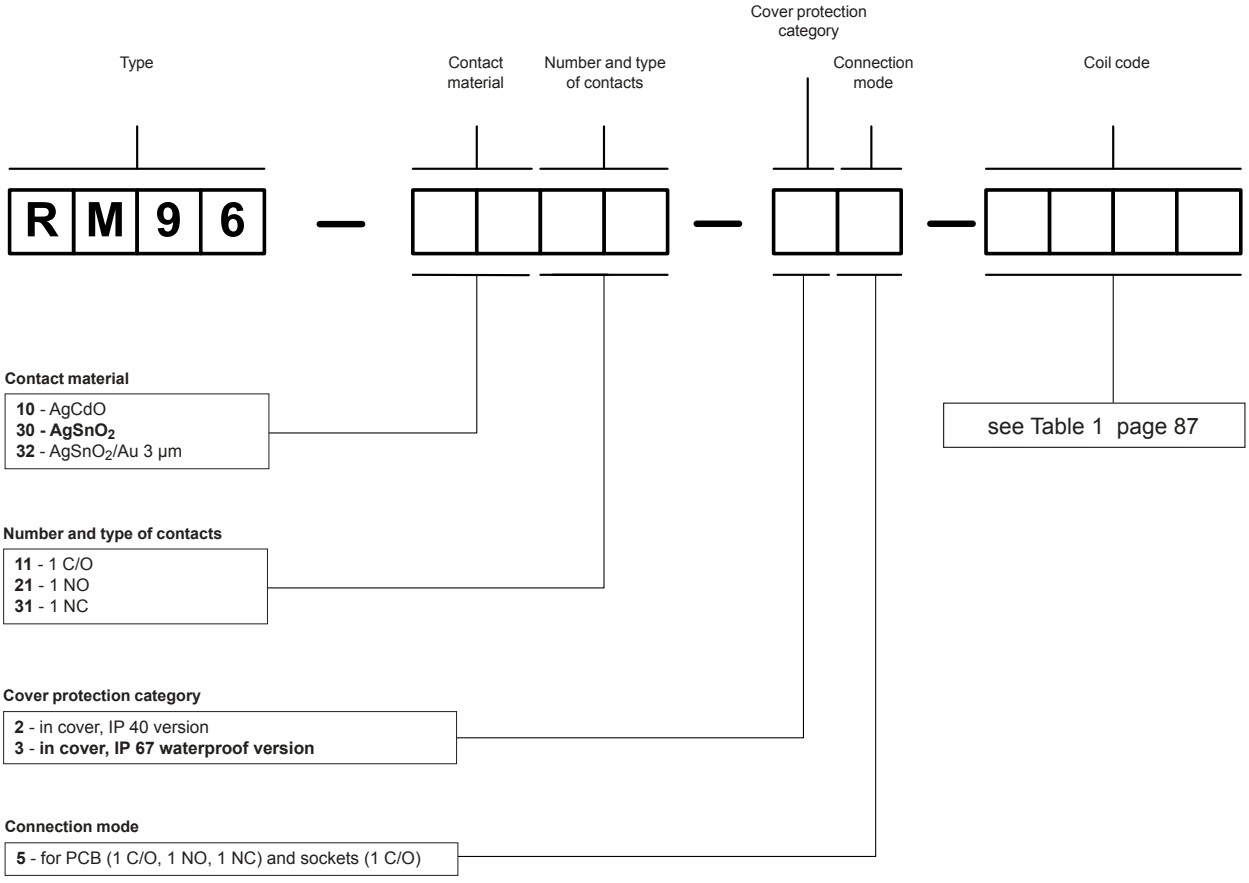
Mounting

Relays **RM96 1 C/O** (one changeover contact) are designed for: • direct PCB mounting • screw terminals plug-in sockets **ES 32** ❶ with clip **MS16** or **GZM80-0041**, 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with one M3 screw. Signalling / protecting modules **type M...** are available with sockets (see page 250).

Relays **RM96 1 NO** (one normally open contact) and **RM96 1 NC** (one normally closed contact) are designed for direct PCB mounting.

❶ Plug-in sockets **ES 32** may be linked with interconnection strip type **ZGGZ80** (see page 261).

Ordering codes



Examples of ordering codes:

RM96-3011-35-1012 relay **RM96**, contact material $AgSnO_2$, with one changeover contact, in cover IP 67, for PCB and sockets, voltage version 12 V DC

RM96-3031-25-1024 relay **RM96**, contact material $AgSnO_2$, with one normally closed contact, in cover IP 40, for PCB, voltage version 24 V DC

Print on relay cover

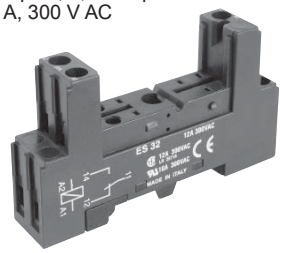
Type marking on relays cover **RM96** do not match the ordering codes.
Example of marking:

RM96P-24-W
RM96P - relay **RM96**, with one changeover contact
24 - voltage version 24 V DC
W - in cover, IP 67 waterproof version

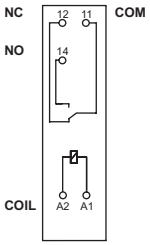
ES 32

For RM96 1 C/O

Screw terminals
Maximum screw torgue: 0,5 Nm
35 mm rail mount acc. to PN-EN 60715
or on panel mounting
75 x 15,5 x 42,5(59) mm ❷
One pole, 3,2 mm pinout
12 A, 300 V AC



Connection diagram



Accessories ❶


ZGGZ80

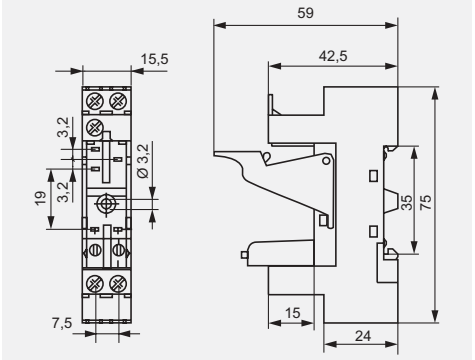

MS16


GZM80-0041


TR


Module type M...

Dimensions



❶ ”Mounting and sub-assemblies of accessories in the socket” and ”Signalling / protecting modules type M...” - see www.relpol.com.pl - Product Guide - Type of relay - Additional information.

❷ In the bracket the height of socket with retainer / retractor clip is shown.