- Cadmium - free contacts • Height 15,7 mm
- 5000 V / 10 mm reinforced insulation
- For PCB and plug-in sockets
- Accessories: sockets and modules
- AC and DC coils
- Recyclable packing
- Compliance with standard PN-EN 60335-1
- Recognitions, certifications, directives: RoHS,

Contact data

Number and type of contacts		2 C/O, 2 NO
Contact material		**AgNi**, AgNi/Au 5 µm, $AgSnO_2$
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		5 V AgNi, 5 V AgNi/Au 5 µm, 10 V $AgSnO_2$
Rated load (capacity)	AC1	8 A / 250 V AC
	AC15	3 A / 120 V 1,5 A / 240 V (B300)
	AC3	550 W (single-phase motor)
	DC1	8 A / 24 V DC (see Fig. 3)
	DC13	0,22 A / 120 V 0,1 A / 250 V (R300)
Min. switching current		5 mA AgNi, 2 mA AgNi/Au 5 µm, 10 mA $AgSnO_2$
Max. inrush current		15 A $AgSnO_2$
Rated current		8 A
Max. breaking capacity	AC1	2 000 VA
Min. breaking capacity		0,3 W AgNi, 0,05 W AgNi/Au 5 µm, 1 W $AgSnO_2$
Contact resistance		≤ 100 mΩ
Max. operating frequency		
• at rated load	AC1	600 cycles/hour
• no load		72 000 cycles/hour

Coil data

Rated voltage	50/60 Hz AC	12...240 V
	DC	3...110 V
Must release voltage		AC: ≥ 0,15 U_n DC: ≥ 0,1 U_n
Operating range of supply voltage		see Tables 1, 2 and Fig. 4, 5
Rated power consumption	AC	0,75 VA
	DC	0,4...0,48 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	5 000 V AC type of insulation: reinforced
• contact clearance	1 000 V AC type of clearance: micro-disconnection
• pole - pole	2 500 V AC type of insulation: basic
Contact - coil distance	
• clearance	≥ 10 mm
• creepage	≥ 10 mm

General data

Operating / release time (typical values)		7 ms / 3 ms
Electrical life		
• resistive AC1		> 10^5 8 A, 250 V AC
• cosϕ		see Fig. 2
• L/R=40 ms		> 10^5 0,15 A, 220 V DC
Mechanical life (cycles)		> 3 x 10^7
Dimensions (L x W x H)		29 x 12,7 x 15,7 mm
Weight		14 g
Ambient temperature	• storage	-40...+85 °C
	• operating	AC: -40...+70 °C DC: -40...+85 °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	(NO/NC)	10 g / 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 ±10% at 20 °C Ω	Coil operating range at 20 °C V DC	
			min.	max.
1003	3	22	2,1	7,6
1005	5	60	3,5	12,7
1006	6	90	4,2	15,3
1009	9	200	6,3	22,9
1012	**12**	**360**	**8,4**	**30,6**
1018	18	710	12,6	45,9
1024	**24**	**1 440**	**16,8**	**61,2**
1036	36	3 140	25,2	91,8
1048	48	5 700	33,6	122,4
1060	60	7 500	42,0	153,0
1110	110	25 200	77,0	280,0

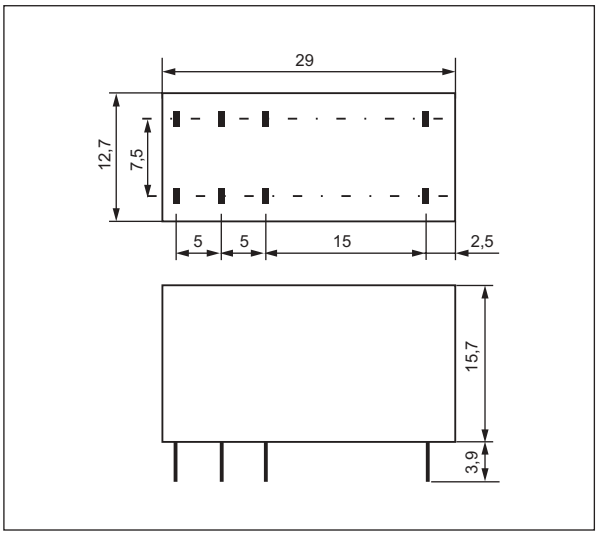
The data in bold type pertain to the standard versions of the relays.

Coil data - AC 50/60 Hz voltage version Table 2

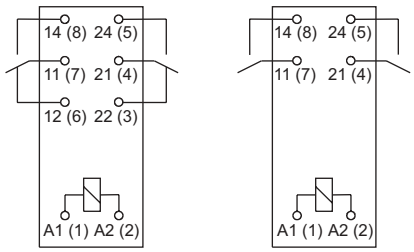
Coil code	Rated voltage V AC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range at 20 °C V AC - 50 Hz	
				min.	max.
5012	12	100	± 10%	9,6	13,2
5024	**24**	**400**	**± 10%**	**19,2**	**28,8**
5048	48	1 550	± 10%	38,4	57,6
5060	60	2 600	± 10%	48,0	72,0
5110	110	8 900	± 10%	88,0	132,0
5115	115	9 600	± 10%	92,0	138,0
5120	120	10 200	± 10%	96,0	144,0
5220	220	35 500	± 10%	176,0	264,0
5230	**230**	**38 500**	**± 10%**	**184,0**	**276,0**
5240	240	42 500	± 15%	192,0	288,0

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

Dimensions



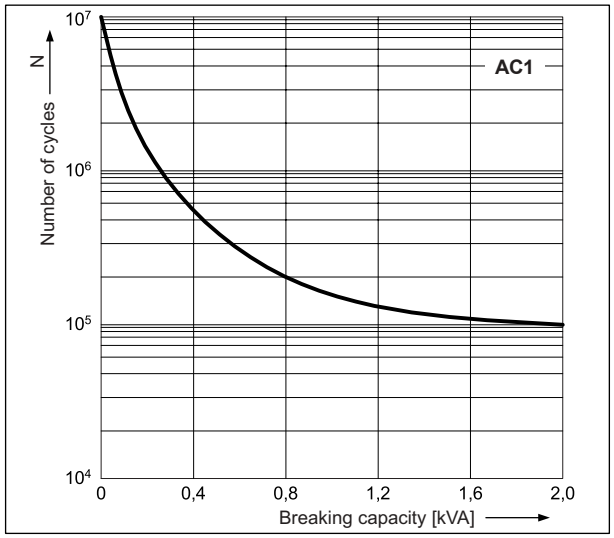
Connection diagrams (pin side view)



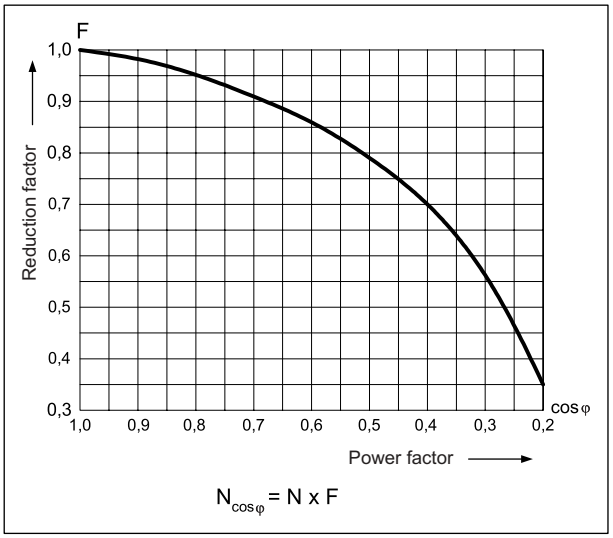
2 C/O **2 NO**

Terminal (pin)	A1(1); A2(2)	22(3); 21(4); 24(5); 12(6); 11(7); 14(8)
[mm]	Ø 0,6	0,5 x 0,9
Drilling hole: • for relays • for sockets	Ø 1,3 + 0,1 mm Ø 1,5 + 0,1 mm	

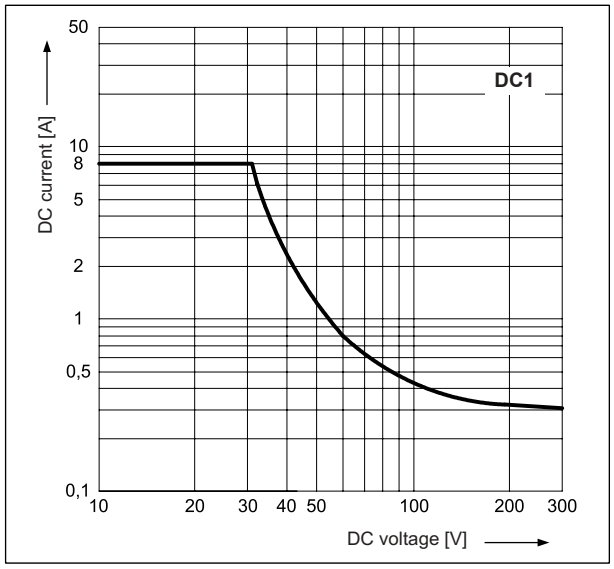
Electrical life at AC resistive load. Maximum switching frequency at rated load Fig. 1



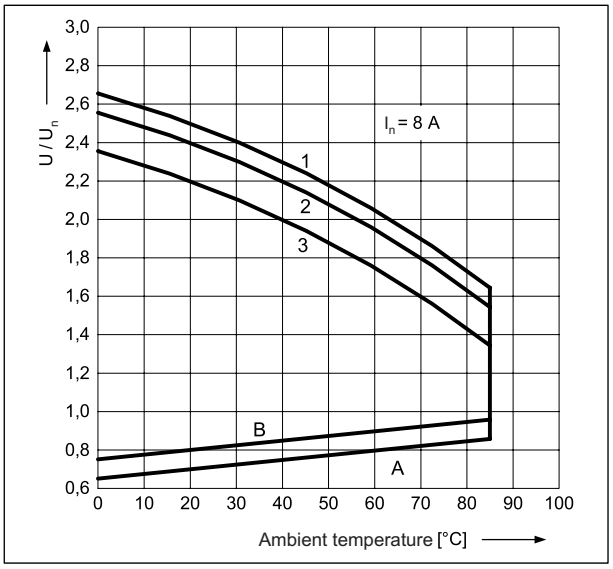
Electrical life reduction factor at AC inductive load Fig. 2



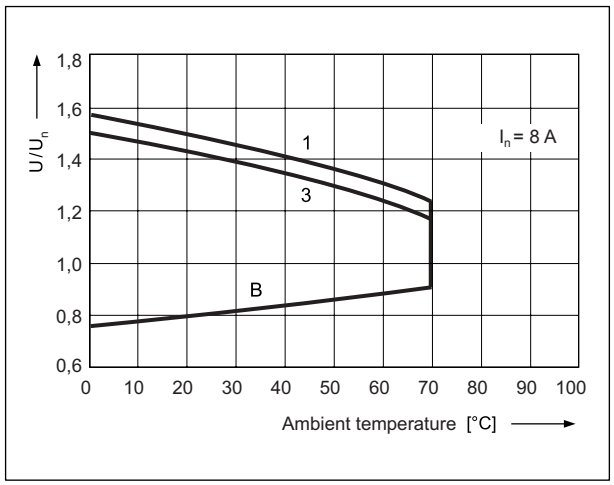
Max. DC resistive load breaking capacity Fig. 3



Coil operating range - DC Fig. 4



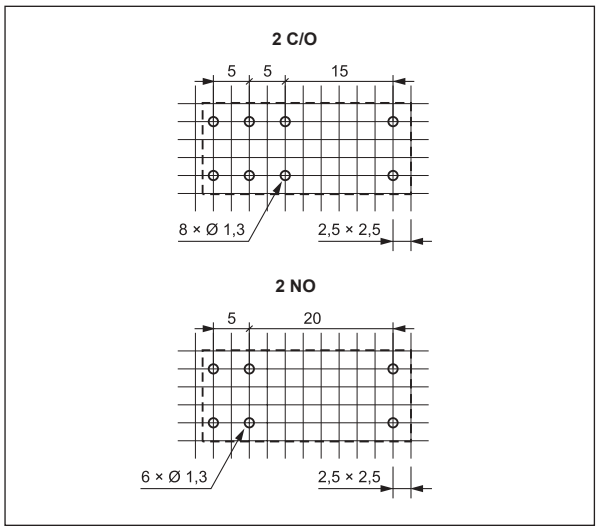
Coil operating range - AC 50 Hz Fig. 5



Description of Fig. 4 and 5

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, 3 - values on Y axis represent allowed overvoltage on coil at certain ambient temperature and contact load:
1 - no load
2 - 50% of rated load
3 - rated load

Pinout (solder side view)

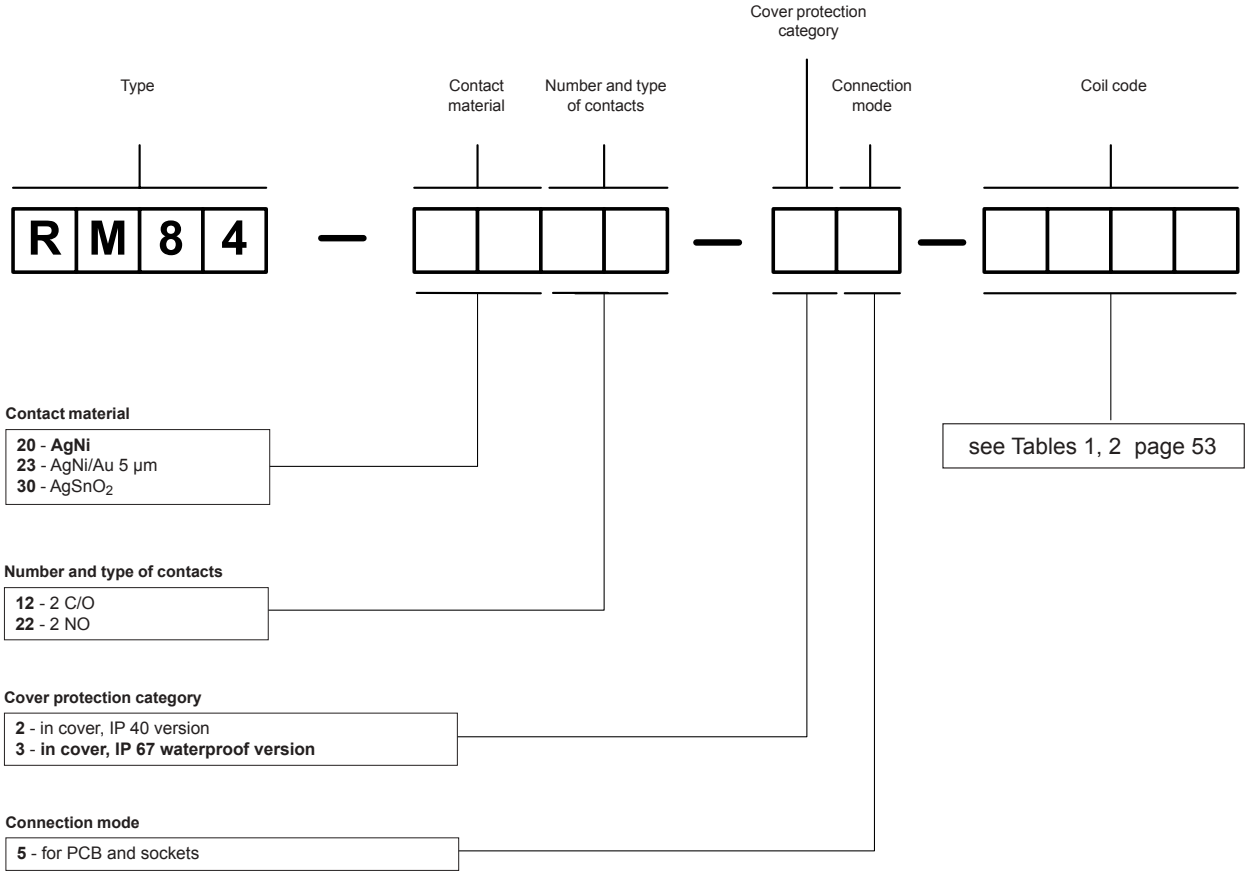


Mounting

Relays **RM84** are designed for: • direct PCB mounting • screw terminals plug-in sockets **GZT80** and **GZM80** ❶ with clip **GZT80-0040** or **GZM80-0041**; plug-in sockets **GZS80** ❶ with clip **GZS-0040** 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 249) • plug-in sockets for PCB mounting **EC50** and **PW80** with clip **MH16-2**; plug-in sockets **GD50** with clip **GD-0016**.

❶ Plug-in sockets **GZT80**, **GZM80** and **GZS80** may be linked with interconnection strip type **ZGGZ80** (see page 259).

Ordering codes



Example of ordering code:

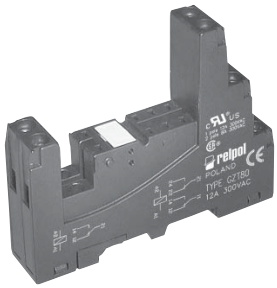
RM84-3012-25-1012 relay **RM84**, contact material $AgSnO_2$, with two changeover contacts, in cover IP 40, for PCB and sockets, voltage version 12 V DC

Plug-in sockets and accessories
for relays RM84, RM85, RM87L, RM87P

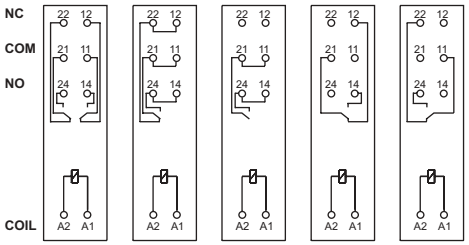
GZT80

For RM84, RM85, RM85 inrush,
RM85 105 °C sensitive,
RM87L, RM87L sensitive,
RM87P, RM87P sensitive

Screw terminals
Maximum screw torgue: 0,7 Nm
35 mm rail mount acc. to PN-EN 60715
or on panel mounting
75,3 x 15,5 x 61(67) mm ❷
Two poles, 5 mm pinout
12 A, 300 V AC

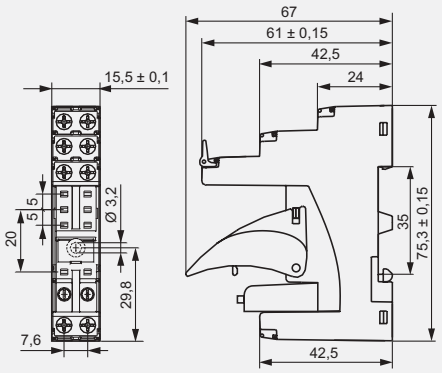


Connection diagrams



Accessories ❶

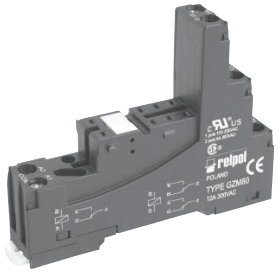
Dimensions



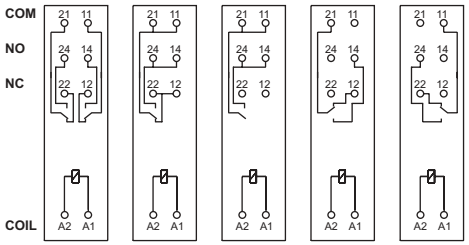
GZM80

For RM84, RM85, RM85 inrush,
RM85 105 °C sensitive,
RM87L, RM87L sensitive,
RM87P, RM87P sensitive

Screw terminals
Maximum screw torgue: 0,7 Nm
35 mm rail mount acc. to PN-EN 60715
or on panel mounting
78,1 x 15,9 x 61(66,5) mm ❷
Two poles, 5 mm pinout
12 A, 300 V AC

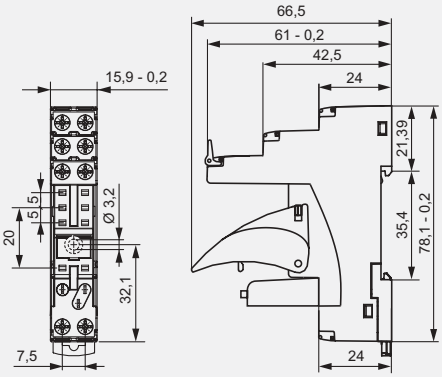


Connection diagrams



Accessories ❶

Dimensions

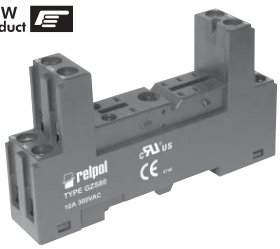


GZS80

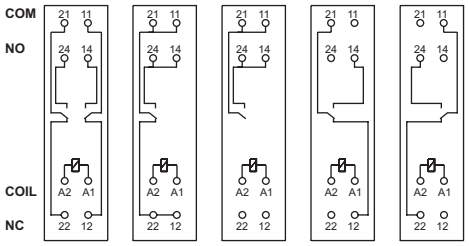
For RM84, RM85, RM85 inrush,
RM85 105 °C sensitive,
RM87L, RM87L sensitive,
RM87P, RM87P sensitive

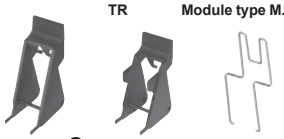
Screw terminals
Maximum screw torgue: 0,5 Nm
35 mm rail mount acc. to PN-EN 60715
or on panel mounting
76,8 x 15,8 x 42,5(57,1) mm ❷
Two poles, 5 mm pinout
10 A / 300 V AC

NEW product



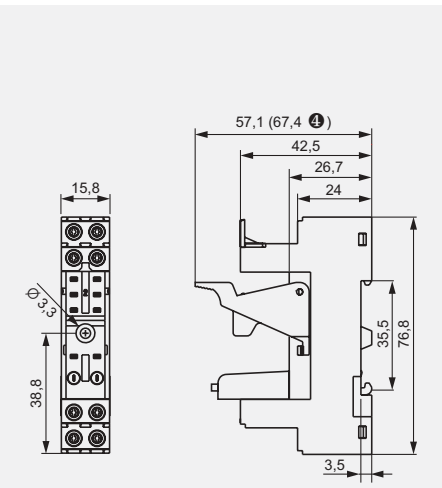
Connection diagrams





Accessories ❶

Dimensions



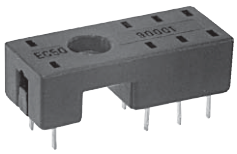
❶ "Mounting and sub-assemblies of accessories in the socket" and "Signalling / protecting modules type M..." - see www.relpol.com.pl - Product Guide - Type of relay - Additional information. ❸ For RM85, RM85 inrush, RM85 105 °C sensitive: loads above 12 A require bridging pairs of terminals: 11 with 21, 12 with 22, 14 with 24.
❷ In the bracket the height of socket with retainer / retractor clip is shown. ❹ Clip designed for relays of the height 25...26 mm.

Plug-in sockets and accessories
for relays RM84, RM85, RM87L, RM87P

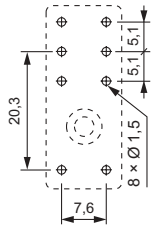
EC50

For RM84, RM85, RM85 inrush,
RM85 105 °C sensitive,
RM87L, RM87L sensitive,
RM87P, RM87P sensitive

For PCB
31,3 x 12,7 x 9 mm
Two poles, 5 mm pinout
8 A, 300 V AC

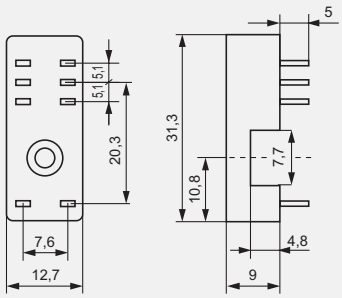


Pinout



Accessories MH16-2

Dimensions

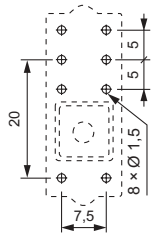


PW80

For RM84, RM85, RM85 inrush,
RM85 105 °C sensitive,
RM87L, RM87L sensitive,
RM87P, RM87P sensitive

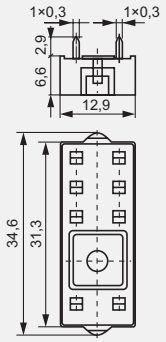
For PCB
34,6 x 12,9 x 6,6 mm
Two poles, 5 mm pinout
8 A, 250 V AC

Pinout



Accessories MH16-2

Dimensions

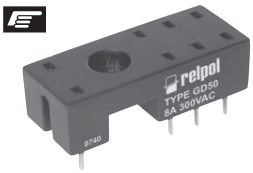


GD50

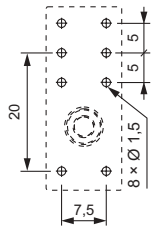
For RM84, RM85, RM85 inrush,
RM85 105 °C sensitive,
RM87L, RM87L sensitive,
RM87P, RM87P sensitive

For PCB
34,6 x 12,9 x 6,6 mm
Two poles, 5 mm pinout
8 A, 300 V AC

NEW product

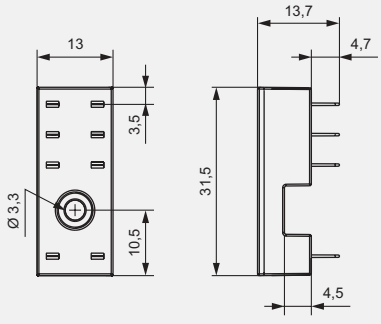


Pinout



Accessories GD-0025 ❹ GD-0016

Dimensions



❹ Clip designed for relays of the height 25...26 mm.