






- CTI 250
- 5000 V / 10 mm reinforced insulation
- For PCB and plug-in sockets
- AC and DC coils, insulation class F: 155 °C
- Available special versions: with transparent cover ①; with the increased dielectric strength of the contact clearance ②
- Compliance with standard EN 60335-1
- Recognitions, certifications, directives: RoHS,     

Contact data

Number and type of contacts	1 CO, 1 NO ②
Contact material	AgNi , AgNi/Au hard gold plating, AgSnO ₂
Rated / max. switching voltage	AC 250 V / 400 V
Min. switching voltage	5 V AgNi, 5 V AgNi/Au hard gold plating, 10 V AgSnO ₂
Rated load (capacity)	AC1 16 A / 250 V AC AC15 3 A / 120 V 1,5 A / 240 V (B300) DC1 16 A / 24 V DC (see Fig. 3) DC13 0,22 A / 120 V 0,1 A / 250 V (R300)
Motor load	acc. to UL 508 1/2 HP 240 V AC, 4,9 FLA, single-phase motor ③ AC3 acc. to IEC 60947-4-1 0,5 kW 240 V AC, single-phase motor
Min. switching current	5 mA AgNi, 2 mA AgNi/Au hard gold plating, 10 mA AgSnO ₂
Max. inrush current	30 A AgSnO ₂
Rated current	16 A
Max. breaking capacity	AC1 4 000 VA
Min. breaking capacity	0,3 W AgNi, 0,05 W AgNi/Au hard gold plating, 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, 24 , 48, 60, 110, 115, 120, 220, 230 , 240 V DC 3, 5, 6, 9, 12 , 18, 24 , 36, 48, 60, 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 EN 60664-1

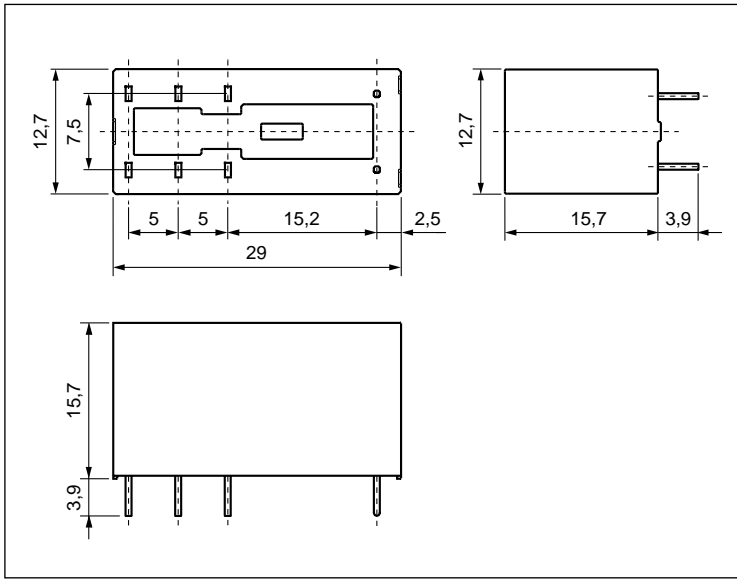
Insulation rated voltage	400 V AC
Rated surge voltage	4 000 V 1,2 / 50 μs
Overtoltage category	III
Insulation pollution degree	3
Dielectric strength	• between coil and contacts 5 000 V AC type of insulation: reinforced • contact clearance 1 000 V AC type of clearance: micro-disconnection 2 000 V AC contact 1 NO, type of clearance: full-disconnection ②
Contact - coil distance	• clearance ≥ 10 mm • creepage ≥ 10 mm

General data

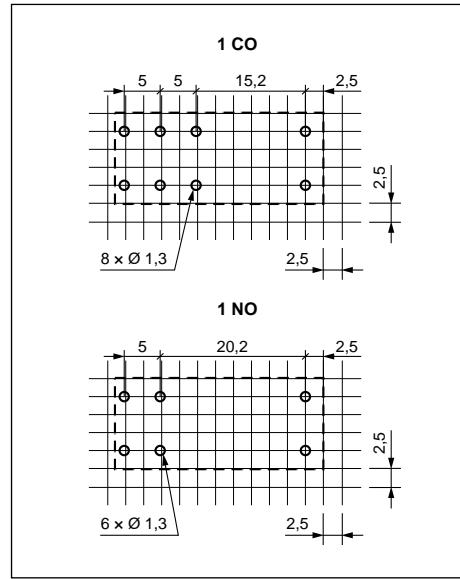
Operating / release time (typical values)	7 ms / 3 ms
Electrical life (number of cycles)	• resistive AC1 > 0,7 x 10 ⁵ 16 A, 250 V AC > 10 ⁴ 20 A, 250 V AC, 85 °C (RM85-3021-25-1...) • motor load acc. to UL 508 10 ⁵ 5 FLA / 7 LRA, 240 V AC, 65 °C (RM85-3021-.5-1...) 10 ⁵ 5 FLA / 12 LRA, 24 V DC, 65 °C (RM85-3021-.5-1...) 3 x 10 ⁴ 5 FLA / 30 LRA, 240 V AC, 70 °C (RM85-2021-..5-1...) • cosφ see Fig. 2 • DC 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) / Weight	29 x 12,7 x 15,7 mm / 14 g
Ambient temperature (non-condensation and/or icing)	• storage -40...+85 °C • operating AC: -40...+70 °C DC: -40...+85 °C -20...+70 °C ①
Cover protection category	IP 40 ① or IP 67 EN 60529
Environmental protection	RTII ① or RTIII EN 61810-7
Shock / vibration resistance	30 g / 10 g 10...150 Hz
Solder bath temperature / Soldering time	max. 270 °C / max. 5 s

The data in bold type relate to the standard versions of the relays. ① Relate to the special versions - relays with transparent cover, only available with IP 40 and RTII, operating temperature -20...+70 °C. See "Ordering codes". ② Relate to the special versions - relays with one normally open contact 1 NO, with increased contact gap - dielectric strength 2000 V AC, only available with DC coils. See "Ordering codes". ③ For single phase motors for 110-120 V AC do not use motors with higher FLA than given for 240 V AC.

Dimensions



Pinout (solder side view)



Connection diagrams (pin side view)

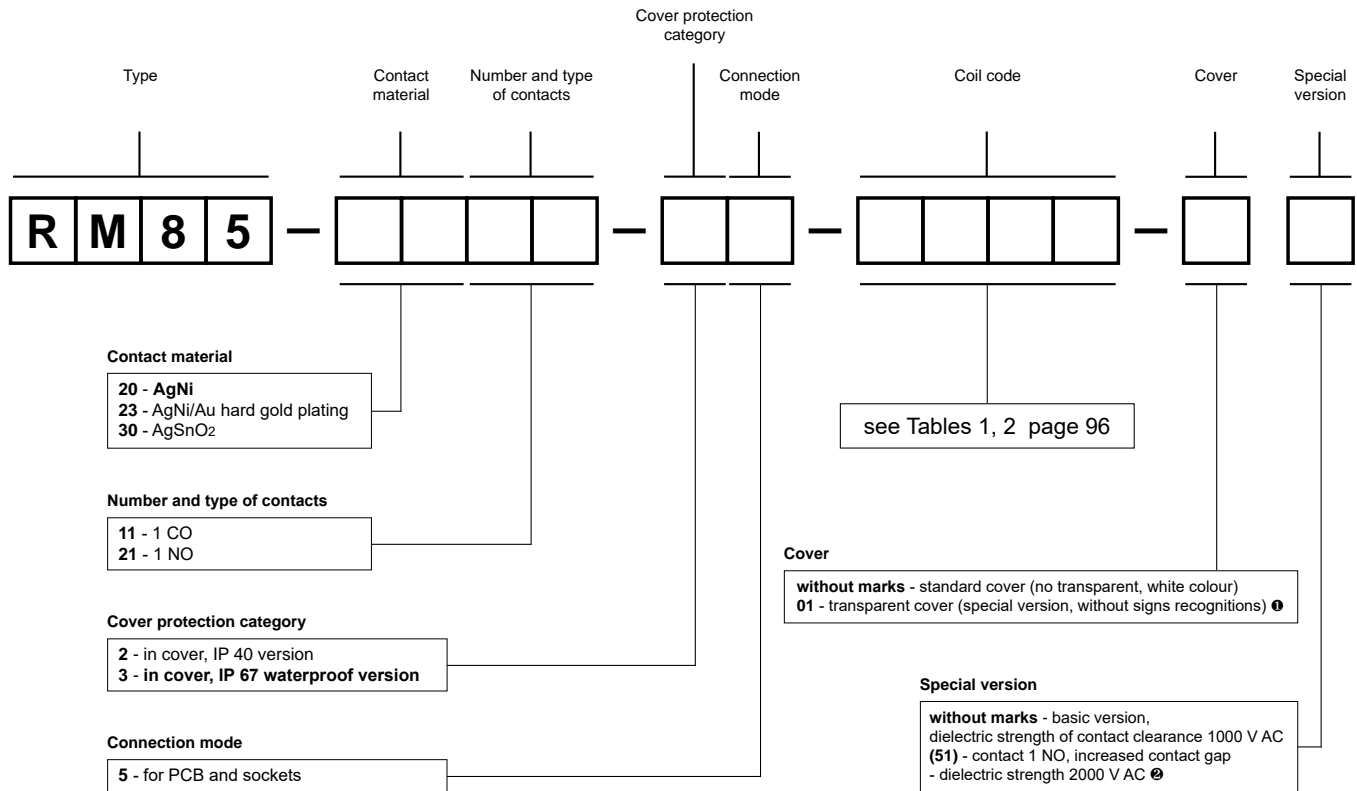
Terminal (pin)	A1(1); A2(2)	22(3); 21(4); 24(5); 12(6); 11(7); 14(8)
[mm]	Ø 0,6	0,5 x 0,9
Drilling hole:		
• for relays Ø 1,3 + 0,1 mm		
• for sockets Ø 1,5 + 0,1 mm		

RM85 terminals are doubled for each contact.
Both terminals are to be used while connecting to load.

Connection of GZ.80 sockets

Note: Loads above 12 A (GZT80, GZM80) or 10 A (GZS80, GZF80, GZMB80) require bridging pairs of terminals: 11 with 21, 12 with 22, 14 with 24. Loads up to 12 A or 10 A do not require bridging of common terminals (such bridges may be fixed, however).

Ordering codes



① 01: special version - relay with transparent cover, only available with IP 40 and RTII, operating temperature -20...+70 °C ② (51): special version - relay with one normally open contact 1 NO, with increased contact gap - dielectric strength 2000 V AC, only available with DC coil

Examples of ordering code:

RM85-3011-25-5024

relay **RM85**, for PCB and sockets, one changeover contact, contact material AgSnO₂, coil voltage 24 V AC 50/60 Hz, in standard cover (no transparent, white colour) IP 40

RM85-2011-25-1012-01

relay **RM85**, for PCB and sockets, one changeover contact, contact material AgNi, coil voltage 12 V DC, with transparent cover (special version, without signs recognitions) IP 40

RM85-2321-35-1024 (51)

relay **RM85**, special version with increased contact gap, for PCB and sockets, one normally open contact, contact material AgNi/Au hard gold plating, coil voltage 24 V DC, in standard cover (no transparent, white colour) IP 67

GZF80

Screw terminals
plug-in socket
for RM84, RM85...,
RM87L, RM87P,
RMP84, RMP85
- see page 361

