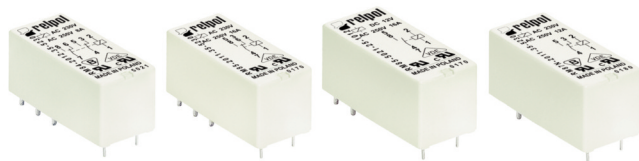


RM84 / RM85 / RM87

Miniature Electromagnetic Relays



- Miniature dimensions
- 5000 V / 10 mm reinforced insulation
- Available special versions with the increased dielectric strength of the contact clearance
- IP67 flux proof, water proof and sealed cover protection (For IP40 unsealed, contact Altech)
- Cadmium - free contacts
- For PCB and plug-in sockets

	RM84	RM85	RM87
Contact Data			
No. and type of contacts	DPDT. DPST (2NO)	SPDT. SPST (1NO)	SPDT. SPST (1NO)
Contact material	AgNi	AgNi	AgNi
Rated / max. switching voltage	250 V / 440 V	250 V / 440 V	250 V / 440 V
Min. switching voltage	5 V	5 V	5 V
Rated load (capacity)	8 A / 250 V AC	16 A / 250 V AC	12 A / 250 V AC
AC1	3 A / 120 V; 1.5 A / 240 V (B300)	3 A / 120 V; 1.5 A / 240 V (B300)	3 A / 120 V; 1.5 A / 240 V (B300)
AC15	550 W (single-phase motor)	750 W (single-phase motor)	750 W (single-phase motor)
AC3	8 A / 24 V DC (see Fig. 3.1)	16 A / 24 V DC (see Fig. 3.2)	12 A / 24 V DC (see Fig. 3.3)
DC1	0.22 A / 120 V; 0.1 A / 250 V (R300)	0.22 A / 120 V; 0.1 A / 250 V (R300)	0.22 A / 120 V; 0.1 A / 250 V (R300)
DC13			
Min. switching current	5 mA	5 mA	5 mA
Max. inrush current	12 A	24 A	18 A
Rated current	8 A	16 A	12 A
Max. breaking capacity	2 000 VA	4 000 VA	3 000 VA
Min. breaking capacity	0.3 W	0.3 W	0.3 W
Contact resistance	≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ
Max. operating frequency			
• at rated load	600 cycles/hour	600 cycles/hour	600 cycles/hour
• no load	72000 cycles/hour	72000 cycles/hour	72000 cycles/hour
Coil Data			
Rated voltage	12 ... 240 V	12 ... 240 V	12 ... 240 V
50/60 Hz AC			
DC	3 ... 110 V	3 ... 110 V	3 ... 110 V
Must release voltage	AC: ≥ 0.15 U _N ; DC: ≥ 0.1 U _N	AC: ≥ 0.15 U _N ; DC: ≥ 0.1 U _N	AC: ≥ 0.15 U _N ; DC: ≥ 0.1 U _N
Operating range of supply voltage	see page 80 and Fig. 4.1. 5.1	see page 80 and Fig. 4.2. 5.2	see page 80 and Fig. 4.3. 5.3
Rated power consumption	0.75 VA	0.75 VA	0.75 VA
AC			
DC	0.4 ... 0.48 W	0.4 ... 0.48 W	0.4 ... 0.48 W
Insulation			
Insulation rated voltage	400 V AC	400 V AC	400 V AC
Rated surge voltage	4000 V 1.2 / 50 μs	4000 V 1.2 / 50 μs	4000 V 1.2 / 50 μs
Overvoltage category	III	III	III
Insulation pollution degree	3	3	3
Dielectric strength			
• between coil and contacts	5000 V AC type of insulation: reinforced	5000 V AC type of insulation: reinforced	5000 V AC type of insulation: reinforced
• contact clearance	1000 V AC type of clearance: micro-disconnection 2000 V AC contacts DPST (2NO). type of clearance: full-disconnect 2500 V AC type of insulation: basic	1000 V AC type of clearance: micro-disconnection 2000 V AC contacts DPST (2NO). type of clearance: full-disconnect	1000 V AC type of clearance: micro-disconnection 2000 V AC contacts SPST (1NO). type of clearance: full-disconnect
• pole - pole		-	-
Contact - coil distance			
• clearance	≥ 10 mm	≥ 10 mm	≥ 10 mm
• creepage	≥ 10 mm	≥ 10 mm	≥ 10 mm
General data			
Operating / release time (typical values)	7 ms / 3 ms	7 ms / 3 ms	7 ms / 3 ms
Electrical life			
• resistive	> 10 ⁶ ; 8 A. 250 V AC	> 0.7 x 10 ⁶ ; 16 A. 250 V AC	> 10 ⁶ ; 12 A. 250 V AC
AC1	see Fig. 2.1	see Fig. 2.2	see Fig. 2.3
• cosφ			
• DC L/R=40 ms	> 10 ⁶ ; 0.15 A. 220 V DC	> 10 ⁶ ; 0.15 A. 220 V DC	> 10 ⁶ ; 0.15 A. 220 V DC
Mechanical life (cycles)	> 3 x 10 ⁷	> 3 x 10 ⁷	> 3 x 10 ⁷
Dimensions (L x W x H)	29 x 12.7 x 15.7 mm	29 x 12.7 x 15.7 mm	29 x 12.7 x 15.7 mm
Weight	14 g	14 g	14 g
Ambient temperature			
• storage	-40...+85 °C	40...+85 °C	40...+85 °C
• operating	AC: -40...+70 °C DC: -40...+85 °C	AC: -40...+70 °C DC: -40...+85 °C	AC: -40...+70 °C DC: -40...+85 °C
Cover protection category	IP 67 PN-EN 60529	IP 67 PN-EN 60529	IP 67 PN-EN 60529
Environmental protection	RTIII PN-EN 116000-3	RTIII PN-EN 116000-3	RTIII PN-EN 116000-3
Shock resistance	20 g	30 g	30 g
(NO/NC)			
Vibration resistance	10 g / 5 g 10...150 Hz	10 g 10...150 Hz	10 g 10...150 Hz
Solder bath temperature	max. 270 °C	max. 270 °C	max. 270 °C
Soldering time	max. 5 s	max. 5 s	max. 5 s