

RM40 and RM50

Miniature Electromagnetic Relays

RM40



- Very small dimensions
- High switching capacity up to 5 A or 8 A
- Cover with enhanced sealing protects the relay in course of soldering and cleaning
- Applications: for household equipment, office machines, control devices, alarm systems, in industrial control, industrial controllers
- Recognitions, certifications, directives: RoHS



E105728

RM50



- Small dimensions
- Switching current up to 10 A / 15 A
- The plastics applied provide for the operation of the relays at high temperature and in chemical environment
- Sealed, for soldering
- Applications: for household equipment, office machines, audio equipment, coffee machines, control devices, etc.
- Recognitions, certifications, directives: RoHS



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RM50

Contact Data

No. and type of contacts		SPDT	SPST (1N0)	SPDT, SPST (1N0)
Contact material		AgNi	AgSnO ₂	AgSnO ₂
Rated / max. switching voltage AC		250 V / 380 V	250 V / 440 V	240 V / 277 V
Min. switching voltage		5 V AgNi	5 V AgSnO ₂	5 V
Rated load	AC1	5 A / 250 V AC	8 A / 250 V AC	10 A / 240 V AC
	DC1	5 A / 30 V DC	8 A / 30 V DC	15 A / 24 V DC
Min. switching current		10 mA AgNi	10 mA AgSnO ₂	15 mA
Rated current		5 A	8 A	12 A
Max. breaking capacity AC1		1250 VA	2000 VA	3000 VA
Min. breaking capacity		50 mW AgNi	50 mW AgSnO ₂	0.75 W
Contact resistance		≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ

Coil Data

Rated voltage DC		3 ... 48 V	3 ... 48 V	3 ... 48 V
Must release voltage		DC: ≥ 0.05 U _n	DC: ≥ 0.05 U _n	DC: ≥ 0.05 U _n
Operating range of supply voltage		see page 75	see page 75	see page 75
Rated power consumption DC		0.20 W	0.20 W	0.36 W 3 ... 24 V; 0.45 W 48 V

Insulation

Dielectric strength		4000 V AC type of insulation: reinforced	4000 V AC type of insulation: reinforced	1000 V AC type of insulation: basic
• between coil and contacts		1000 V AC type of clearance: micro-disconnection	1000 V AC type of clearance: micro-disconnection	500 V AC type of clearance: micro-disconnection
• contact clearance				
Contact - coil distance		≥ 5 mm	≥ 5 mm	≥ 1.9 mm
• clearance		≥ 5 mm	≥ 5 mm	≥ 1.9 mm
• creepage				

General Data

Operating / release time (typical values)		8 ms / 4 ms	8 ms / 4 ms	10 ms / 5 ms
Electrical life (number of cycles)		> 10 ⁵ ; 5 A, 250 V AC	> 10 ⁵ ; 8 A, 250 V AC	–
• resistive AC1 360 cycles/hour		–	–	> 10 ⁵ ; 7 A, 250 V AC
• resistive AC1 1 200 cycles/hour		–	–	> 3 x 10 ⁴ ; 12 A, 250 V AC
• resistive AC1 1 200 cycles/hour		–	–	> 5 x 10 ⁴ ; 15 A, 24 V DC
• resistive DC1 1 200 cycles/hour		> 10 ⁵ ; 5 A, 30 V DC	> 10 ⁵ ; 8 A, 30 V DC	–
• resistive DC1 1 800 cycles/hour		> 10 ⁷	> 10 ⁷	> 10 ⁷
Mechanical life 18 000 cycles/hour		20 x 10 x 10.5 mm	20 x 10 x 10.5 mm	19 x 15.4 x 15.5 mm
Dimensions (L x W x H)		6 g	6 g	11 g
Weight		-40...+85 °C	-40...+85 °C	-30...+55 °C
Ambient temperature		operating	operating	operating
• operating		IP 64 PN-EN 60529	IP 64 PN-EN 60529	IP 64 PN-EN 60529
Cover protection category		10 g	10 g	10 g
Shock resistance		1.5 mm DA (constant amplitude) 10...55 Hz	1.5 mm DA (constant amplitude) 10...55 Hz	1.5 mm DA (constant amplitude) 10...55 Hz
Vibration resistance		max. 235 °C	max. 235 °C	max. 235 °C
Solder bath temperature		max. 3.5 s	max. 3.5 s	max. 3.5 s
Soldering time				