RM Magnetic Latching Relay

- 1 Form A/B
- Rated current: 60 to 120 A
- Only needs pulsed excitation, single or double coils available
- High capacity, up to 120 A / 250 V AC
- Manual-switch controled
- If requires, welding accessories is available

RM
1 Form A, up to 120 A

RM
1 Form B, up to 120 A

CE

CE

		Technical parameters	Technical parameters
Coil data			
Coil input voltage		6/9/12/24/48 V DC	6/9/12/24/48 V DC
Coil power		Single coil: 1000/1500/2400 mW Double coils: 2000/3000/4800 mW	Single coil: 1000/1500/2400 mW Double coils: 2000/3000/4800 mW
Response voltage		< 75% (Room temp.)	< 75% (Room temp.)
Drop out voltage		> 5% (Room temp.)	> 5% (Room temp.)
Operation time / Release time		Less than 20 ms / less than 10 ms	Less than 20 ms / less than 10 ms
Contact data			
Contact numbers		1 Form A	1 Form B
Contact material		Ag alloy	Ag alloy
Max. switching voltage		250 V AC	250 V AC
Max. swiching power		30,000 VA	30,000 VA
Contact ratings		120 A 250 V AC, 90 A 250 V AC, 100 A 250 V AC, 80 A 250 V AC, 60 A 250 V AC	120 A 250 V AC, 90 A 250 V AC, 100 A 250 V AC, 80 A 250 V AC, 60 A 250 V AC
Contact resistence		Max. 100 mΩ (1 A / 6 V DC)	Max. 100 mΩ (1 A / 6 V DC)
Mechanical service life		1×10^5 times	1×10^5 times
Electrical Service life	AC1	1×10^4 times	1×10^4 times
General data			
Rated withstand impulse voltage	Coil / Contact	4 kV AC / 1 min	4 kV AC / 1 min
	Between contacts	1.5 kV AC / 1 min (OFF), 2 kV AC / 1 min (100 A, OFF)	1.5 kV AC / 1 min (OFF), 2 kV AC / 1 min (100 A, OFF)
Surge voltage		10 kV AC (1.2/50 μs)	10 kV AC (1.2/50 μs)
Insulation Resistance		1,000 MΩ (500 V DC)	1,000 MΩ (500 V DC)
Vibration		Malfunction 10~55 Hz (Amplitude1.5 mm) Endurance 10~55 Hz (Amplitude1.5 mm)	Malfunction 10~55 Hz (Amplitude1.5 mm) Endurance 10~55 Hz (Amplitude1.5 mm)
Shock		Malfunction 98 m/s^2, Endurance 980 m/s^2	Malfunction 98 m/s^2, Endurance 980 m/s^2
Ambient temperature (Operation)		-40~70 ℃ (No condensation)	-40~70 ℃ (No condensation)
Operating humidity		20~85%	20~85%
Dimension L×W×H (mm)		39.0×16.8×31.0	39.0×16.8×31.0
Enclosure type		Flux-proof	Flux-proof
Mounting		PCB & Socket Installation	PCB & Socket Installation
Weight (g)		49	49
Compliance certification number		CE:M.2014.103.3158	CE:M.2014.103.3158

Type designation

Model designation	Number of poles	Coil voltage	Contact configuration	Contact rating	Polarity	Ciol poles	Terminal distance	Special request
RM	-1	12	B	1	D	S	-A	-XXX
RM	1: 1 pole	06: 6 V 09: 9 V 12: 12 V 24: 24 V 48: 48 V	M: 1 Form A B: 1 Form B	1: 60 A / 250 V AC 2: 80 A / 250 V AC 3: 90 A / 250 V AC 4: 100 A / 250 V AC 5: 120 A / 250 V AC	D: Standard polarity F: Reverse polarity	S: Single coil W: Double coils	A: coil pin distance 5 mm, bending pin B: coil pin distance 5 mm, straight pin C: coil pin distance 10 mm, bending pin D: coil pin distance 10 mm, straight pin	

Coil rating (60 A Series)						
Rated voltage (VDC)	Coil resistance (Ω±10%)		Operating power (mW)		Operating voltage (VDC)	Release voltage (VDC)
	Single Coil	Double Coils	Single Coil	Double Coils		
6	36	18+18	1,000	2,000	≤4.50	≥0.30
9	81	41+41	1,000	2,000	≤6.75	≥0.45
12	144	72+72	1,000	2,000	≤9.00	≥0.60
24	576	288+288	1,000	2,000	≤18.00	≥1.20
48	2,304	1152+1152	1,000	2,000	≤36.00	≥2.40

MAX. allowable coil voltage: 130% of rated coil voltage (Room temperature)

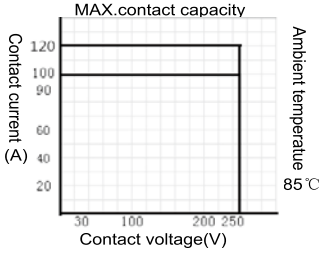
Coil rating (80 A/90 A Series)						
Rated voltage (VDC)	Coil resistance (Ω±10%)		Operating power (mW)		Operating voltage (VDC)	Release voltage (VDC)
	Single Coil	Double Coils	Single Coil	Double Coils		
6	24	12+12	1,500	3,000	≤4.50	≥0.30
9	54	27+27	1,500	3,000	≤6.75	≥0.45
12	96	48+48	1,500	3,000	≤9.00	≥0.60
24	384	192+192	1,500	3,000	≤18.00	≥1.20
48	1,536	768+768	1,500	3,000	≤36.00	≥2.40

MAX. allowable coil voltage: 130% of rated coil voltage (Room temperature)

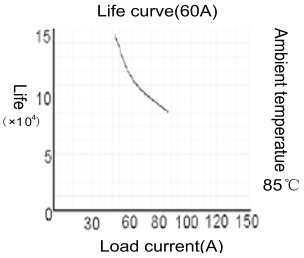
Coil rating (100 A/120 A Series)						
Rated voltage (VDC)	Coil resistance (Ω±10%)		Operating power (mW)		Operating voltage (VDC)	Release voltage (VDC)
	Single Coil	Double Coils	Single Coil	Double Coils		
6	15	7.5+7.5	2,400	4,800	≤4.50	≥0.30
9	38	19+19	2,400	4,800	≤6.75	≥0.45
12	60	30+30	2,400	4,800	≤9.00	≥0.60
24	240	120+120	2,400	4,800	≤18.00	≥1.20
48	960	480+480	2,400	4,800	≤36.00	≥2.40

MAX. allowable coil voltage: 130% of rated coil voltage (Room temperature)

MAX.contact capacity

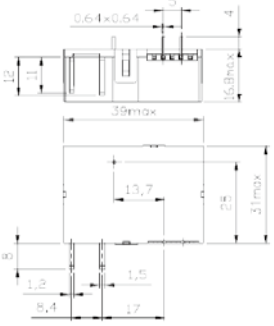


Life curve(60A)

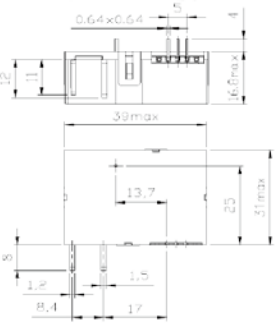


Outline dimensions

Single coil(bending pin) 5.0mm

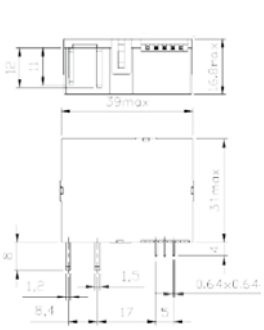


Double coils(bending pin) 5.0mm

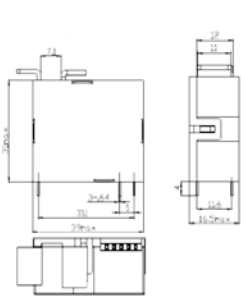


Single coil(straight pin) 5.0mm

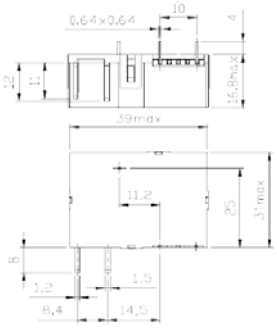
Double coils(straight pin) 5.0mm



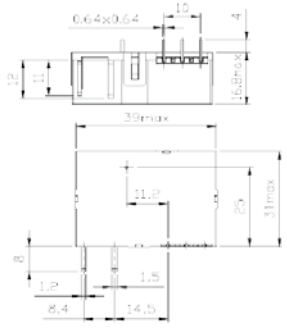
Single coil(straight pin)



Single coil(bending pin) 10.0mm

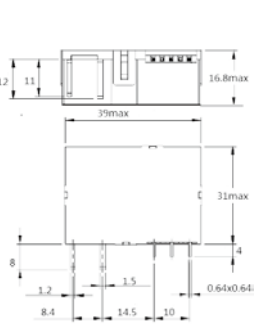


Double coils(bending pin) 10.0mm



Single coil(straight pin) 10.0mm

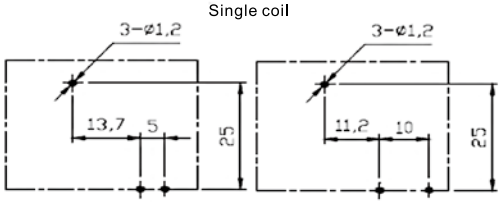
Double coils(straight pin) 10.0mm



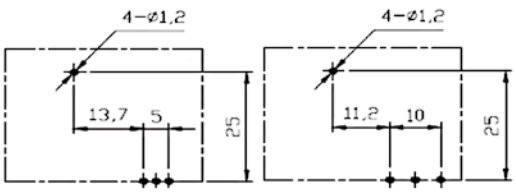
Tolerance	
Outline dimension	
<1mm	±0.2mm
1~5mm	±0.3mm
>5mm	±0.4mm
PCB board layout	
Pitch-row	±0.1mm
Aperture	+0.1mm

PCB board layout (Bottom view)

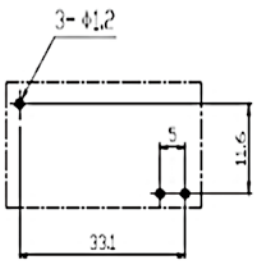
Single coil



Double coils



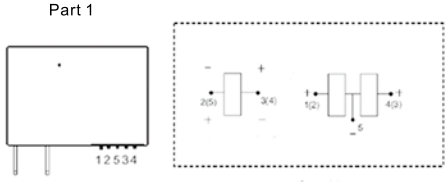
Single coil(straight pin)



SSA approval rating	
CE	
60A/250VAC	10,000ops
80A/250VAC	10,000ops
90A/250VAC	10,000ops
100A/250VAC	10,000ops
120A/250VAC	10,000ops

Terminal assignment

Part 1



Part 2