



Features

- 10A switching capability.
- Double insulation, high stability.
- Dielectric strength: 4000V.
- Sealed type available.

Safety Approval

UL, C-UL File No.: E179745

TUV File No.: R50142422

CQC File No.: CQC08001024212

Contact Capacity

Model	SMA
Nominal switching capacity (res. load)	10A 250VAC
Max. switching current	10A
Max. switching voltage	250VAC
Max. switching power	2,500VA

Charateristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	50mΩ Max.	
Operate time (at nominal volt.)	15msec. Max.	
Release time (at nominal volt.)	8msec. Max.	
Initial insulation resistance	1,000MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts: AC900V, 50/60Hz 1Min.	
	Between coil and contact: AC4,000V, 50/60Hz 1Min.	
Vibration resistance	Functional	10 ~ 55Hz at double amplitude of 1.5 mm
	Destructive	10 ~ 55Hz at double amplitude of 1.5 mm
Shock resistance	Functional	10G Min.
	Destructive	100G Min.
Endurance (operations)	Mechanical (at 10,800 ops./h)	10,000,000
	Electrical (at 1,800 ops./h)	100,000
Ambient temperature	-40°C ~ +105°C (no condensation)	
Unit weight	Approx. 11.0 g	

Coil Data (at 20°C)

Nominal voltage (VDC)	Nominal operating current ± 10% (mA)	Coil resistance ± 10% (Ω)	Max. allowable voltage	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Nominal operating power
3	180.00	17	130 % of nominal voltage	75 % of nominal voltage	10 % of nominal voltage	Approx. 0.54W
5	108.00	46				
6	90.00	67				
9	60.00	150				
12	45.00	267				
18	30.00	600				
24	22.50	1,067				
48	11.25	4,267				

Coil Data (at 20°C)

Nominal voltage (VDC)	Nominal operating current $\pm 10\%$ (mA)	Coil resistance $\pm 10\%$ (Ω)	Max. allowable voltage	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Nominal operating power
3	83.33	36	130 % of nominal voltage	75 % of nominal voltage	10 % of nominal voltage	Approx. 0.25W
5	50.00	100				
6	41.66	144				
9	27.77	324				
12	20.83	576				
18	13.88	1,296				
24	10.42	2,304				
48	5.21	9,216				

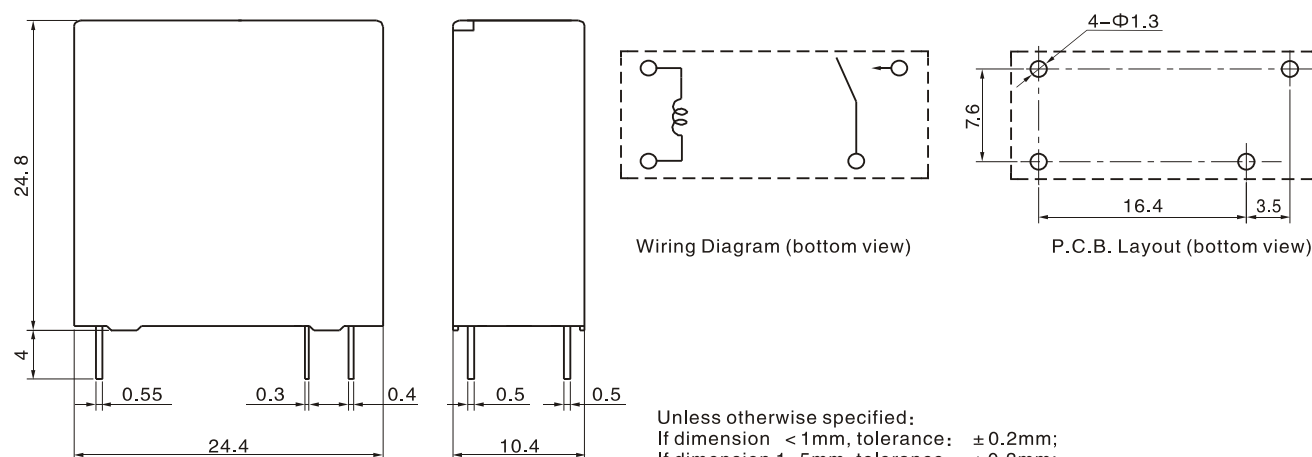
Safety Approval Ratings

Approval	CQC	TUV	UL/CUL
File No.	CQC08001024212	R50142422	E179745
Approved ratings	10A 250VAC	10A 250VAC 10A 30VDC	10A 250VAC, Resistive 10A 30VDC, Resistive 3A 250VAC, General use

Ordering Information

Nomenclature	
SMA-S-1-12-D-M-1-F-XX	Special Parameter: Nil-Standard type, Letter or number-Special requirement
	Insulation System: Nil-Standard, B-Class B, F-Class F
	Contact Material: Nil-AgSnO ₂ , 1-AgCdO
	Contact Form: M-Form A
	Coil Power: D-0.54W, L-0.25W
	Coil Voltage (VDC): 03, 05, 06, 09, 12, 18, 24, 48
	Number of Poles: 1-1 Pole
	Protective Construction: S-Flux proofed, SH-Sealed type washable
	Type Designation: SMA

Outline Dimensions, Wiring Diagram, P.C. Board Layout (unit: mm)



Unless otherwise specified:
 If dimension < 1mm, tolerance: ± 0.2 mm;
 If dimension 1~5mm, tolerance: ± 0.3 mm;
 If dimension > 5mm, tolerance: ± 0.4 mm.
 Note: 1. Extended terminal dimension is dimension before soldering.
 2. Tolerance of P.C.B. layout: ± 0.1 mm.

Typical Applications

- Home appliances, industrial control equipment, instrument

Characteristic Curves

