SANYOURELAYS
Relays for advanced technology

Miniature Power Relay

SJ-M(10A)-Series



Features

- Advanced DEC DQ 1U technology and production line was introduced into from Japan
- Small size(18.2*10.2*15.5mm)with 12A switching capability for high density PCB mounting
- Surge voltage 10000V (between coil and contact)
- Patent number : ZL 2008201888176 , ZL 2008201888180
- Satisfy IEC60335-1product is available.
- Satisfy IEC60079-15 product is available.

Safety Approval

UL, CUL-File No. : E190598
TUV File No. : R50142420
CQC File No. : CQC02001002114
VDE File : VDE 40002146

Contact Capacity

Model	SJ-DM	SJ-LM
Nominal switching capacity (res. load)	10A 250VAC	8A 277VAC
Max. switching current	12A	12A
Max. switching voltage	277VAC	277VAC
Max. switching power	3,324VA	3,324 VA

Characteristic Data

Contact material	Silveralloy	
Initial contact resistance (at 6VDC 1A)	100mΩ Max.(1A 6VDC)	
Operate time (at nominal volt .)	10msec. Max.(no diode)	
Release time (at nominal volt .)	5msec. Max. (no diode)	
Initial insulation resistance	1,000MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts : AC1,000V , 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 ~ 55Hzat double amplitude of 1.5 mm
Shock resistance	Functional	10G Min.
	Destructive	100GMin .
Endurance (operations)	Mechanical (at 10,800 ops./h)	10,000,000 (at room temperature)
	Electrical (at 360 ops./h)	100,000 (at room temperature)
Ambient temperature	-40℃ ~ +105℃ (no condensation)	
Unit weight	Approx.5.7 g	

Coil Data (at 20℃)

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	150.00	20	130% of nominal voltage	75% of nominal voltage	5% of nominal voltage	.Approx 0.45W
5	90.00	55				
6	75.00	80				
9	50.00	180				
12	37.50	320				
18	25.00	720				
24	18.75	1,280				

Coil Data (at 20℃)

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	66.67	45	130% of nominal voltage	75% of nominal voltage	5% of nominal voltage	.Approx 0.2W
5	40.00	125				
6	33.33	180				
9	22.22	405				
12	16.67	720				
18	14.81	1,620				
24	8.33	2,880				

Safety Approval Ratings

(Note:More detail of approval ratings,please refer to the safety certification)

Approval	CQC	TUV	VDE	UL/CUL
File No.	CQC02001002114	R50142420	40002146	E190598
Approved ratings	SJ-D 10A 250VAC 12A 125/250/277VAC SJ-L 8A 277VAC 12A 125/250/277VAC	SJ-D 10A 250VAC SJ-L 8A 277VAC	SJ-D 10A 250VAC SJ-L 8A 277VAC	SJ-D 10A 125VAC/250VAC,Resistive 10A 120VAC,Resistive 1/3 HP 240VAC TV-5,120VAC Poliot Duty:240VA,240VAC 12A/10A 125/250/277VAC,Resistive & General use SJ-L 8A 277VAC Resistive TV-5,120AVC Poliot Duty:120VA,240VAC 12A/10A 125/250/277VAC,Resistive & General use

(1) The above-mentioned unspecified temperature ratings, means that the ambient temperature is room temperature.

(2) Only some typical ratings are listed above. Each rating's test condition is different, so the electrical endurance will be different. If more details are required, please contact us.

(3) For sealed type testing, please open the ventilation hole of case before test.

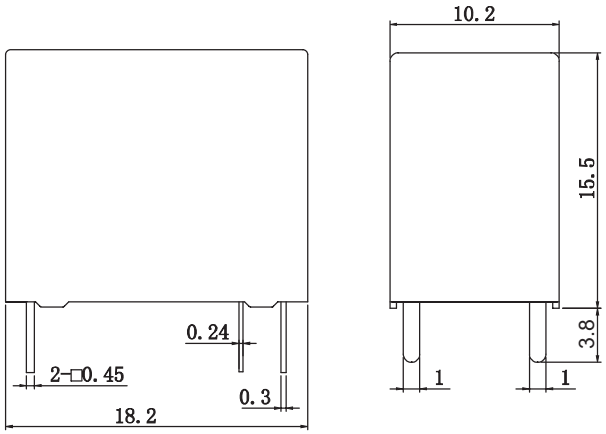
Ordering In formation

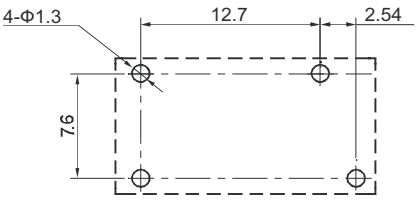
Nomenclature

SJ	- S	-1	12	D	M	H	1-	F-	XX	Special Parameter : Nil-Standard type, Letter or number-Special requirement
										Insulation System : Nil-Standard, B-ClassB, F-ClassF
										Contact Material : Nil-$AgSnO_2$, 1-AgCdO , 2-AgNi
										Load Capacity : H-12A,10A,8A(see note)
										Contact Form : M-FormA
										Coil Power : D-0.45W, L-0.2W
										Coil Voltage (VDC) : 03,05, 06, 09, 12, 18, 24
										Number of Poles : 1-1Pole
										Protective Construction : S-Flux proofed SH-Sealed type washable
										Type Designation : SJ

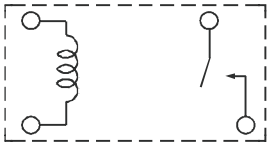
Note: when coil power is 0.45W, H stands for 10A,when coil power is 0.2W, H-stands for 8A;12 a maximum load certification.

Outline Dimensions, WiringDiagram , P.C. BoardLayout (unit : mm)

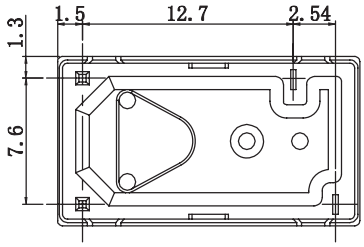




PCB . Layout (bottomview)



WiringDiagram (bottomview)



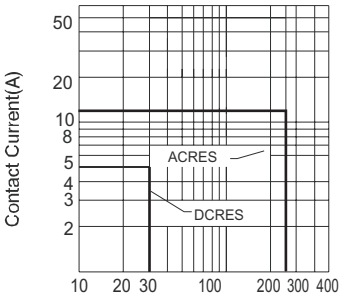
Unlessotherwisespecified :
Ifdimension < 1mm, tolerance : 0.2 mm;
Ifdimension 1~5mm, tolerance : 0.3 mm;
Ifdimension > 5mm, tolerance : 0.4 mm.
Note : 1. Extendedterminaldimensionisdimensionbeforesoldering .
2. Toleranceo fPCB. . layout : 0.1 mm.

Typical Applications

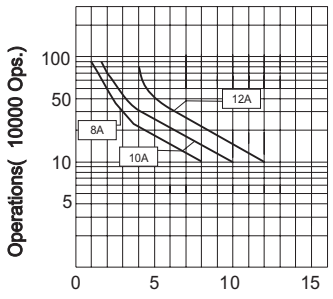
- Home appliances, officee quipment, audioe quipment, car, air conditioner, etc.

Characteristic Curves

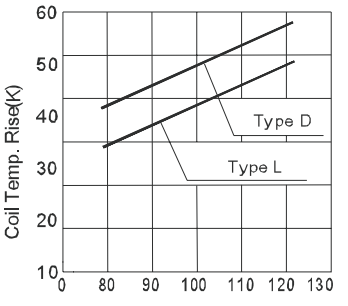
Max. SwitchingPower



Endurance Curve



CoilTemp . Rise



Disclaimer:
This datasheet is the customers' reference. All the specification are subject to change without notice.
We could not evaluate all the performance and all the parameters for every possible application.Thus the user should in a right position to choose the suitable product for their own application.For sealed relays after installation and cleaning, please open the vent hole on the case before use.If there is any query,please contact Sanyou for the technica service. However it is the user's responsibility to determine which product should be used only.

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