Solid State Relay
ASR-SJM Series Single Phase DC

ALTRAN MAGNETICS

- MOSFET Output
- Low Impedance
- 4-32VDC Control Input
- Load Current: 10A-50A
- Internal Over-voltage Protection
- LED Indicator
- RoHS Compliant

Product Description

SJM series industrial single phase relay with triac output is widely used in industry applications. The relay can be used for resistive, inductive or capacitive load. The control voltage is 4-32VDC, output current is rated at 10A, 16A or 25A.

Product Selection

ASR	–	SJM	50	D	40	W	-L	Q
	Packing -: Bulk A-Z	ASR- SJM Series	Load Voltage 30: 30VDC 50: 50VDC 60: 60VDC 100:100VDC 200: 200VDC	Control Voltage D:DC Control	Load Current 10: 10 Amp 20: 20 Amp 40: 40 Amp 50: 50 Amp	Control Voltage W: 4-32VDC	LED Indication Blank: Without LED L: With LED	Terminal Type Blank: Screw Q: Quick Connection

PART NUMBERS ARE AS FOLLOWS

	30VDC	50VDC	60VDC	100VDC	200VDC
10A			ASR-SJM60D10-L		ASR-SJ M200D10- L
20A			ASR-SJM60D20-L	ASR-SJ M100D20- L	
40A		ASR-SJM50D40-L			
50A	ASR-SJM30D50-L				

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Technical Specification

INPUT CIRCUIT (Ta=25˚C)						
Control Voltage Range	4-32VDC					
Must Turn-On Voltage	4VDC					
Must Turn-Off Voltage	1VDC					
Maximum Input Current	25mA@32VDC					
Maximum Transient Overvoltage	32VDC					
OUTPUT CIRCUIT (Ta=25˚C)						
Ordering Information	KSJM30D50-L	KSJM50D40-L	KSJM60D10-L	KSJM60D20-L	KSJM100D20-L	KSJM200D10-L
Transistor Voltage (VDC)	55	75	100	100	150	250
Load Voltage Range (VDC)	0-24	0-36	0-48	0-48	0-75	0-120
TVS Breakdown Voltage Scope (V)	37.1-41	53.2-58.8	64.6-71.4	64.6-71.4	105-116	190-210
Maximum Load Current (A)	50	40	10	20	20	10
Maximum Surge Current (Apk.@10ms)	150	120	30	30	60	30
Maximum On-State Resistance (mΩ)	4.2	12	14	14	13	60
Maximum Off-State Leakage Current @Rated Load Voltage (mA)	0.1					
Minimum Load Current (mA)	2					
Maximum Turn-on Time (ms)	0.3					
Maximum Turn-off Time (ms)	0.3					
General Specifications (TA=25˚C)						
Dielectric Strength (50/60Hz)	Input/Output	2500Vrms				
	Input, output/Base	2000Vrms				
Minimum Insulation Resistance (@500VDC)	1000MΩ					
Ambient Temperature Range	-30℃ ~ +80℃					
Storage Temperature Range	-30℃ ~ +100℃					
Weight (Typical)	35g					

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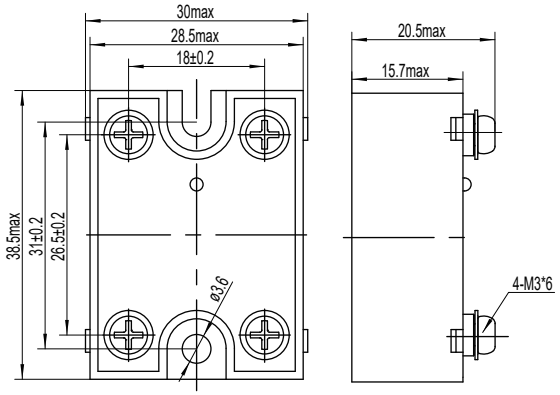
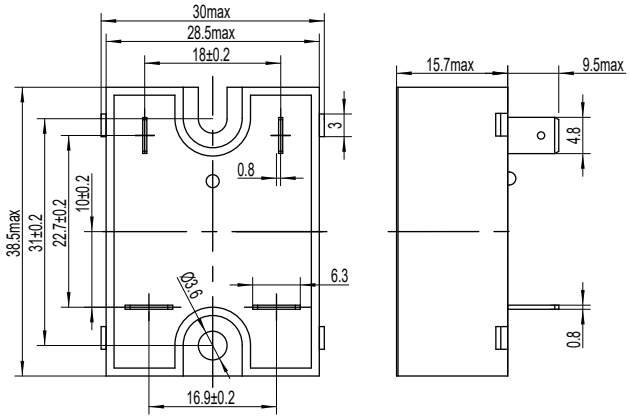
Application Note:
Control heating, DC power supplies, electromechanical valves, motors, medical equipment, etc.

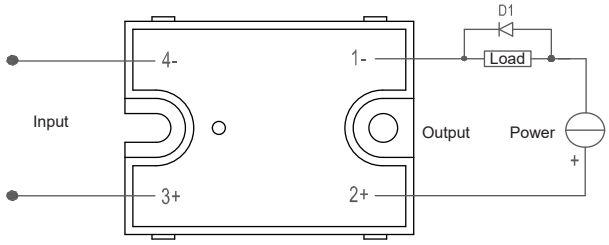
Outline Dimensions/ Wiring Diagram



Typical



With Quick Connector
Suffix with (-Q)



Wiring Diagram

When the relay is used for inductive load control, please be sure to use a suppression circuit, just like the drawing above. Both load terminals are inverse parallelled with a fly-wheel diode D1.
D1: Fast Recovery Diode

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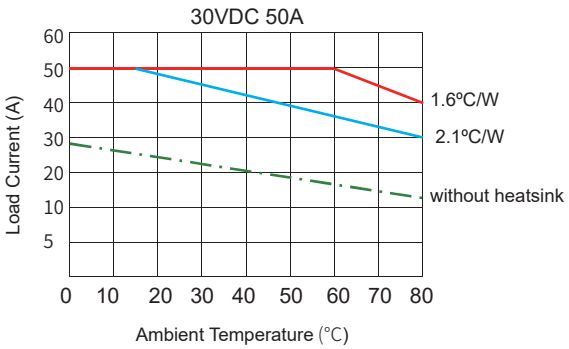
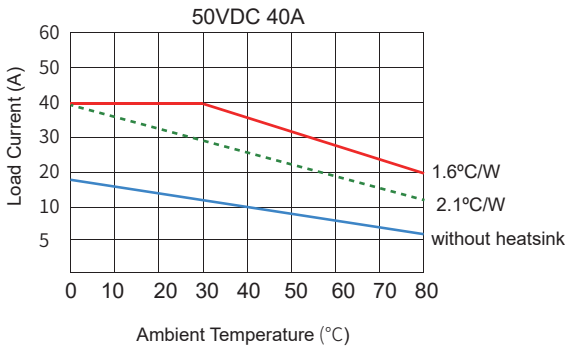
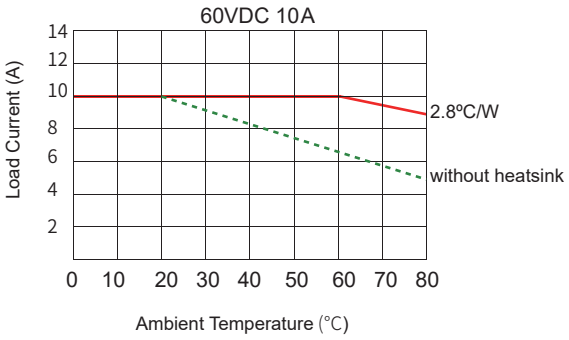
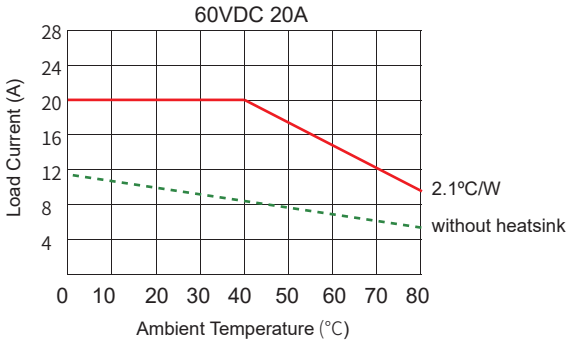
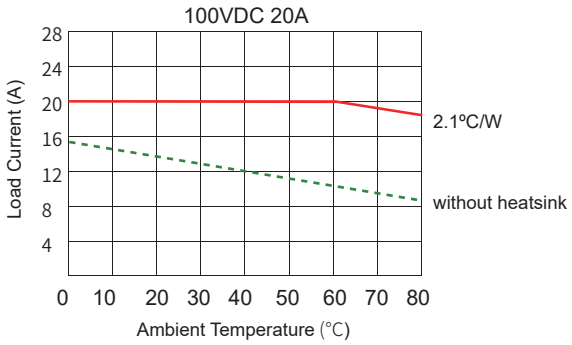
Thermal Curve

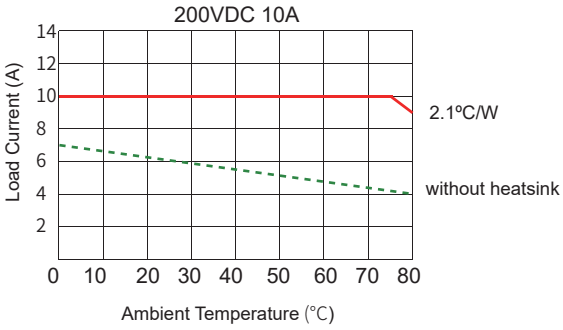












Important Notice

1. Relay must be mounted to proper sized beat sink based on thermal curves. Thermal grease or a thermal pad must be used between relay and heat sink and be torqued down to (13-15)/(1.5-1.7) in-lb/Nm.
2. When connection wiring to SSR, please ensure screws are torqued down properly. Recommended torque for input screw is (13-15)/(1.5-1.7) in-lb/Nm, output screw is (13-15)/(1.5-1.7) in-lb/Nm.
3. SSR's carrying load capacity is related to the operation ambient temperature and heat dissipation condition, please refer to the Thermal Derating Curve for derating.
4. Capacitive load will produce very high surge current at the moment of conduction, which may lead to the damage of solid state relay due to the excessive surge current. Therefore, if the actual load is capacitive, or the load has parallelled large capacitance, it is strongly recommended that NTC should be connected in series in the load loop to suppress surge current in order to avoid damage to the product.

Product Certification

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