

Product Data Sheet



- Zero Switching or Random-on
- Ratings from 25A-125A @ 48-660VAC
- SCR Output Or TRIAC Output
- DC Input
- Dielectric Strength 4000VACrms
- LED Indication
- Internal MOV/TVS Protection Circuit (optional)

Product Selection

MSR	—	SI	480	D	25	R	W	-L
	Packing - : Bulk Pack Y: Individual Pack	SI Series	Load Voltage 240:240VAC 380:380VAC 480:480VAC 600:600VAC	Control Voltage D:DC Control A:AC Control	Load Current 10:10Amp 15:15Amp 20:20Amp 25:25Amp 40:40Amp 60:60Amp 80:80Amp 100:100Amp 125:125Amp	Switching Mode Z:Zero Crossing R:Random-on	Control Voltage Blank:3-32VDC Y:90-280VAC W:4-32VDC	LED Blank: Without L: With LED

Product Description

-Q: Quick Connects, -V: IP20 Cover, -H: High Profile

Note:

- 1 The load current with -Q version is only available from 25A ~ 40A, 25A is TRIAC output and 40A.
- 2 The load current with -V version is only available from 80A ~ 125A.
- 3 The load current with -H version is available from 25A ~ 80A.
- 4 The load current of standard version is available from 25A ~ 60A, 25A is TRIAC output and 40A~60A.

MOV and TVS overvoltage protection, IP00 cover, and thermal pad options also available. Consult with engineering to determine which combinations are available.

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Technical Specification

INPUT CIRCUIT (TA=25°C)		
Control Voltage Range	AC Control	90-280VAC
	DC Control	4-32VDC
		3-32VDC
Must Turn-on Voltage	AC Control	90VAC
	DC Control	4VDC
Must Turn-off Voltage	AC Control	10VAC
	DC Control	1VDC
Maximum Input Current	AC Control	25mA(@280VAC/50Hz)
	DC Control	25mA(@32VDC)
OUTPUT CIRCUIT		
Load Voltage	240	48-280VAC
	380	24-440VAC
	480	48-530VAC
	600	48-660VAC
Load Current Range	10A	0.1-10A
	15A	0.1-15A
	20A	0.1-20A
	25A	0.1-25A
	40A	0.1-40A
	60A	0.1-60A
	80A	0.1-80A
	100A	0.1-100A
	125A	0.1-125A
Maximum Turn-on Time	Random-on (DC Control)	1ms
	Zero-on(DC Control)	10ms
	AC Input	40ms

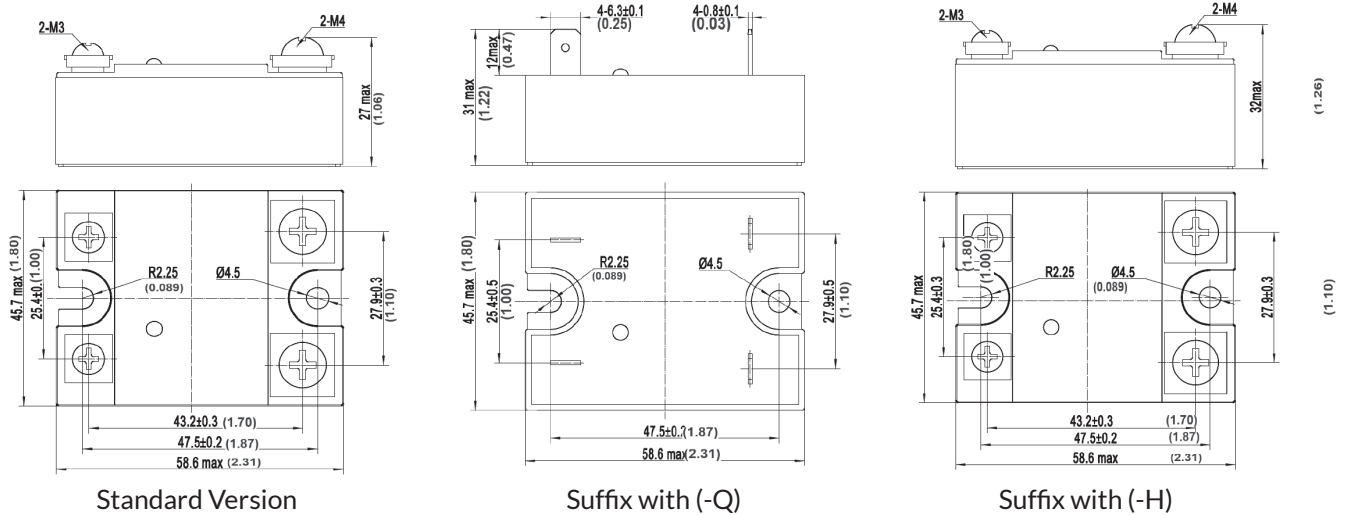
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Maximum Turn-off Time	AC Control	40ms
	DC Control	10ms
Maximum Surge Current [@10ms]	10A	120A
	15A	160A
	20A	200A
	25A	250A
	40A	500A
	60A	700A
	80A	1000A
	100A	1250A
	125A	1500A
Maximum I ² t For Fusing [@10ms]	40A	1250A ² S
	60A	2450A ² S
	80A	5000A ² S
	100A	7812A ² S
	125A	11250A ² S
Transient Overvoltage	MSR-SI240...-L...Series	600Vpk
	MSR-SI480...-L...Series	1200Vpk
	MSR-SI600...-L...Series	1600Vpk
Maximum operating voltage allowed by varistor	MSR-SI240...-LM...Series	300VAC
	MSR-SI480...-LM...Series	550VAC
	MSR-SI600...-LM...Series	680VAC
TVS Protection Voltage (Typical)	MSR-SI240...-LT...Series	480V
	MSR-SI480...-LT...Series	960V
	MSR-SI600...-LT...Series	1100V
Maximum Off-state Leakage Current [@ Rated Voltage]		10mA
Maximum On-state Voltage Drop [@ Rated Current]		1.7Vrms
Minimum Off-state dv/dt [@ Maximum Rated Voltage]	TRIAC Output	200V/μs
	SCR Output	500V/μs

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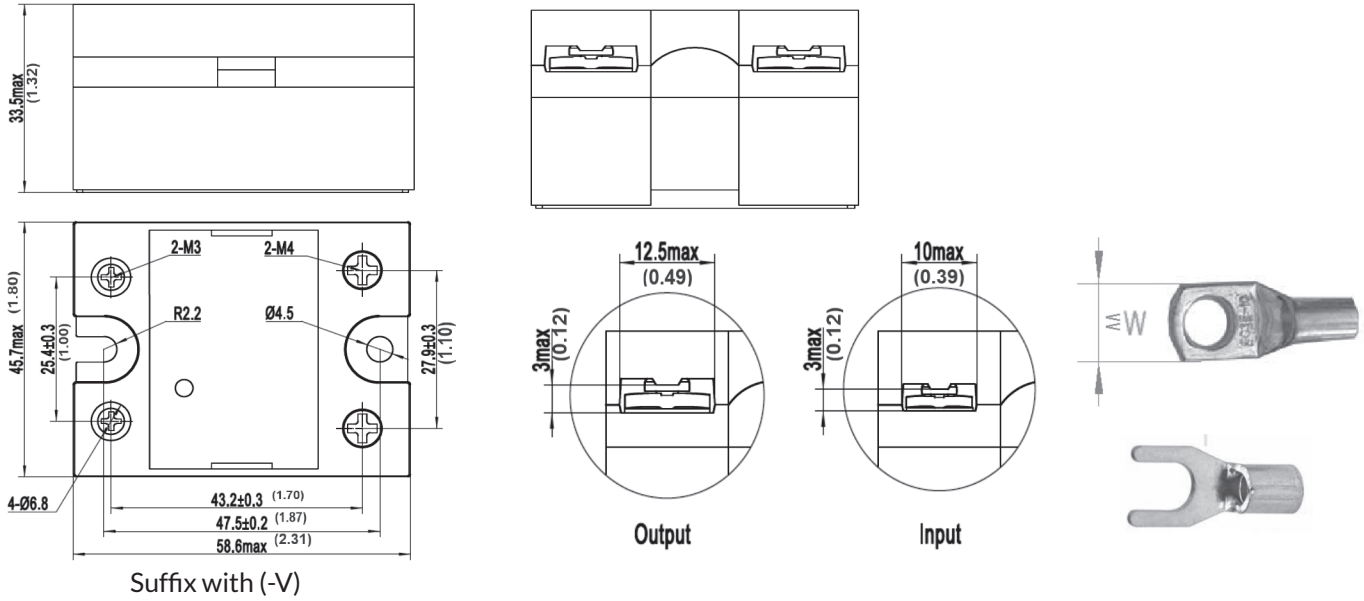
GENERAL INFORMATION		
Dielectric Strength [50/60Hz]	Input/Output	4000Vrms
	Input,Output/Base	2500Vrms
Insulation Resistance(@500VDC)		Input/Output
Ambient Operating Temperature Range		-30°C - +80°C
Ambient Storage Temperature Range		-30°C - +100°C
Weight [Typical]	Standard Version	96g
	Suffix with (-Q)	100g
	Suffix with (-V)	180g
	Suffix with (-H)	113g

Installation



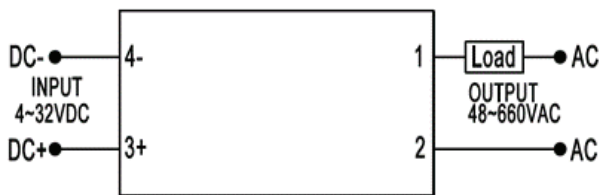
Solid State Relay MSR-SI Series Single Phase AC Output

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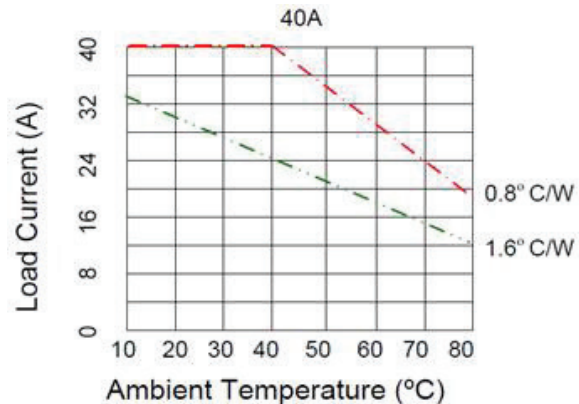
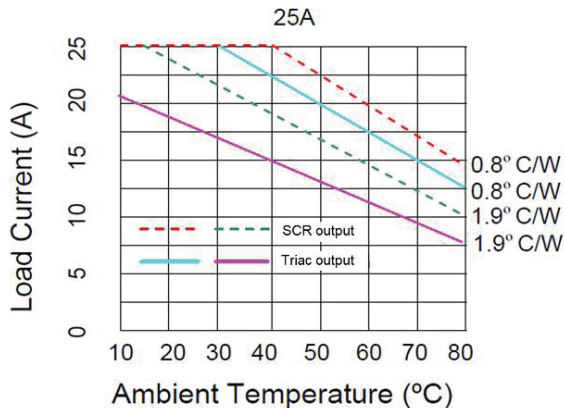


RING TERMINAL DIMENSIONS:	Input: W=9.5mm (0.37in) Max.	Output: W=12mm (0.47in) Max.
WIRE DIMENSION:	Input: 3mm ² (0.0046in ²) Max.	Output: 2x7mm ² (0.011in ²) Max.
TORQUE:	Input:(0.58-0.98)N·m, (5.13-8.67)in·lb	Output:(0.98-1.37)

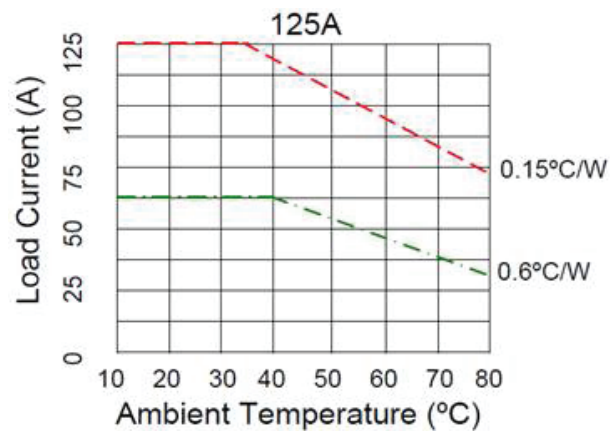
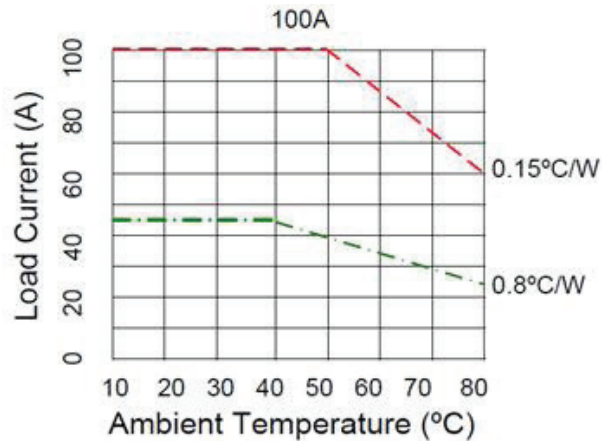
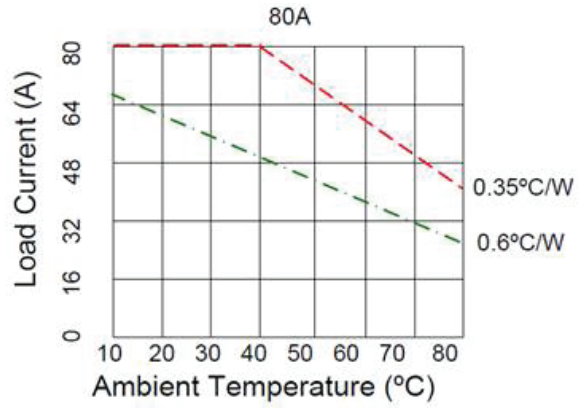
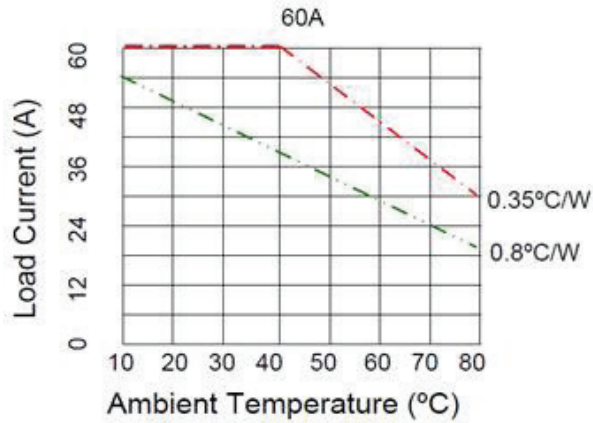
Connection:



Thermal Curve



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Attentions:

1. Relay must be mounted to proper sized heat sink based on thermal curves. Thermal grease or a thermal pad must be used between relay and heat sink and be torqued down to 18-20(in-lb), 2.0-2.2(N·m).
2. When connection wiring to SSR please ensure screws are torqued down properly: input 13-15(in-lb), 1.5-1.7(N·m); output 18-20(in-lb), 2.0-2.2(N·m).
3. When Ambient temperature is above 25°C see thermal derating curve.

Product Certification



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