

## Product Data Sheet



- Zero-crossing or Random-on Switching
- Rated Load Current:25A,40A,60A,80A
- SCR Output
- Dielectric Strength  $\geq 4000V_{rms}$
- Opto-isolation
- Internal RC/MOV Protection Circuit
- RoHS Compliant

### Product Description

SQF series is three phase AC output solid state relay, control voltage is 90-280VAC or 4-32VDC, load current range are 25A,40A,60A and 80A. Load voltage range 24-660VAC. SCR output. Dielectric strength  $\geq 4000V_{rms}$ (Input/Output),  $\geq 2500V_{rms}$ (Input,Output/Base).

### Product Selection

MSR	-	SQF	480	D	25	R	W	-P
	Packing - : Bulk Packing A-Z	SQF Series	Load Voltage 480:480VAC 600:600VAC	Control Voltage Type D:DC Control A:AC Control	Load Current 25:25Amp 40:40Amp 60:60Amp 80:80Amp	Switching Mode Z: Zero Crossing R: Random-on	Control Voltage Y:90-280VAC W:4-32VDC	Thermal Pad Blank: Without -P:With

### Technical Specification

INPUT CIRCUIT		
Control Voltage Range	AC Control	90-280VAC
	DC Control	4-32VDC
Must Turn-on Voltage	AC Control	90VAC
	DC Control	4VDC
Must Turn-off Voltage	AC Control	15VAC
	DC Control	1VDC
Maximum Reverse Voltage	DC Control	32VDC
Maximum Input Current	AC Control	30 mA@280VAC
	DC Control	35 mA@32VDC

**Product Data Sheet**

OUTPUT CIRCUIT		
Load Voltage Range	480V	24 -530VAC
	600V	24 -660VAC
Maximum Turn-on Time	AC Control	40ms
	DC Control	Zero Crossing      10ms
		Random-on      1ms
Maximum Turn-off Time	AC Control	20ms
	DC Control	10ms
Maximum Surge Current (@10ms)	25A	300A
	40A	500A
	60A	860A
	80A	1280A
Transient Overvoltage	480V	1200Vpk
	600V	1600Vpk
Maximum I <sup>2</sup> t For Fusing [@10ms]	40A	1250A <sup>2</sup> S
	60A	3698A <sup>2</sup> S
	80A	8192A <sup>2</sup> S
Maximum Off-State Leakage Current [@ Rated Voltage]		200V/μs
Maximum On-State Voltage Drop [@ Rated Current]		1.6Vrms
Minimum Off-State dv/dt [@ Maximum Rated Voltage]		≥500 V/μs

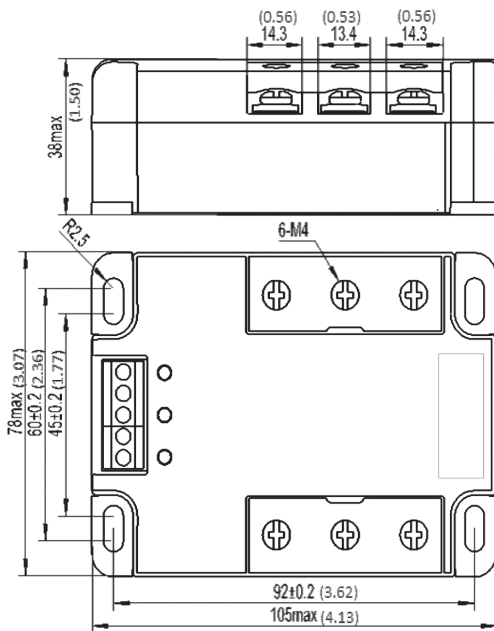
## Product Data Sheet

GENERAL INFORMATION		
Dielectric Strength [50/60Hz]	Input/Output	$\geq 4000\text{Vrms}$
	Input,Output/Base	$\geq 2500\text{Vrms}$
Ambient Operating Temperature Range		$-30^{\circ}\text{C} - +80^{\circ}\text{C}$
Ambient Storage Temperature Range		$-30^{\circ}\text{C} - +100^{\circ}\text{C}$
Weight [Typical]	25A, 40A	385g
	60A,80A	520g

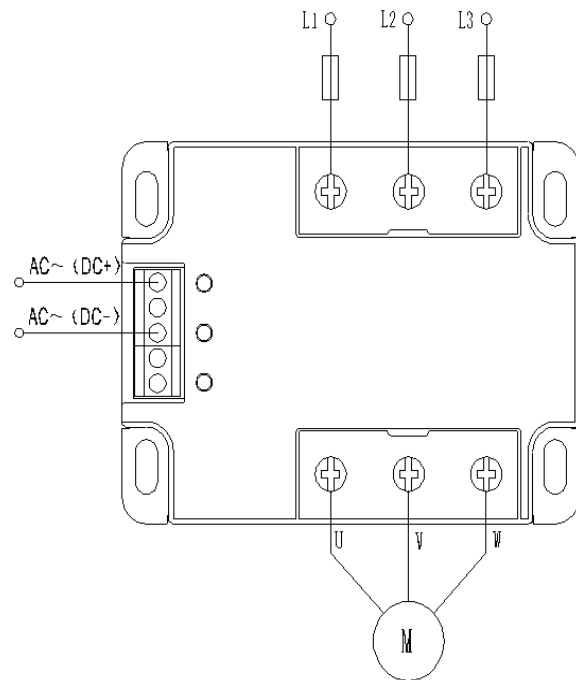
### Application Note:

Suitable for three phase motor control, temperature control, large oven, and etc.

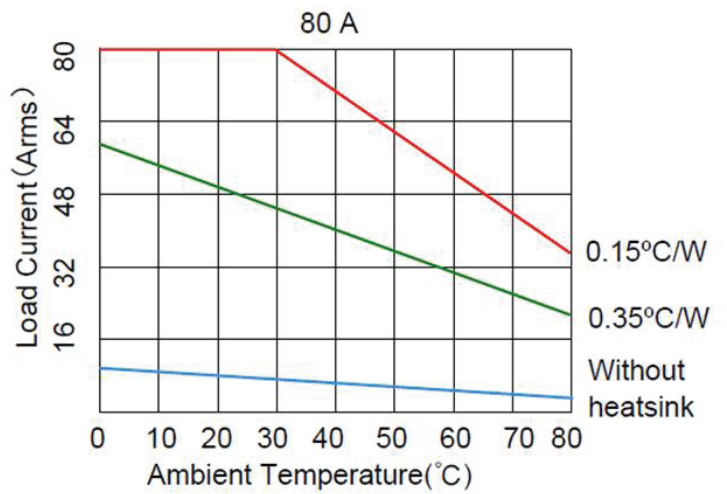
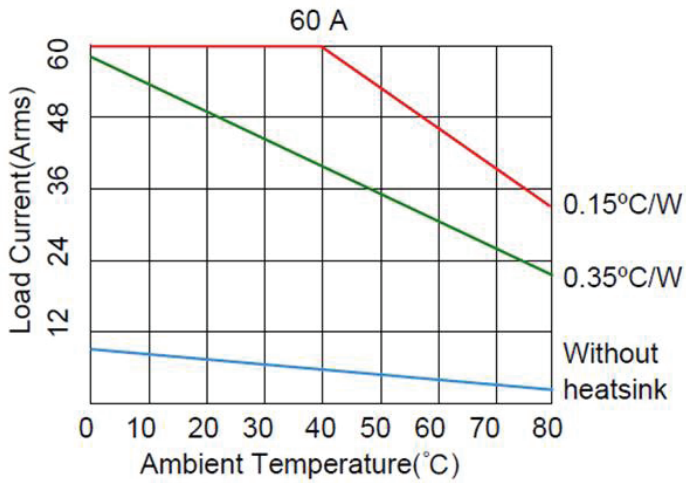
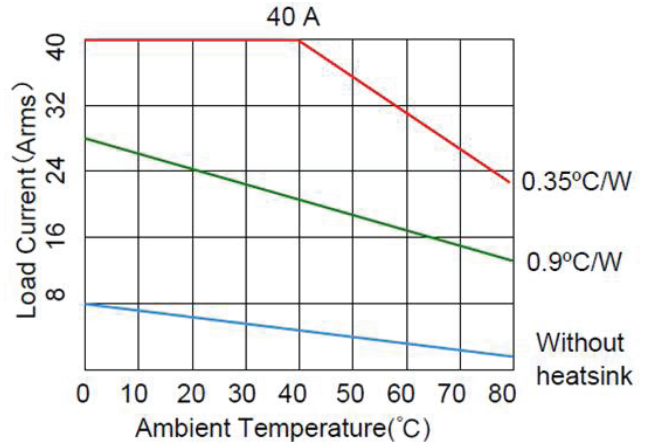
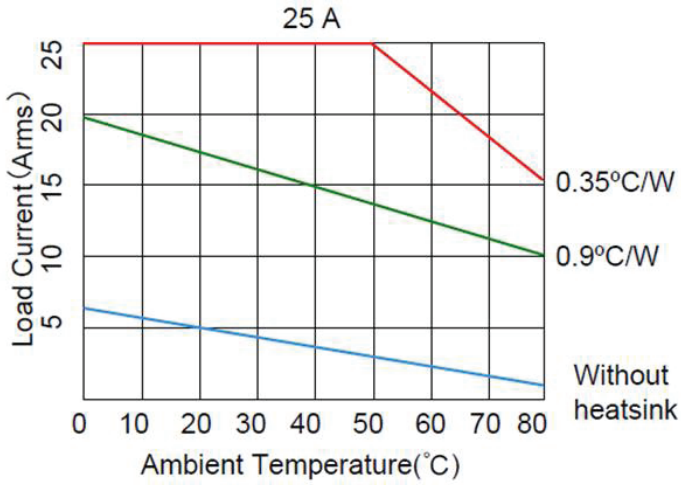
### Installation



### Wiring Diagram



**Thermal Curve**



**Attentions:**

1. If the connection of the load will produce high surge current, please pay attention to the solid state relay and see if it is able to withstand the surge current value.
2. When the operation temperature is high, please consider the derating as per the thermal curve.

**Product Certification**



Note: (1) No TÜV for AC input.

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