SSRM Series

45-65A DIN Mount Solid State Relay With Paired SCR Output, Integral Heatsink

cULusFile E29244

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to confirm the product meets the requirements for a given application.

Features

- DIN mount design with integral heatsink.
- Choice of 45, 55 or 65A rms inverse-parallel connected SCR output.
- 48 - 660VAC output.
- 4 -32VDC or 90 - 140Vrms input control.
- 4000V rms optical isolation.
- Green LED input status indicator.
- Finger-safe (IP20) screw clamp terminals for load and control.
- B-to-B SCR.
- Zero Turn-ON voltage.
- Ground terminal.

Engineering Data

Form: 1 Form A (SPST-NO).
Duty: Continuous.
Isolation: 4000V rms input-to-output-to-ground.
Insulation Resistance: 10^9 Ohms, minimum, at 500VDC.
Capacitance: 8.0 pf maximum (input to output).
Temperature Range:
Storage: –40°C to +125°C
Operating: –40°C to + 80°C
Case and Mounting: Refer to outline dimension drawing.
Termination:
Control: Finger safe (IP20) screw clamps accepting wire size up to #12 AWG (2.5 mm).
Load: Finger safe (IP20) screw clamps accepting wire size up to #8 AWG (3.8 mm).
Ground: #10 screw with 5/16 in. hex/slottted head.
Installation Spacing: Minimum 0.8 in (20 mm) space between units.
Approximate Weight: 16.9 oz. (479 g).

Ordering Information

Typical Part Number	SSRM	-600	A	55

1. Basic Series: SSRM = Solid State Relay with Integral Heatsink for DIN Rail Mounting

2. Line Voltage: 600 = 48 - 660 VAC

3. Input Type & Voltage: A = 90 - 140VAC
D = 4 - 32VDC

4. Maximum Switching Rating/Output: 45 = 45.0A rms
55 = 55.0A rms
65 = 65.0A rms

Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.

SSRM-600A45	SSRM-600A55	SSRM-600A65
SSRM-600D45	SSRM-600D55	SSRM-600D65

Input Specifications

Parameter	Conditions	AC Control Units	DC Control Units
Control Voltage Range V_{IN}	@ 25°C	90 - 140 Vrms	4.0 - 32 VDC
Reverse Voltage V_{IN} (Max.)	@ 25°C	—	32 VDC
Must Operate Voltage $V_{IN(OP)}$ (Min.)	@ 25°C	90 Vrms	4.0 VDC
Must Realease Voltage $V_{IN(REL)}$ (Min.)	@ 25°C	10 Vrms	1.0 VDC
Input Current (Typical)	@ 25°C	15 mA @ 120 Vrms	14 mA @ 5 VDC
Input Current (Max.)	@ 25°C	—	30 mA

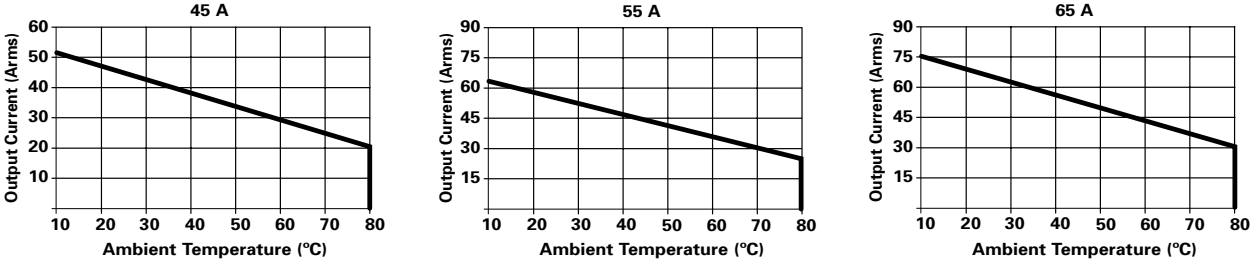
SSRM Series (Continued)

Output Specifications (@ 25° C, unless otherwise specified)

Parameter	Conditions	Units	45A Rated Units	55A Rated Units	65A Rated Units
Load Voltage Range V_L	f = 47 - 63 Hz.	V rms	48 - 660	48 - 660	48 - 660
Repetitive Blocking Voltage (Min.)		V peak	±1200	±1200	±1200
Load Current Range I_L*		A rms	0.15 - 45.0	0.25 - 55.0	0.25 - 65.0
Single Cycle Surge Current (Min.)		A peak	625	1,000	1,200
Leakage Current (Off-State) (Max.)	f = 60 Hz. V_L = 600Vrms	mA rms	1.0	1.0	1.0
Thermal Resistance Junction to Case $R_{\theta J-C}$(Max.)		°C/W	0.63	0.31	0.28
On-State Voltage Drop (Max.)	I_L = Max.	V peak	1.7	1.7	1.7
Static dv/dt (Off-State) (Min.)	V_L = Max.	V/µs	500	500	500
Turn-On Time (Max.)	f = 60 Hz.	ms	8.3 for DC Input Models, 10.0 for AC Input Models		
Turn-Off Time (Max.)	f = 60 Hz.	ms	8.3 for DC Input Models, 40.0 for AC Input Models		
I^2t Rating (Max.)	t = 8.3 ms	A^2 Sec.	1,620	4,150	6,000
Load Power Factor Rating (Min.)	I_L = Max.		0.5	0.5	0.5

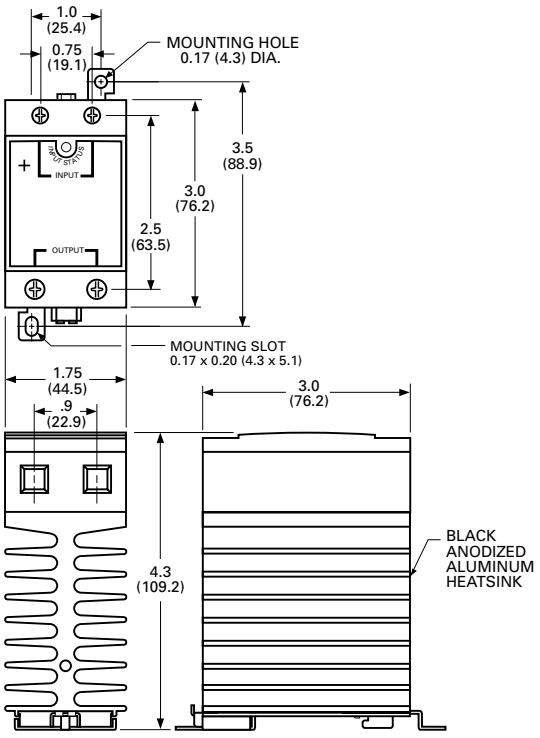
*See Thermal Derating Curves.

Electrical Characteristics (Thermal Derating Curves)



Product Code	Part Number
SSRM-600A45	7-1393030-5
SSRM-600A55	7-1393030-6
SSRM-600A65	7-1393030-7
SSRM-600D45	7-1393030-2
SSRM-600D55	7-1393030-3
SSRM-600D65	7-1393030-4

Outline Dimensions



Recommended Torque Range for Terminal Screws:
Control: 5 - 6 in lb (0.6 - 0.7 Nm).
Output: 10 - 15 in lb (1.1 - 1.7 Nm).

To view Solid-State relay application notes click here