



SSRM Series

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

US File 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.
- 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/slotted 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 Release 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

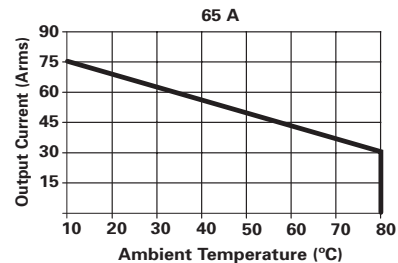
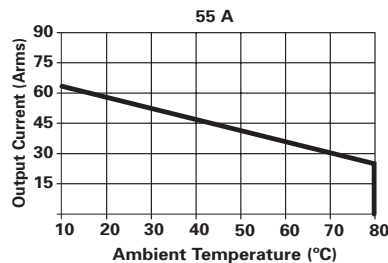
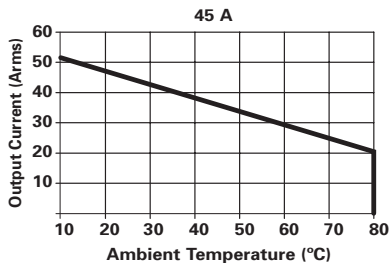
SSRM Series (Continued)

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

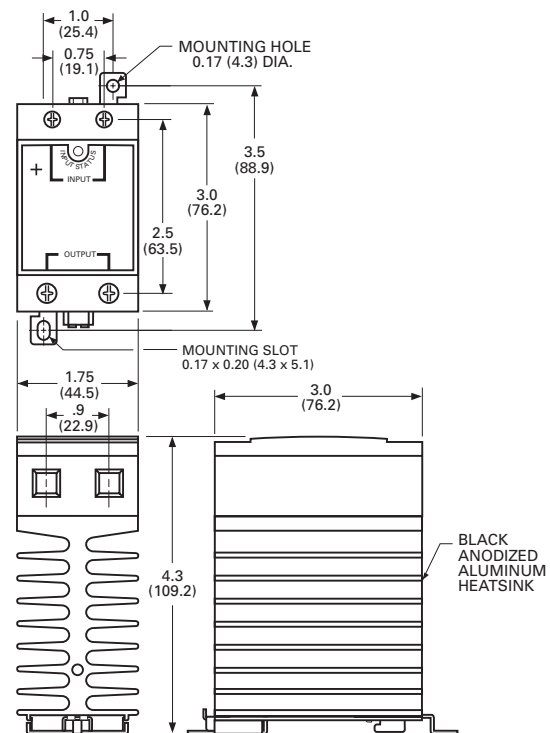
Parameter	Conditions	Units	45A Rated Units	55A Rated Units	65A Rated Units
Load Voltage Range V_L	$f = 47 - 63 \text{ Hz.}$	V rms	48 - 660	48 - 660	48 - 660
Repetitive Blocking Voltage (Min.)		V peak	±1200	±1200	±1200
Load Current Range I_L^*		A rms	0.15 - 45.0	0.25 - 55.0	0.25 - 65.0
Single Cycle Surge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

*See Thermal Derating Curves.

Electrical Characteristics (Thermal Derating Curves)



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).