



SSRM Series

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

UL 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:** 10⁹ 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

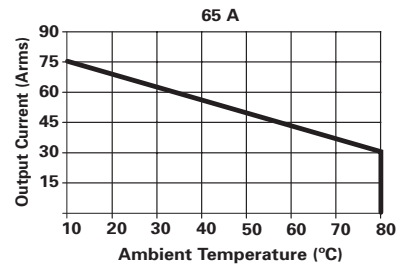
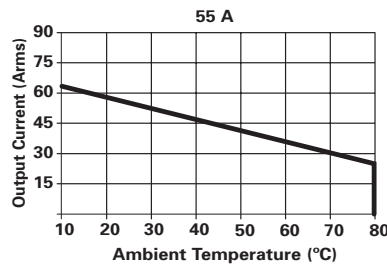
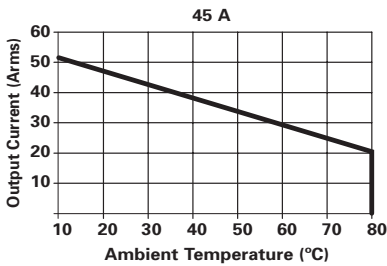
SSRM Series (Continued)

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

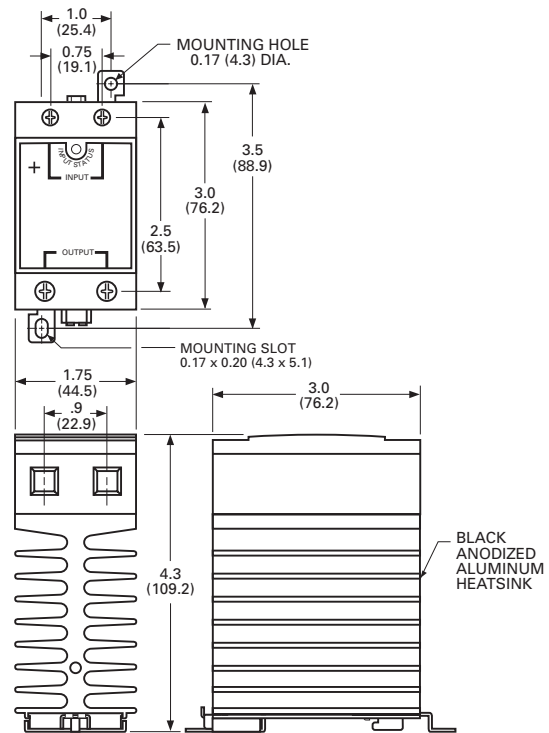
Parameter	Conditions	Units	45A Rated Units	55A Rated Units	65A Rated Units
Load Voltage Range V_L	$f = 47 - 63 \text{ Hz.}$	V rms	48 - 660	48 - 660	48 - 660
Repetitive Blocking Voltage (Min.)		V peak	±1200	±1200	±1200
Load Current Range I_L^*		A rms	0.15 - 45.0	0.25 - 55.0	0.25 - 65.0
Single Cycle Surge 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).