

SSRC Series

5A SIP Solid State Relay With Paired SCR Output

cULusFile E81606

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

- SIP package permits high density population of PC board.
- 5A rms inverse-parallel connected SCR output.
- Choice of 240 or 480VAC nominal output.
- 3-15 / 4-15VDC input control.
- Zero voltage and random voltage turn-on versions.
- 4000V rms optical isolation.
- Pinout compatible with OAC or OACM series output modules.

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: 10.0 pf maximum (input to output).
Temperature Range:
Storage: –30°C to +125°C
Operating: –30°C to + 80°C
Case Material: Thermally conductive epoxy encapsulation.
Case and Mounting: Refer to outline dimension drawing.
Termination: Printed circuit terminals. Refer to outline dimension drawing.
Approximate Weight: .0.4 oz. (11g).

Ordering Information

Typical Part Number	SSRC	-240	D	5	R

1. Basic Series: SSRC = Miniature SIP Solid State Relay

2. Line Voltage: 240 = 24 - 280 VAC
480 = 48 - 660 VAC (Motor Controller – 480Vac, General Use -660Vac)

3. Input Type & Voltage: D = 3 - 15VDC (240V output types) or 4 - 15VDC (480V output types)

4. Maximum Switching Rating/Output: 5 = 5.0A rms

5. Options: Blank = Zero voltage turn-on
R = Random voltage turn-on

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

SSRC-240D5 SSRC-480D5
SSRC-240D5R SSRC-480D5R

Input Specifications

Parameter	Conditions	Units	240V Output, Zero or Random V Turn-on	480V Output Units, Zero or Random V Turn-on
Control Voltage Range V_{IN}	@ 25°C	VDC	3 -15	4 -15
Must Operate Voltage $V_{iN(OP)}$ (Min.)	@ 25°C	VDC	3.0	4.0
Must Release Voltage $V_{iN(REL)}$ (Min.)	@ 25°C	VDC	1.0	1.0
Input Current @ 5 VDC (Typ.)	@ 25°C	mA DC	15	15
Input Impedance (Nom.)	@ 25°C	ohms	300	240

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Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

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SSRC Series (Continued)

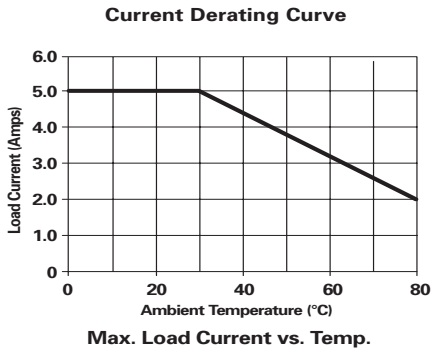
Output Specifications (@ 25° C, unless otherwise specified)

Parameter	Conditions	Units	240V Nom. Output Units	480V Nom. Output Units
Load Voltage Range V_L	f = 47 - 63 Hz.	V rms	12 - 280	48 - 660*
Repetitive Blocking Voltage (Min.)		V peak	±600	±600
Load Current Range I_L *		A rms	.06 - 5.0	.06 - 5.0
Single Cycle Surge Current (Min.)		A peak	250	250
Leakage Current (Off-State) (Max.)	f = 60 Hz. V_L = 280Vrms	mA rms	0.1	0.1
On-State Voltage Drop (Max.)	I_L = Max.	V peak	1.4	1.4
Static dv/dt (Off-State) (Min.)	V_L = Max.	V/µs	500	500
Turn-On Time (Max.)	f = 60 Hz.	ms	8.3 for Zero Voltage Turn-On Models 0.1 for Random Voltage Turn-On Models	8.3 for Zero Voltage Turn-On Models 0.1 for Random Voltage Turn-On Models
Turn-Off Time (Max.)	f = 60 Hz.	ms	8.3	8.3
I^2t Rating	t = 8.3 ms	A Sec. ^{2}	260	260
Load Power Factor Rating (Min.)	I_L = Max.		0.5	0.5

*see Thermal Derating Curves

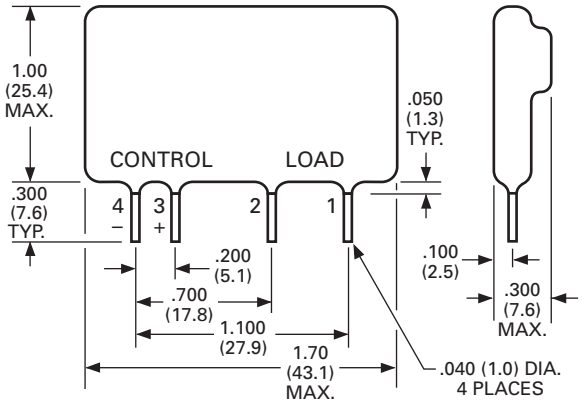
*Motor Controller – 480Vac, General Use -660Vac

Electrical Characteristics (Thermal Derating Curves)



Max. Load Current vs. Temp.

Outline Dimensions



Product Code	Part Number
SSRC-240D5	5-1393030-8
SSRC-240D5R	6-1393030-0
SSRC-480D5	5-1393030-9
SSRC-480D5R	6-1393030-1

PIN ASSIGNMENTS:

PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: +DC INPUT
PIN 4: -DC INPUT

To view the Solid-State relay application notes click here

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