SSRK Series

10-30A DIN Mount Solid State Relay With Paired SCR Output, Integral Heatsink

c**UL**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 ensure the product meets the requirements for a given application.

Features

• Narrow (22.5mm), DIN mount design with integral heatsink.
• Choice of 10, 20 or 30A rms inverse-parallel connected SCR output.
• 24-240VAC and 48-660VAC output types.
• 3 - 32VDC, 4 - 32VDC or 90 - 280Vrms 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: –30°C to +100°C
    Operating: –30°C to + 80°C
Case and Mounting: Refer to outline dimension drawing.
Termination:
    Load & Control: Finger safe (IP20) screw clamps accepting wire size up to #10 AWG (3 mm).
    Ground: #10 screw with 5/16 in. hex/slottted head.
Installation Spacing: Minimum 0.8 in (20 mm) space between units.
Approximate Weight: 9.87 oz. (280g).

Ordering Information

	Typical Part Number >	**SSRK**	**–600**	**A**	**30**

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

2. Line Voltage: 240 = 24 - 240 VAC
600 = 48 - 660 VAC

3. Input Type & Voltage: A = 90 - 280 VAC
D = 3 - 32VDC for 240V / 4 - 32VDC for 600V

4. Maximum Switching Rating / Output: 10 = 10.0A rms
20 = 20.0A rms
30 = 30.0A rms

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

SSRK-240A20	SSRK-240A30	SSRK-600A30
SSRK-240D20	SSRK-240D30	SSRK-600D30

Input Specifications

Parameter	Conditions	AC Control Units	DC Control Units	
			240 V	**600V**
Control Voltage Range VIN	@25°C	90 - 280 Vrms	3 -32 VDC	4 -32 VDC
Must Operate Voltage VIN(OP) (Min.)	@25°C	90 Vrms	3 VDC	4 VDC
Must release Voltage VIN(REL) (Min.)	@25°C	10 Vrms	1 VDC	1 VDC
Input Current Range(Typ.)	@25°C	7.5mA @ 120 Vrms, 16mA @ 240 Vrms	18mA @ 5Vdc	9.5 - 30 mA

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

Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at http://relays.te.com/definitions

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.
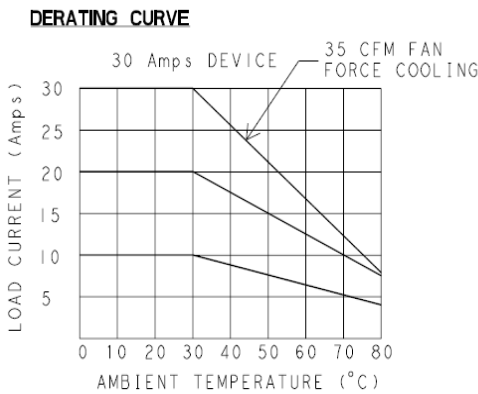
SSRK Series (Continued)

SCR Output Modules

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

Parameter	Conditions	Nom. Line Voltage	Units	10A Rated Units	20A Rated Units	30A Rated Units
Load Voltage V_L	f = 47 - 63Hz	240 V model	V rms	24 - 240	24 - 240	24 - 240
		600 V model	V rms	48 - 660	48 - 660	48 - 660
Repetitive Blocking Voltage (Min.)		240 V model	V peak	600	600	600
		600 V model	V peak	1200	1200	1200
Load Current I_L*		240 V & 600 V model	A rms	0.15 - 10	0.15 - 20	0.15 - 30
Single Cycle Surge Current (Min.)		240 V model	A peak	83	300	800
		600 V model	A peak	300	300	800
Leakage Current (Off-State) (Max.)	f = 60Hz. - V_L = 600V_{rms}	240 V & 600 V model	mA rms	5	5	5
On-State Voltage Drop (Max.)	I_L=Max.	240 V model	V peak	1.8	1.8	1.8
		600 V model	V peak	1.6	1.6	1.8
Static dv / dt (Off-State) (Min.)	V_L=Max.	240 V model	V/µs	200	300	500
		600 V model	V/µs	300	300	500
Turn-On Time (Max.)	f = 60Hz.	240 V & 600 V model	ms	10 for DC Input Models, 40 for AC Input Models		
Turn-Off Time (Max.)		240 V & 600 V model	ms	10 for DC Input Models, 80 for AC Input Models		
I^2t Rating (Max.)	t = 8.3 ms	240 V model	A²s	41	510	3745
		600 V model	A²s	510	510	3745
Load Power Factor Rating (Min.)	I_L=Min.	240 V & 600 V model		0.5	0.5	0.5

* See Derating curve

Electrical Characteristics (Thermal Derating Curves)

Outline Dimensions

DIMENSION IN mm