



## SSRK Series

### 10-30A 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 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.
- B-to-B SCR and Snubber circuit.
- 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<sup>9</sup> 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/slotted 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

**SSRK Series** (Continued)

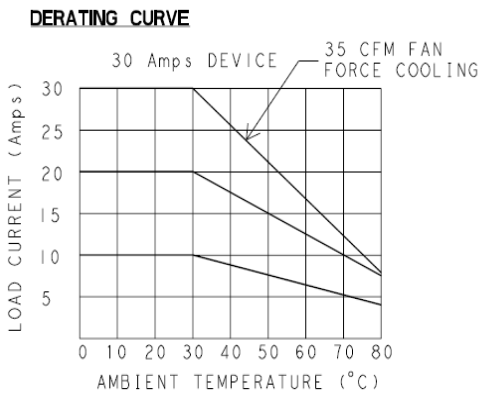
**SCR Output Modules**

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

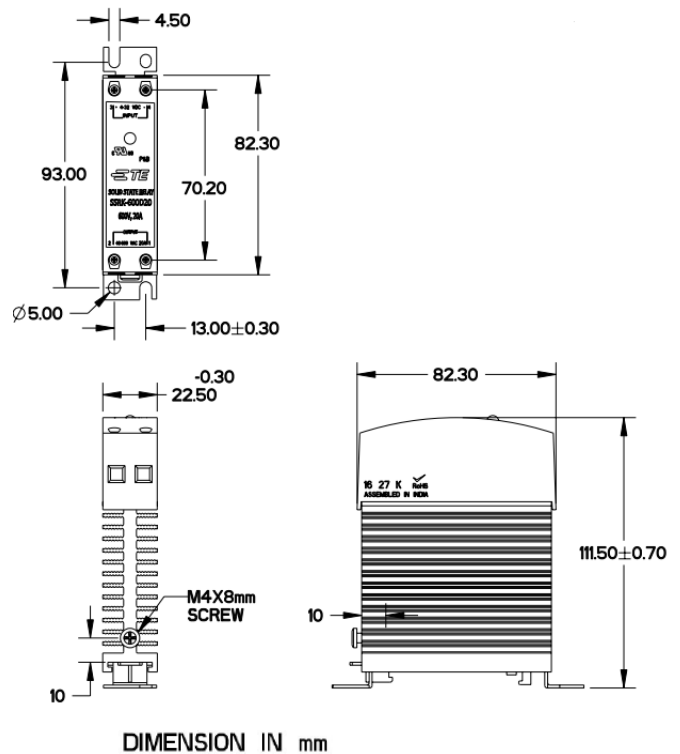
Parameter	Conditions	Nom. Line Voltage	Units	10A Rated Units	20A Rated Units	30A Rated Units
Load Voltage $V_L$	$f = 47 - 63\text{Hz}$	240 V model	V rms	24 - 240	24 - 240	24 - 240
		600 V model	V rms	48 - 660	48 - 660	48 - 660
Repetitive Blocking Voltage (Min.)		240 V model	V peak	600	600	600
		600 V 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.)	$f = 60\text{Hz}$ - $V_L = 600V_{\text{rms}}$	240 V & 600 V model	mA rms	5	5	5
On-State Voltage Drop (Max.)	$I_L = \text{Max.}$	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.)	$V_L = \text{Max.}$	240 V model	V/ $\mu\text{s}$	200	300	500
		600 V model	V/ $\mu\text{s}$	300	300	500
Turn-On Time (Max.)	$f = 60\text{Hz}$	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 <sup>2</sup> t Rating (Max.)	$t = 8.3 \text{ ms}$	240 V model	A <sup>2</sup> s	41	510	3745
		600 V model	A <sup>2</sup> s	510	510	3745
Load Power Factor Rating (Min.)	$I_L = \text{Min.}$	240 V & 600 V model		0.5	0.5	0.5

\* See Derating curve

**Electrical Characteristics (Thermal Derating Curves)**



**Outline Dimensions**



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**SSRK Series** (Continued)

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Product Code	Part Number
SSRK-600A10	6-1393030-9
SSRK-600A20	7-1393030-0
SSRK-600A30	7-1393030-1
SSRK-600D10	6-1393030-6
SSRK-600D20	6-1393030-7
SSRK-600D30	6-1393030-8
SSRK-240A10	4-1393030-8
SSRK-240A20	9-1393030-0
SSRK-240A30	9-1393030-1
SSRK-240D10	9-1393030-2
SSRK-240D20	9-1393030-3
SSRK-240D30	9-1393030-4

**To view Solid-State relay application notes click here**