# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

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• Narrow (22.5mm), DIN mount design with integral heatsink.

• Finger-safe (IP20) screw clamp terminals for load and control.

• 3 - 32VDC, 4 - 32VDC or 90 - 280Vrms input control.

• 24-240VAC and 48-660VAC output types.

• Choice of 10, 20 or 30A rms inverse-parallel connected SCR output.

## **SSRK Series**

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

c Sus 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.

#### **Engineering Data**

Form: 1 Form A (SPST-NO). Duty: Continuous. Isolation: 4000V rms input-to-output-to-ground. Insulation Resistance: 10º 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.

**Installation Spacing:** Minimum 0.8 in (20 mm) space between u **Approximate Weight:** 9.87 oz. (280g).

#### **Ordering Information**

• 4000V rms optical isolation.

Ground terminal.

• Green LED input status indicator.

Features

	Typical Part Number >	SSRK	-600	Α	30
1. Basic Series: SSRK = Slim Solid State Relay with Integral Heatsink for DIN F	Rail Mounting				
<b>2. Line Voltage:</b> 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					I
20 = 20.0A rms					
30 = 30.0 A rms					

 SSRK-240A20
 SSRK-240A30
 SSRK-600A30

 SSRK-240D20
 SSRK-240D30
 SSRK-600D30

#### Input Specifications

Parameter	Conditions	AC Control Units	DC Control Units		
	Conditions	AC Control Onits	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 <a href="http://relays.te.com/definitions">http://relays.te.com/definitions</a>

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.



## SSRK Series (Continued)

# **SCR Output Modules**

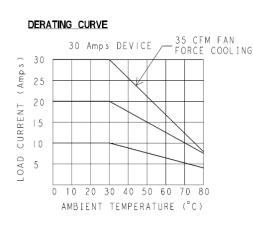
Output Specifications (@ +25°C unless otherwise specified)

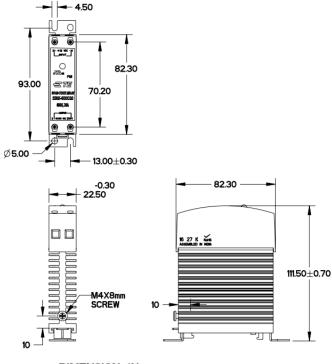
Parameter	Conditions	Nom. Line Voltage	Units	10A Rated Units	20A Rated Units	30A Rated Units		
Load Voltage VL	f = 47 - 63Hz	240 V model	V rms	24 - 240	24 - 240	24 - 240		
		600 V model	V rms	48 - 660	48 - 660	48 - 660		
Repetitive Blocking Voltage (Min.)		240 V model	V peak	600	600	600		
		600 V model	V peak	1200	1200	1200		
Load Current I∟*		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 VL = 600Vrms	240 V & 600 V model	mA rms	5	5	5		
On-State Voltage Drop (Max.)	I∟=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.)	VL=Max.	240 V model	V/µs	200	300	500		
		600 V model	V/µs	300	300	500		
Turn-On Time (Max.)	£ 0011-	240 V & 600 V model	ms	10 for DC Inpu	ut Models, 40 for A0	C Input Models		
Turn-Off Time (Max.)	f = 60Hz.	240 V & 600 V model	ms	10 for DC Inpu	10 for DC Input Models, 80 for AC Input Models			
I²t Rating (Max.)	t = 8.3 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∟=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

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