

SSRD series

Dual AC Output "Hockey Puck" Solid State Relay With Paired SCR Outputs

Nus File 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 ensure the product meets the requirements for a given application.

Features

- Two independent AC output solid state relays in one
- standard package.
- · Enhanced noise immunity (designed to meet level 3 requirements of European EMC Directive).
- Inverse parallel SCR outputs
- 25A rms & 40A rms versions available.
- Choose from 4-15 VDC or 17-32 VDC input control.
- · Zero voltage and random voltage turn-on versions.
- 4000V rms optical isolation.
- Quick connect style terminals

Engineering Data

Form: 2 Form A (2 SPST-NO). Duty: Continuous. Isolation: 4000V rms input-to-output; 2500V rms input or output to ground. Capacitance: 8.0 pf typical (input to output). Temperature Range: Storage: -40°C to +100°C **Operating:** -40°C to + 80°C **Case Material:** Plastic, UL rated 94V-0. Case and Mounting: Refer to outline dimension. Termination: Refer to outline dimension. Approximate Weight: 3.5 oz. (98g).

Ordering information					
Sample Part Number S	SRD	240	D	25	
1. Basic Series: SSRD = Dual output SSR - 2 SPST - NO					
2. Line Voltage: 240 = 24-280 VAC					
3. Input Type & Voltage: D = 4-15 VDC DE = 17-32 VDC					
4. Maximum Switching Rating/Output: 25 = .1-25A rms @ 25°C, mounted to heatsink 40 = .1-40A rms @ 25°C, mounted to heatsink					
 5. Options: Blank = Zero voltage turn-on (both outputs) R = Random voltage turn-on (both outputs) 					

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

SSRD-240D25

SSRD-240D40

Input Specifications

Parameter	Units	Zero V Turn-on and Random V Turn-on Units			
Control Voltage Range V _{IN}	VDC	4-15	17-32		
Must Operate Voltage VIN(OP) (Min.)	VDC	3.75	17		
Must Release Voltage V _{IN(REL)} (Min.)	VDC	1	1		
Input Current (Max.)	mA DC	34	24		
Input Current (Min. for On-State)	mA DC	7.5	13		
Input Resistance	Ohms	500	1,500		

Dimensions are shown for 1106 reference purposes only.

tyco Electronics

Catalog 1308242 Issued 3-03 (PDF Rev. 9-04)

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

Parameter	Conditions	Units	25A Models	40A Models	
Load Voltage Range V_L	f = 47 - 63 Hz.	V rms	24-280		
Peak Voltage (Min.)	t = 1 Min.	V peak	550		
Load Current Range I L*	Resistive	A rms	0.1-25	0.1-40	
Single Cycle Surge Current (Max.)		A peak	500	780	
One Second Surge Current (Max.)		A peak	150	234	
Leakage Current (Off-State) (Max.)	V _L = 280V rms	mA rms	0.1		
On-State Voltage Drop (Max.)	$I_L = Max.$	V peak	1.4	1.3	
Static dv/dt (Off-State) (Min.)		V/µs	500		
Thermal Resistance, Junction to Baseplate ($R_{\theta J-B}$) (Max.)	Both Sections On	°C/W	0.6	0.6	
Turn-On Time (Max.)	f = 60 Hz.	ms	8.33 for Zero Voltage Turn-On Models <0.1 for Random Voltage Turn-On Models		
Turn-Off Time (Max.)	f = 60 Hz.	ms	8.33		
I ² t Rating	t = 8.3 ms	A ² Sec.	1,041	2,435	
Load Power Factor Rating	I _L = Max.		0.5 - 1.0		

*See Derating Curves

Electrical Characteristics (Thermal Derating Curves)



Operating Diagram



† Random Turn-on Units have a Random Turn-on circuit instead of Zero Voltage Circuit

Outline Dimensions





Heatsink Recommendations

- We recommend that solid state relay modules be mounted to a heatsink sufficient to maintain the module's base temperature at less than 85°C under worst case ambient temperature and load conditions.
- The heatsink mounting surface should be a smooth (30-40 micro-inch finish), flat (30-40 micro-inch flatness across mating area), un-painted surface which is clean and free of oxidation.
- An even coating of thermal compound (Dow Corning DC340 or equivalent) should be applied to both the heatsink and module mounting surfaces and spread to a uniform depth of .002" to eliminate all air pockets.
- · The module should be mounted to the heatsink using two #10 screws.

Input Terminal Connectors are available from several different manufacturers.

AMP P/N: 103976-3 or 640440-4 Methode P/N: 1300-004-422

Consult your local distributor for these or equivalent connectors.

Specifications and availability subject to change.

P&B

Dimensions are shown for reference purposes only.

Dimensions are in inches over (millimeters) unless otherwise