SSRD Series

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

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

- Two independent AC output solid state relays in one standard package.
- Inverse parallel SCR outputs.
- 25A rms & 40A rms versions available.
- 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.
Temperature Range:
Storage: –30°C to +100°C
Operating: –30°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: 3.17 oz (90g)

Ordering Information

Typical Part Number	SSR	-240	D	25	R

1. Basic Series: SSRD = Dual output SSR - 2 SPST - NO

2. Line Voltage: 240 = 24 - 280VAC

3. Input Type & Voltage: D = 4 - 15VDC
DE = 18 - 32VDC

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	SSRD-240D25 SSRD-240D25R SSRD-240D40 SSRD-240D40R	SSRD-240DE25 SSRD-240DE25R SSRD-240DE40 SSRD-240DE40R
Control Voltage Range V_{IN}	VDC	4 - 15	18 - 32
Must Operate Voltage $V_{IN(OP)}$ (Min.)	VDC	4.0	18
Must Release Voltage $V_{IN(REL)}$ (Min.)	VDC	1	1
Input Current	mA DC	3 - 40	3 - 40
Input Current (Typical)	mA DC	15 @ 8 Vdc	20 @ 24 Vdc
Input Resistance	Ohms	375	800

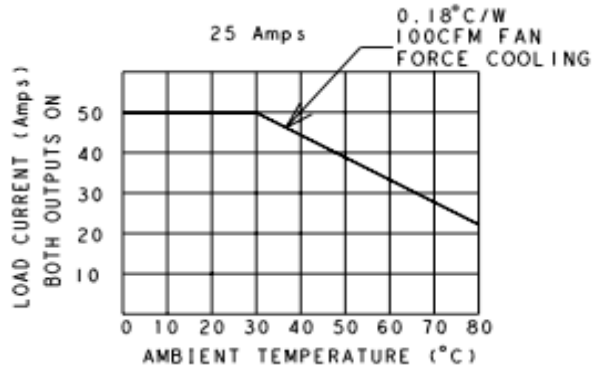
SSRD Series (Continued)

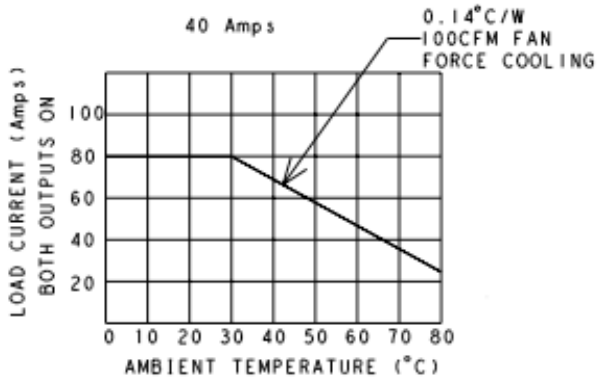
Output Specifications (@ 25° C, unless otherwise specified)

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	600	
Load Current Range I_L*	Resistive	A rms	.1 - 25	.1 - 40
Single Cycle Surge Current (Max.)		A peak	300	800
Leakage Current (Off-State) (Max.)	V_L = 280V rms	mA rms	5.0	
On-State Voltage Drop (Max.)	I_L = Max.	V peak	1.6	1.8
Static dv/dt (Off-State) (Min.)		V/µs	300	500
Thermal Resistance, Junction to Baseplate ($R_{\theta J-C}$) (Max.)	Both sections On	°C/W	2.35	.86
Turn-On Time (Max.)	f = 60 / 50 Hz.	ms	8.3 / 10 for Zero Voltage Turn-On Models 0.1 for Random Voltae Turn-On Models	
Turn-Off Time (Max.)	f = 60 / 50 Hz.	ms	10 for Zero & 8.3 for Random Voltage turn ON	
I^2T Rating	t = 8.3 ms	A^2 Sec.	510	3745
Load Power Factor Rating	I_L = Max.		0.5 - 1.0	

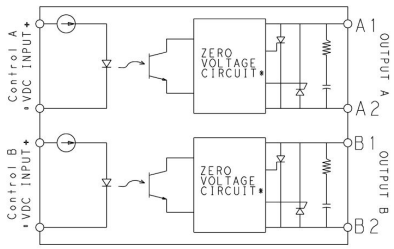
* See Derating curve

Electrical Characteristics (Thermal Derating Curves)





Operating Diagram

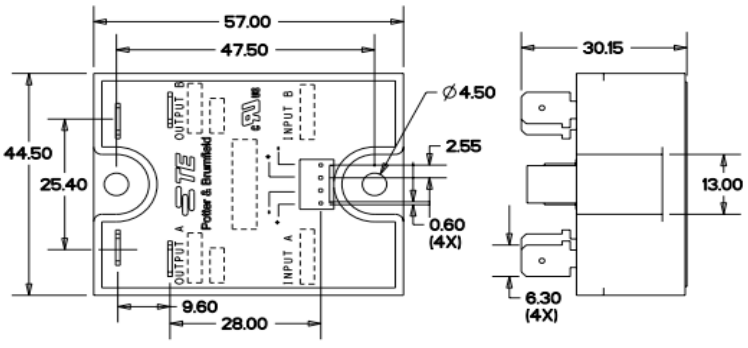


Random Turn-on units have a Random Turn-on circuit instead of zero voltage circuit

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.

Outline Dimensions



DIMENSION IN mm

Input Terminal Connectors are available from several different manufacturers.

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

Consult your local distributor for these or equivalent connectors.

11-2017, Rev. 1117
www.te.com

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Authorized Distributor

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TE Connectivity:

SSRD-240D25