

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

11-2017, Rev. 1117
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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.

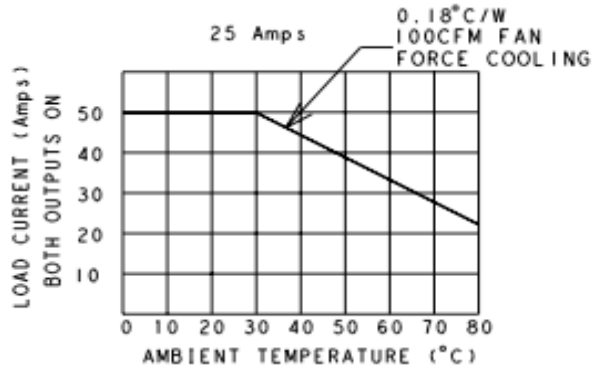
SSRD Series (Continued)

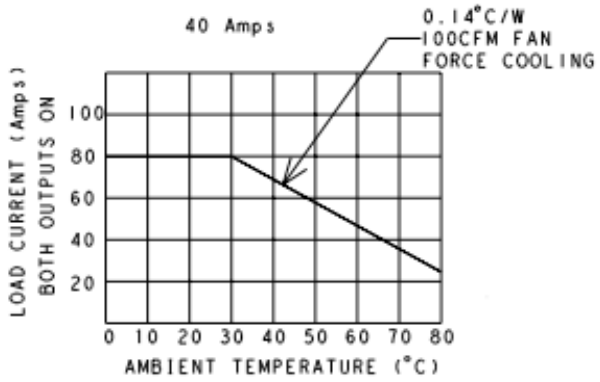
Output Specifications (@ 25° C, unless otherwise specified)

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	

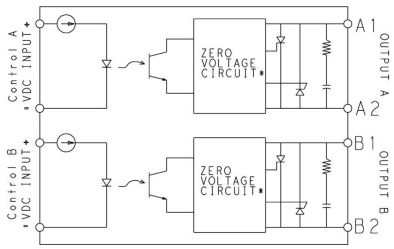
* See Derating curve

Electrical Characteristics (Thermal Derating Curves)





Operating Diagram

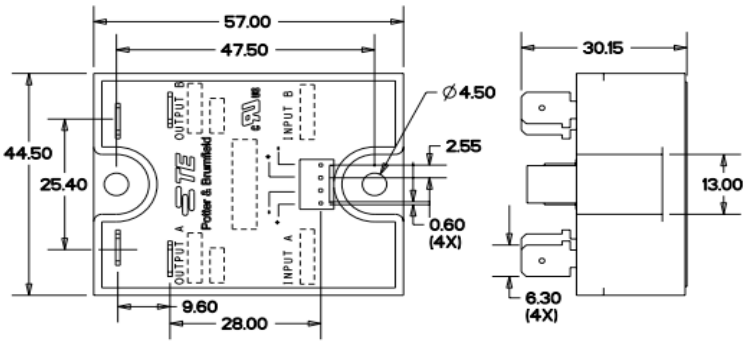


Random Turn-on units have a Random Turn-on circuit instead of zero voltage circuit

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.

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