



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 | SSRD | -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

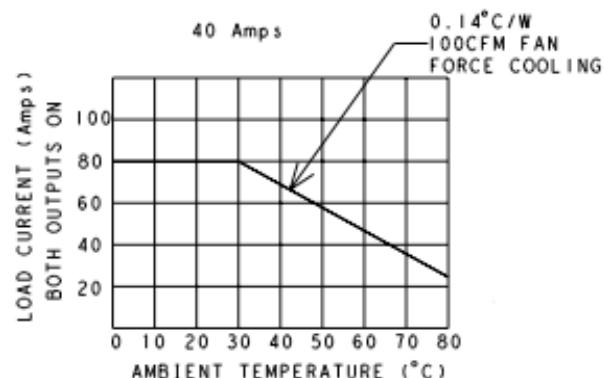
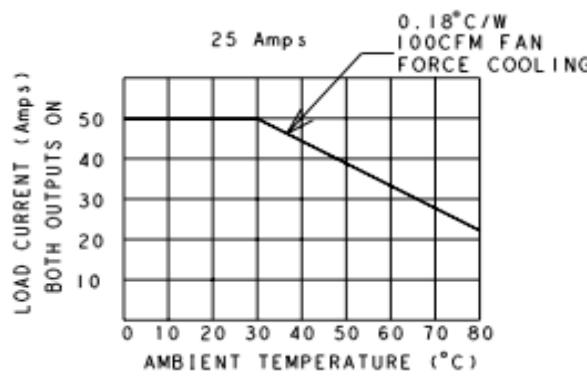
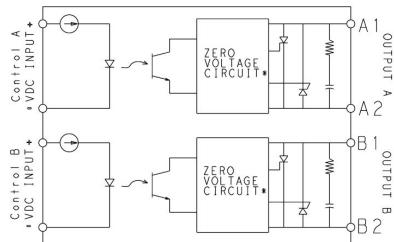
Input Specifications

| Parameter | Units | SSRD-240D25 | SSRD-240DE25 |
|---|-------|-------------|-------------------|
| 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 | | Current regulator |

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.) | $V_L = 280$ V rms | mA rms | | 5.0 |
| On-State Voltage Drop (Max.) | $I_L = \text{Max.}$ | V peak | 1.6 | 1.8 |
| Static dv/dt (Off-State) (Min.) | | V/ μ s | 300 | 500 |
| Thermal Resistance, Junction to Baseplate ($R_{J\text{U-C}}$) (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 Voltage 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 | $I_L = \text{Max.}$ | | | 0.5 - 1.0 |

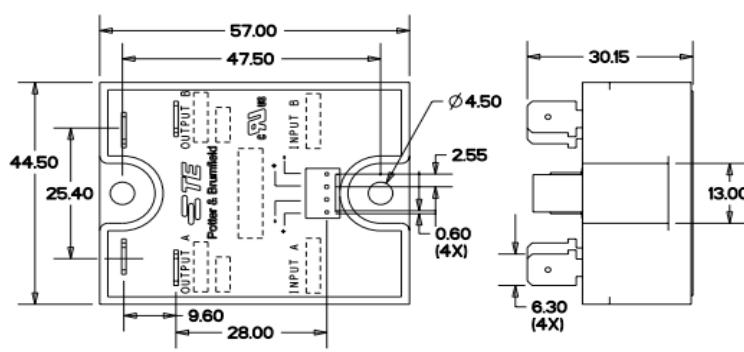
* See Derating curve

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[4-1393030-3](#)