



SSRT series

“Hockey Puck” Solid State Relay With Snubberless Triac Output

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

- Standard “hockey puck” package.
- Enhanced noise immunity (designed to meet level 3 requirements of European EMC Directive).
- LED indicator.
- Floating terminal design.
- Low cost snubberless triac outputs.
- 10A & 25A rms versions.
- AC & DC input versions.
- 4000V rms isolation.
- New housing design with anti-rotation barriers

Engineering Data

- Form:** 1 Form A (SPST-NO).
- Duty:** Continuous.
- Isolation:** 4000V rms minimum, input - output.
- Capacitance:** 8.0 pf typical (input to output).
- Temperature Range:**
 - Storage:** -40°C to +100°C
 - Operating Temperature:** -20°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 ► **SSRT -240 D 10**

1. Basic Series: SSRT = “hockey puck” triac output solid state relay

2. Line Voltage: 240 = 24 - 280 VAC

3. Input Type & Voltage: A = 90 - 280 VAC linear
D = 3 - 32 VDC constant current

4. Maximum Switching Rating: 10 = .1 - 10A rms, mounted to heatsink
25 = .1 - 25A rms, mounted to heatsink

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

SSRT-240A10 SSRT-240D10
SSRT-240A25 SSRT-240D25

Input Specifications

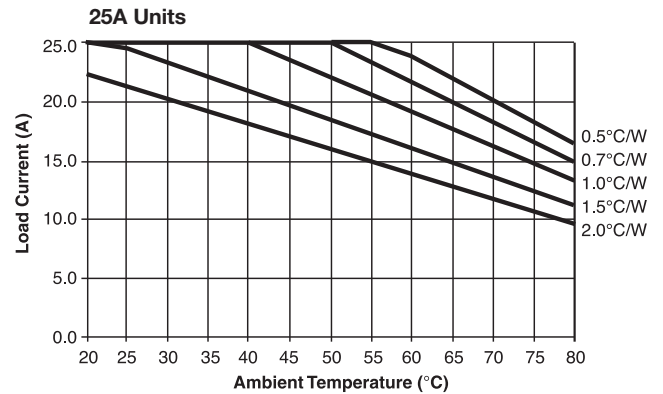
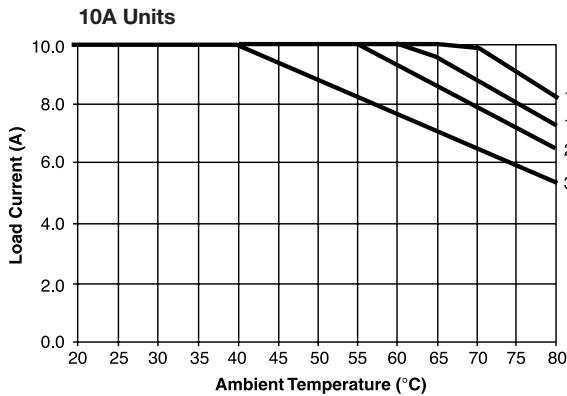
Parameter	AC Input	DC Input
	Zero V Turn-on Units	Zero and Random V Turn-on Units
Control Voltage Range V_{IN}	90 - 280VAC	3 - 32VDC
Must Operate Voltage $V_{IN(OP)}$ (Min.)	90VAC	3VDC
Must Release Voltage $V_{IN(REL)}$ (Min.)	10VAC	1VDC
Input Current (Max.)	15mA	15mA

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

Parameter	Conditions	Units	SSRT-240A10 & SSRT-240D10	SSRT-240A25 & SSRT-240D25
Load Voltage Range V_L		V rms	24 - 280	
Repetitive Blocking Voltage (Min.)		V peak	±600	
Load Current Range I_L^*	Resistive	A rms	.1 - 10	.1 - 25
Single Cycle Surge Current (Min.)		A peak	100	250
Leakage Current (Off-State) (Max.)	$f = 60 \text{ Hz}$, $V_L = \text{Nom.}$ (120 or 240 V rms)	mA rms	.1	
On-State Voltage Drop (Max.)	$I_L = \text{Max.}$	V peak	1.5	1.3
Static dv/dt (Off-State) (Min.)		V/s	500	
Thermal Resistance, Junction to Case ($R_{\theta jc}$) (Max.)		C/W	2.2	1.7
Turn-On Time (Max.)	$f = 60 \text{ Hz}$	ms	8.3 for DC input types, 20 for AC input types	
Turn-Off Time (Max.)	$f = 60 \text{ Hz}$	ms	8.3 for DC input types, 30 for AC input types	
$I^2 t$ Rating	$t = 8.3 \text{ ms}$	$A^2 \text{ Sec.}$	41	240
Load Power Factor Rating	$I_L = \text{Max.}$		0.5 - 1.0	

*See Derating Curves

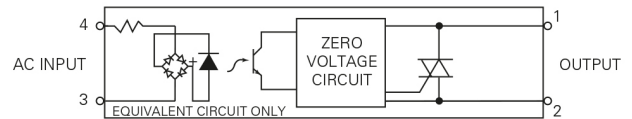
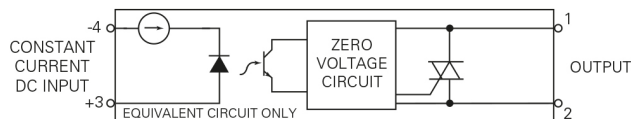
Electrical Characteristics (Thermal Derating Curves)



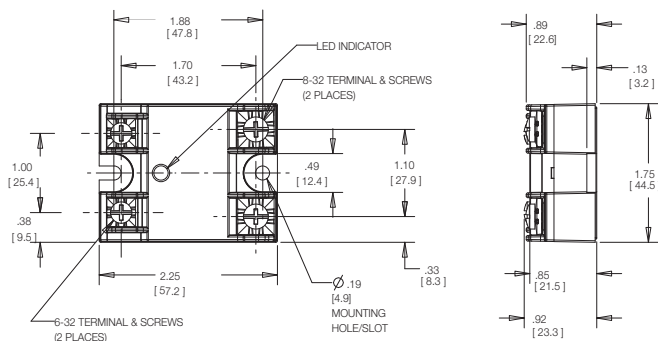
Heatsink Recommendations

- 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.

Operating Diagrams



Outline Dimensions



Dimensions are shown for reference purposes only.

Dimensions are in inches over (millimeters) unless otherwise specified.

Specifications and availability subject to change.

www.tycoelectronics.com
Technical support:
Refer to inside back cover.