SDT–R series

10 Amp Miniature Power PC Board Relay

Appliances, HVAC, CTV, Monitor Display.

- UL File No. E58304
- CSA File No. LR48471
- SEMKO FileNo. 9722134, 9803052
- TUV File No. R9750487

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user 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

- UL TV-5 and TV-8 rating relay.
- 1 Form A contact arrangement.
- Sensitive and standard coils available.
- Applications include appliance, HVAC, CTV, Monitor, emergency lighting.

Contact Data @ 20°C

Arrangements: 1 Form A (SPST-NO)
Material: AgSnO
Max. Switching Rate: 300 ops./min. (no load).
30 ops./min. (rated load).
Expected Mechanical Life: 10 million operations (no load).
Expected Electrical Life: 100,000 operations (rated load).
Minimum Load: 100mA @ 5VDC.
Initial Contact Resistance: 100 milliohms @ 1A, 6VDC.

Contact Ratings

Ratings:
SDT-LMR: 5A Tungsten @ 120VAC (TV-5) 25,000ops.
5A @ 250VAC resistive,
5A @ 30VDC resistive.

SDT-DMR: 8A Tungsten @ 120VAC (TV-8) 25,000ops.
10A @ 250VAC resistive,
10A @ 30VDC resistive.

Max. Switched Voltage: **AC:** 250V.
DC: 30V.
Max. Switched Current: 5A (SDT-LMR), 10A (SDT-DMR)
Max. Switched Power: 1,250VA, 150W (SDT-LMR),
2,500VA, 300W (SDT-DMR).

Initial Dielectric Strength

Between Open Contacts: 1,000VAC 50/60 Hz. (1 minute).
Between Coil and Contacts: 4,000VAC 50/60 Hz. (1 minute).
Surge Voltage Between Coil and Contacts: 10,000V (1.2 / 50µs).

Initial Insulation Resistance

Between Mutually Insulated Elements: 1,000M ohms min. @ 500VDCM.

Coil Data

Voltage: 5 to 48VDC.
Nominal Power:
SDT-LMR : 250 mW
SDT-DMR : 540 mW
Coil Temperature Rise: 40°C max., at rated coil voltage.
Max. Coil Power: 130% of nominal.
Duty Cycle: Continuous.

Coil Data @ 20°C

SDT-LMR (250mW)				
Rated Coil Voltage (VDC)	**Nominal Current (mA)**	**Coil Resistance (ohms) ± 10%**	**Must Operate Voltage (VDC)**	**Must Release Voltage (VDC)**
5	50.0	100	3.75	0.50
6	41.7	144	4.50	0.60
9	27.7	325	6.75	0.90
12	20.7	580	9.00	1.20
24	10.5	2,300	18.00	2.40
SDT-DMR (400mW)				
Rated Coil Voltage (VDC)	**Nominal Current (mA)**	**Coil Resistance (ohms) ± 10%**	**Must Operate Voltage (VDC)**	**Must Release Voltage (VDC)**
5	106.4	47	3.75	0.50
6	88.0	68	4.50	0.60
9	58.0	155	6.75	0.90
12	44.4	270	9.00	1.20
24	21.8	1,100	18.00	2.40
48	10.9	4,400	36.00	4.80

Operate Data

Must Operate Voltage: 75% of nominal voltage or less.
Must Release Voltage: 10% of nominal voltage or more.
Operate Time: 15 ms max.
Release Time: 5 ms max.

Environmental Data

Temperature Range:
Operating: -30°C to +70°C
Vibration, Mechanical: 10 to 55 Hz., 1.5mm double amplitude
Operational: 10 to 55 Hz., 1.5mm double amplitude.
Shock, Mechanical: 1,000m/s² (100G approximately).
Operational: 100m/s² (10G approximately).
Operating Humidity: 20 to 85% RH. (Non-condensing).

Mechanical Data

Termination: Printed circuit terminals.
Enclosure (94V-0 Flammability Ratings):
SDT-S: Snap-on dust cover (Flux-tight).
Weight: 0.38 oz. (11g) approximately.

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.

Ordering Information

Typical Part Number ►	SDT	-S	-1	12	L	M	R	,000

1. Basic Series:
SDT = Miniature Power PC board relay.

2. Enclosure:
S = Snap-on (Flux-tight)* cover.

3. Termination:
1 = 1 pole

4. Coil Voltage:
05 = 5VDC 09 = 9VDC 24 = 24VDC
06 = 6VDC 12 = 12VDC 48 = 48VDC

5. Coil Input:
L = Sensitive (250mW) D = Standard (540mW)

6. Contact Arrangement:
M = 1 Form A, SPST-NO

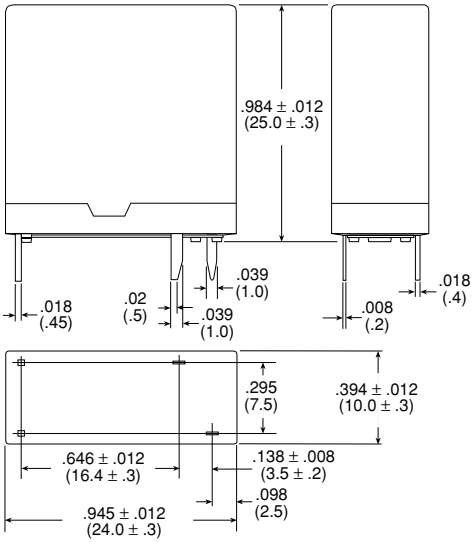
7. Construction:
R = New construction

8. Suffix:
,000 = Standard model Other Suffix = Custom model

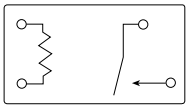
* Not suitable for immersion cleaning processes.

Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.
None at present.

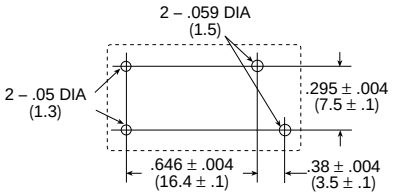
Outline Dimensions



Wiring Diagram (Bottom View)

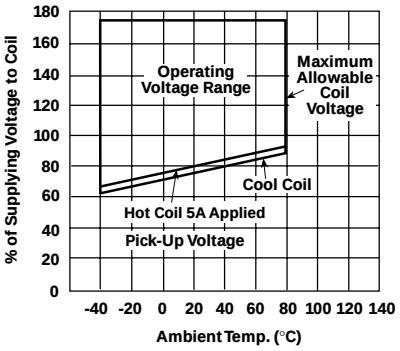


PC Board Layout (Bottom View)

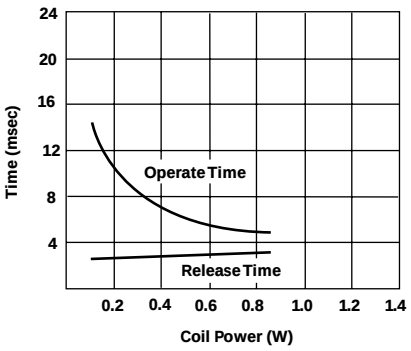


Reference Data

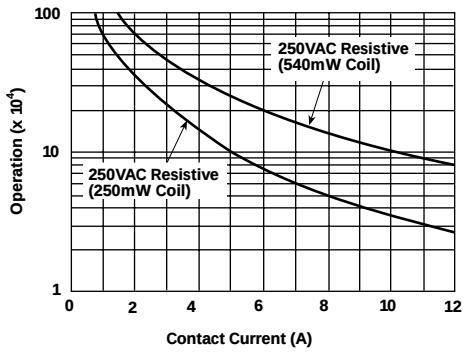
Operating Voltage (SDT-LMR)



Operate Time



Life Expectancy



Note: This data is based on the max. allowable temperature for E type insulation coil (115°C).