For new designs refer to V23105.

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T85 series

High Sensitivity, DIP PC Board Relay

File E45026
File LR35579

Features

- Ultra sensitive DC coils through 48 volts.
- Switches up to 2 amps.
- Standard DIP configuration mates with 16-pin socket.
- Bifurcated contacts in a 2 Form C arrangement.
- 1,500 volt surge strength – meets FCC Part 68.
- Well suited for application in telecommunications equipment, audio equipment and business machines.
- Immersion cleanable, plastic sealed case.
- Ultrasonic cleaning is not advised.

Contact Data @ 20°C

Contact Style	Series 4	Series 5
Arrangement:	Bifurcated 2 Form C (DPDT)	Bifurcated 2 Form C (DPDT)
Material: Stationary:	Gold overlay silver-palladium alloy	Gold overlay silver-nickel alloy
Movable:	Silver-palladium alloy	Gold overlay silver-nickel alloy
Initial Contact Resistance:	100 milliohms, max. @ 100mA, 6VDC	100 milliohms, max. @ 100mA, 6VDC
Ratings: Max. Switched Current:	1.25A, AC or DC	2A, AC or DC
Max. Switched Voltage:	60VDC, 120VAC	150VDC, 125VAC
Max. Switched Power:	24W or 60VA	30W or 62.5VA
Max. Carry Current:	2A, AC or DC	2A, AC or DC
Min. Switched Current:	10µA, AC or DC	10µA, AC or DC
Min. Switched Voltage:	50µV, AC or DC	50µV, AC or DC
Min. Switched Power:	25µW, AC or DC	25µW, AC or DC
Expected Mechanical Life:	20 million ops.	10 million ops.
Expected Electrical Life:	500,000 operations @ 1A, 24VDC, res. 200,000 operations @ .5A, 120VAC, res.	100,000 operations @ 2A, 30VDC 200,000 operations @ .4A, 120VAC

Initial Dielectric Strength

Between Open Contacts: 500V rms, 50/60 Hz., for 1 minute.
Between Poles: 1,000V rms, 50/60 Hz., for 1 minute.
1,500V rms surge per FCC Part 68.
Between Coil and Contacts: 1,000V rms, 50/60 Hz., for 1 minute.
1,500V rms surge per FCC Part 68.

Initial Insulation Resistance

Between Mutually Insulated Conductors: 10^9 ohms @ 500VDC.

Coil Data @ 20°C

Voltage: 4.5 through 48VDC.
Nominal Power: See Coil Data table.

Maximum Coil Power: 725 milliwatts, for contact style series 4.
800 milliwatts, for contact style series 5.
Temperature Rise: 110°C per watt, typical.
Duty Cycle: Continuous.

Coil Data @ 20°C - For Contact Style Series 4

Nominal Voltage (VDC)	Resistance ±10% (Ohms)	Nominal Coil Power (mW)
4.5	135	150
5	167	150
6	240	150
9	540	150
12	960	150
24	2,880	200
48	7,680	300

Coil Data @ 20°C - For Contact Style Series 5

Nominal Voltage (VDC)	Resistance ±10% (Ohms)	Nominal Coil Power (mW)
4.5	36	560
5	45	560
6	66	550
9	140	580
12	280	510
24	1,070	540
48	4,000	580

Operate Data @ 20°C

Must Operate Voltage: 70% of nominal voltage or less.
Must Release Voltage: 5% of nominal voltage or more.
Operate Time (Excluding Bounce)†: 6 ms, max.
Release Time (Excluding Bounce)†: 3 ms, max.
Operate Bounce: 3 ms, max.
Release Bounce: 4 ms, max.

† At or from Nominal Coil Voltage.

Environmental Data

Temperature Range: -30°C to +80°C, for contact style series 4.
-40°C to +60°C, for contact style series 5.
Vibration, Operational: 10g, 10-55 Hz.
Shock, Operational: 10g for 11 ms, 1/2 sine wave.
Shock, Non-destructive: 100g for 6 ms, 1/2 sine wave.

Mechanical Data

Termination: DIP compatible, printed circuit terminals.
Enclosure: Sealed PBT plastic case.
Weight: 0.16 oz. (4.5g) approximately.

Ordering Information

Typical Part Number ▶	T85	N	11	D	11	4	-12

1. Basic Series:
T85 = Ultra sensitive, DIP PC board relay.

2. Enclosure:
N = Sealed plastic case.

3. Contact Arrangement:
11 = 2 Form C (DPDT)

4. Coil Input:
D = DC voltage.

5. Terminals:
11 = Printed circuit terminals.

6. Contact Style and Material:
4 = Bifurcated, silver-palladium (gold overlay on stationary), 1.25A max.
5 = Bifurcated, silver-nickel (gold overlay on stationary and moveable), 2A max.

7. Coil Voltage:

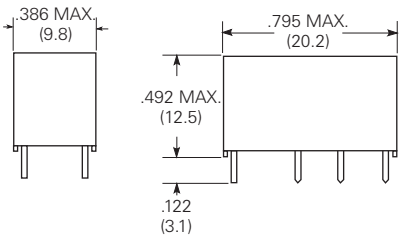
04 = 4.5VDC	06 = 6VDC	12 = 12VDC	48 = 48VDC
05 = 5VDC	09 = 9VDC	24 = 24VDC	

For new designs refer to V23105.

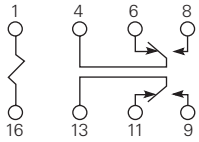
Stock Items – The following items are normally maintained in stock for immediate delivery.

T85N11D114-05	T85N11D114-48	T85N11D115-24
T85N11D114-12	T85N11D115-05	
T85N11D114-24	T85N11D115-12	

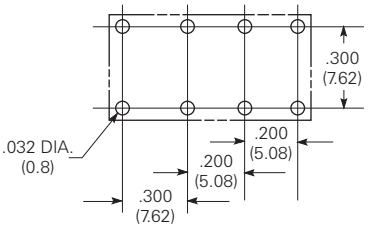
Outline Dimensions



Wiring Diagrams (Bottom Views)



PC Board Layout (Bottom View)



Siemens Electromechanical Components, Inc.
700 Westpark Drive
Peachtree City, GA 30269-1498

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TE Connectivity:

1-1743284-2 1393431-1 1743455-2 2-520128-2 2377783-2 292230-8 3430B2F51RTDF 35402K7FT CRGCQ2010J3K3 2834055-1 1488167-1 1969656-1 2-292161-3 2-520103-2 917790-2 936348-1 SMV3W5M6JT SMW73R0JT 1MM-HU-D10-VS-00-F-TBP 2-32562-2 281990-2 CRGCQ0805F150R 352116RFT 36161 650075-000 917696-1 141991-2 3-1393225-0 640174-1 1-794222-0