

For new designs refer to T7C and T7N series.



## T72 series

### 10 Amp Miniature PC Board Relay

File E22575

File LR15734

#### Features

- Type L has 240V UL spacing per UL-114, UL-478, UL-508 and UL-751.
- Class A coil insulation (Class B coil insulation available).
- 10A @ 125VAC.
- Immersion cleanable plastic case with knock-off nib for ventilation.
- Low profile package has a seated height of only .67 in. (17 mm).

#### Contact Data

**Arrangements:** 1 Form C (SPDT)

**Material:** Type 164: Silver cadmium oxide.

**Max. Switching Rate:** 20 operations per second with no contact load.  
6 operations per minute for rated life at rated load.

**Expected Mechanical Life:** 10 million operations.

#### Max. Contact Ratings & Expected Electrical Life <sup>(1)</sup>

Mat'l. Code	Load Volts		
	28VDC	125VAC	240VAC
164	10A, res. 100K ops.	10A, res. 100K ops. N.O. 50K ops. N.C.	5A, res. 100K ops.

#### Initial Dielectric Strength

Relay Type	Dielectric Strength	
	Between Contacts and Coil	Between Open Contacts
L	1,500V rms	1,000V rms

#### Initial Insulation Resistance

**Between Mutually Insulated Elements:** 10<sup>8</sup> ohms, min. @ 500VDC.

#### Coil Data

**Voltage:** 3 through 48VDC.

**Resistance:** See Coil Data table.

**Nom. Power:** 360mW.

**Coil Temp. Rise:** 70°C/W, typical.

#### Coil Data (@ 23°C Coil Temperature)

Rated Coil Voltage (VDC)	Coil Resistance ±10% (Ohms)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
3	25	2.1	.3
5	70	3.5	.5
9	225	6.3	.9
12	400	8.4	1.2
24	1,600	16.8	2.4
48	6,400	33.6	4.8

#### Operate Data

**Must Operate and Must Release Voltage:** See Coil Data table.

**Operate Time <sup>(2)</sup>:** 10 ms, max.

**Release Time <sup>(2)</sup>:** 5 ms, max.

#### Environmental Data

**Temperature Range:** Storage: -40°C to +105°C.

**Operating:** -40°C to +70°C (see Fig. 2).

**Vibration:** 10-55 Hz., .06" (1.52 mm) double amplitude; 10g, 55-200 Hz<sup>(3)</sup>.

**Shock, Operational:** 10g for 11 ms, 1/2 sine wave pulse<sup>(3)</sup>.

**Shock, Mechanical:** 100g for 11 ms, 1/2 sine wave pulse.

**Drop Test:** Capable of meeting specifications after a 3.28 foot (1.0 meter) drop test<sup>(4)</sup>.

**Flammability:** UL 94-V0.

#### Mechanical Data

**Termination:** Printed circuit terminals.

**Enclosure:** Immersion cleanable case with knock-off nib for ventilation.

**Weight:** 0.4 oz. (12 gm) approximately.

#### Conditions

All parametric, environmental and life tests are performed according to EIA Standard RS-407-A at standard test conditions (23°C Ambient, 20-50% RH, 29.5 ± 1" Hg.) unless otherwise noted.

#### Notes:

(1) To achieve maximum life, ventilate relay by removing knock-off nib after board cleaning and before relay is put in service.

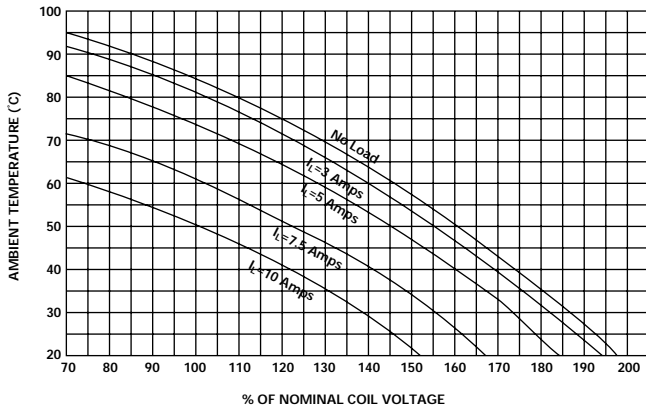
(2) At or from nominal coil voltage, excluding bounce with no suppression.

(3) No contact opening > 100µs.

(4) Characteristic changes permitted.

Figure 1 – Ambient Temperature vs. Coil Voltage for Continuous Duty

360mW Coil (Type L)



Assumptions:

1. Thermal resistance = 70°C per watt
2. Still air
3. Nominal coil resistance
4. Maximum mean coil temperature = 105°C

Ordering Information

Typical Part Number ▶

**T72**    **L**    **5**    **D**    **164**    **-24**

1. Basic Series:

T72 = Miniature, low profile, printed circuit board relay.

2. Relay Type:

L = Relay with UL 240V spacing in an immersion cleanable case.

3. Contact Arrangement:

5 = 1 Form C (SPDT)

4. Coil Input:

D = DC voltage.

5. Contact Material:

164 = Silver cadmium oxide contacts.

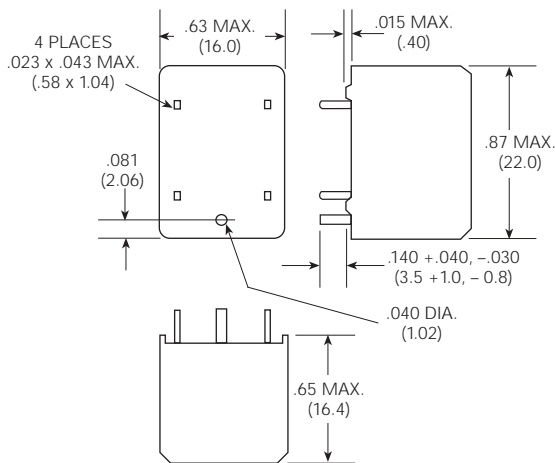
6. Coil Voltage:

03 = 3VDC      05 = 5VDC      09 = 9VDC      12 = 12VDC      24 = 24VDC      48 = 48VDC

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

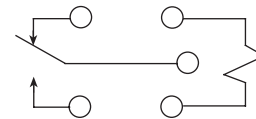
Outline Dimensions

Tolerance (unless otherwise noted): 3 decimal: ±.010 (±.254); 2 decimal: ±.015 (±.381).

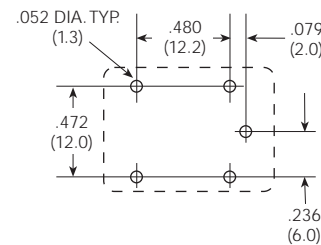


Wiring Diagrams (Bottom Views)

Code 5  
1 Form C



Suggested PC Board Layout (Bottom View)



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Specifications and availability subject to change without notice.  
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