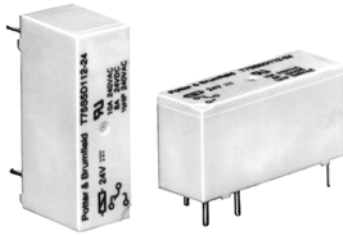


*Sensitive, Low Profile, Hi-Current  
Relay Designed to Meet  
International Standards*



**T75 series**  
**10 Amp, PC Board  
Miniature Relay**

**UL** File E29244  
**VDE** File No. 39 19



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**

- High sensitivity – nominal coil power requirement is as low as 212mW.
- Low profile, .591 in. (15mm) tall case uses only .465 in<sup>2</sup> (3cm<sup>2</sup>) of area on the printed circuit board, permitting high density circuit design.
- Power switching capability – contacts rated 10 amps in 1 Form A (SPST-NO) or 1 Form C (SPDT) arrangements.
- Designed to meet UL, CSA, VDE, SEMKO and SEV requirements.
- Designed to meet VDE 8mm spacing, 4kV dielectric, coil to contacts.
- Designed to meet 3 mm creepage between contacts.
- Conforms to:
  - VDE 0110 – Insulation Group C (250V)
  - VDE 435 Part 201 – High current applications
  - VDE 0804 – Telecommunications equipment
  - VDE 0631 – Temperature controllers and limiters
  - VDE 0700 – Household appliances
  - VDE 0805/5.90 – Office machines
- Wash tight (washable).
- Well suited for a broad range of applications e.g. HVAC, appliances, security and industrial control.

**Contact Ratings @ 25° C with relay properly vented.  
Remove vent nib after soldering and cleaning.**

**Arrangements:** 1 Form A (SPST-NO) and 1 Form C (SPDT).  
**Material:** Silver-cadmium oxide.

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

- 100,000 operations at 8 amps, 240VAC.
- 50,000 operations at 14 amps NO / 5 amps NC, 120VAC Res.
- 30,000 operations at 7.2 FLA, 45 LRA, 120VAC.
- 10,000 operations at 5 FLA, 30 LRA, 240VAC.
- 30,000 operations at B300 pilot duty (360VA, 240VAC; 470VA, 120VAC).

**Contact Ratings (See Figure 1):**

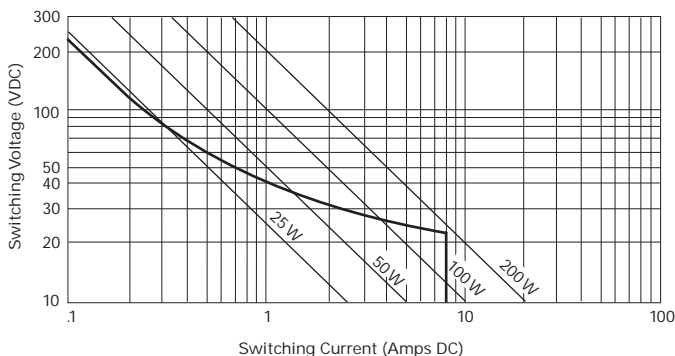
**Maximum Switched Voltage:** 380VAC.  
**Maximum Switched Current:** 14/5 (N.O./N.C.) amps, AC resistive;  
8 amps DC (see Fig. 1)

**Maximum Switched Power:** 200W, DC; 2,000VA, AC.  
**Minimum Required Contact Load:** 12V, 100mA.

**VDE Contact Ratings:** 8 amps, 250VAC.

**UL Contact Ratings:** 10 amps, 240VAC; 8 amps 24VDC;  
1/3 HP, 120VAC; 1/2 HP, 240VAC.

**Figure 1 - DC Switching Load Limit Curve**



**Initial Dielectric Strength**

**Between Open Contacts:** 1,000V rms.  
**Between Contacts and Coil:** 4,000V rms, 8mm.

**Coil Data**

**Voltage:** 3 to 60VDC.  
**Maximum Power @ 23° C:** 1W.  
**Nominal Power @ 23° C:** 230mW, typ.  
**Temperature Rise:** 85C° per Watt.  
**Duty Cycle:** Continuous.

**Coil Data**

|          | Nominal Voltage | DC Resistance in Ohms ±10% | Must Operate Voltage | Nominal Coil Current (mA) |
|----------|-----------------|----------------------------|----------------------|---------------------------|
| DC Coils | 3               | 40                         | 2.1                  | 75.0                      |
|          | 5               | 118                        | 3.4                  | 42.4                      |
|          | 6               | 165                        | 4.1                  | 36.4                      |
|          | 9               | 365                        | 6.1                  | 24.7                      |
|          | 12              | 650                        | 8.2                  | 18.5                      |
|          | 18              | 1,455                      | 12.3                 | 12.4                      |
|          | 24              | 2,270                      | 16.3                 | 10.6                      |
|          | 36              | 5,460                      | 24.5                 | 6.4                       |
|          | 48              | 8,790                      | 32.6                 | 5.5                       |
|          | 60              | 15,265                     | 40.8                 | 3.9                       |

**Operate Data @ 23° C**

**Must Operate Voltage:** 70% of nom. voltage or less.  
**Must Release Voltage:** 10% of nom. voltage or more.  
**Operate Time (Excluding Bounce):** 6 ms, typ., at nom. voltage.  
**Release Time (Excluding Bounce):** 2.5 ms, typ., at nom. voltage.  
**Maximum Switching Rate:** 20 operations/second.  
**Maximum Continuous Operating Voltage:** 225% of nom. voltage.

**Temperature Range**

**Storage:** -40° C to +130° C.  
**Operating:** -40° C to +85° C.

**Mechanical Data**

**Termination:** Printed circuit terminals.  
**Enclosures:** Wash tight (washable) case.  
**Weight:** 0.39 oz. (11.0g) approximately.

Ordering Information

Typical Part Number ▶

**T75 S 5 D 1 1 2 -12**

**1. Basic Series:**  
T75 = Low profile, printed circuit board relay.

**2. Enclosure:**  
S = Wash tight (washable).

**3. Contact Arrangement:**  
1 = 1 Form A (SPST-NO)  
5 = 1 Form C (SPDT)

**4. Coil Input:**  
D = DC voltage

**5. Coil Configuration:**  
1 = Single coil, non-latching (monostable)

**6. Mounting and Terminals:**  
1 = Printed circuit terminals

**7. Contact Material:**  
2 = Silver-cadmium oxide (AgCdO)

**8. Coil Voltage:**

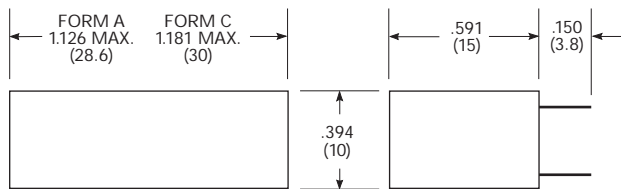
|           |           |            |            |            |
|-----------|-----------|------------|------------|------------|
| 03 = 3VDC | 06 = 6VDC | 12 = 12VDC | 24 = 24VDC | 48 = 48VDC |
| 05 = 5VDC | 09 = 9VDC | 18 = 18VDC | 36 = 36VDC | 60 = 60VDC |

NOTE: All part numbers are RoHS compliant.

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

- T75S5D112-05
- T75S5D112-12
- T75S5D112-24

Outline Dimensions



CONTACT TERMINALS: .023 x .040 (.58 x 1.02) REF.  
COIL TERMINALS: .024 (.61) DIA. REF.

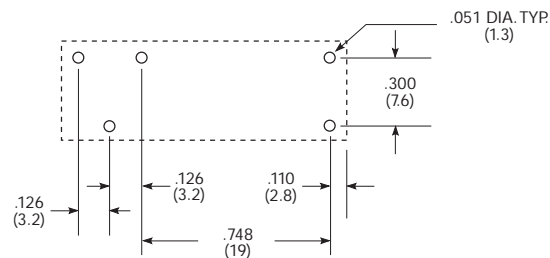
Wiring Diagram (Bottom View)



\* ON SINGLE THROW MODELS, ONLY NECESSARY TERMINALS ARE PRESENT.

PC Board Layouts (Bottom Views)

1 Form C



1 Form A

