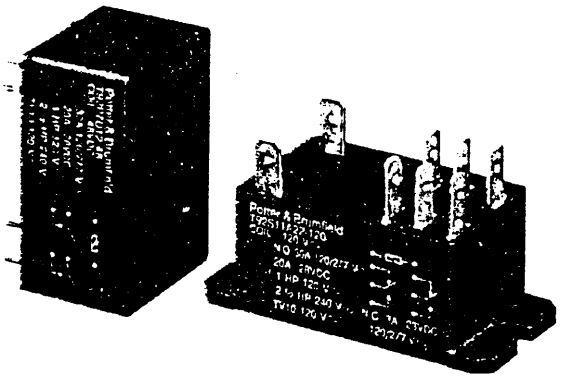


T92 series

TWO-POLE, 30 AMP PC BOARD OR PANEL MOUNT RELAY DESIGNED TO MEET VDE

File E22575
File LR15734

FEATURES

- 30A switching capabilities.
- DPST-NO and DPDT configurations.
- Designed to control compressor loads to 3.5 tons, 25.3 FLA, 110 LRA.
- Extended life – >300,000 operations at 30A, 240VAC (DC coil).
  >100,000 operations at 30A, 240VAC (AC coil).
- Meets requirements of UL873 and UL508 spacings.
  - .315" (8 mm) through air, .375" (9.5 mm) over surface.
- Meets requirements of VDE 8 mm spacing, 4kV dielectric coil-to-contacts.
- Meets requirements of UL Class F construction.
- Dust cover or immersion cleanable, tape sealed plastic case.

CONTACT DATA @ 25°C

Arrangements: 2 Form A (DPST-NO) and 2 Form C (DPDT).
Materials: Silver cadmium oxide.
Max. Load Rating:
Normally Open Contacts: 30A @ 120/277VAC, resistive;
1 HP @ 120VAC, 2.5 HP @ 240VAC;
22FLA, 96LRA @ 240VAC with AC coil;
25.3 FLA, 110 LRA @ 240VAC with DC coil(1);
3A @ 240VAC pilot duty;
15A @ 120VAC @ 1PF inductive;
20A @ 28VDC;
TV10 @ 120VAC.
Normally Closed Contacts: 3A @ 28VDC or 277VAC.
Min. Load Rating:
Normally Open Contacts: 500mA @ 12VAC/VDC.
Normally Closed Contacts: 100mA @ 6VAC/VDC.
Expected Mechanical Life: 5 million operations.
Expected Electrical Life: 100,000 operations at rated load.

INITIAL DIELECTRIC STRENGTH

Between Contacts and Coil: 4,000V rms, 50/60 Hz.
Between Open Contacts: 1,500V rms, 50/60 Hz.
Between Poles: 2,000V rms, 50/60 Hz.

INITIAL INSULATION RESISTANCE

Between Mutually Insulated Elements: 10^9 ohms, min. @ 500VDC.

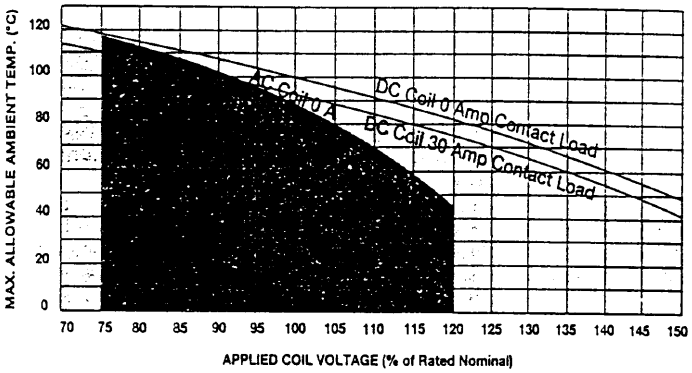
COIL DATA

Voltage: 6 through 110VDC and 24 through 277VAC.
Resistance: See Coil Data table.
Nom. Power: AC Coil: 4.0VA; DC Coil: 1.7W.
Coil Temp. Rise: 35°C/W.
Max. Coil Temp.: 140°C

COIL DATA (@ 25°C Coil Temperature)

DC COILS (1.7W)		AC COILS (4.0VA)	
Nominal Voltage (VDC)	DC Resistance ±10% (Ohms)	Nominal Voltage (VAC)	DC Resistance ±10% (Ohms)
6	22	24	39
12	86	120	950
24	350	208	2,841
48	1,390	240	3,800
110	7,255	277	5,485

AMBIENT TEMPERATURE VS. COIL VOLTAGE



Assumptions

1. Thermal resistance = 35°C per Watt (DC only.)
2. Still air
3. Nominal coil resistance
4. Maximum mean coil temperature = 140°C using change of resistance method, Class F
5. Coil temperature rise due to load = 6.3°C @ 30 Amps
6. Curves are based on 1.7 W at 25°C (DC only.)

OPERATE DATA

Must Operate Voltage: AC Coil: 80% of nominal voltage or less.
DC Coil: 75% of nominal voltage or less.
Must Release Voltage: 10% of nominal voltage or more.
Initial Operate Time (2): 15 ms typical, (25 ms max. w/bounce).
Initial Release Time (2): 10 ms typical, (25 ms max. w/bounce).
Max Operating Frequency: 14 operations per minute.

ENVIRONMENTAL DATA

Temperature Range: Storage: -55°C to +155°C.
Operating: AC Coil: -40°C to +65°C.
DC Coil: -40°C to +85°C.
Vibration: 0.065" (1.65 mm) double amplitude for 10-55 Hz., functional.
Shock, Operational: 10g for 11 ms, 1/2 sine wave pulse with no contact opening > 100µs.
Shock, Mechanical: 100g for 11 ms, 1/2 sine wave pulse.
Flammability: UL 94-V0.

MECHANICAL DATA

Termination: Printed circuit terminals; .250" (6.35 mm) quick connects for coil and contacts; or .187" (4.75 mm) quick connects for coil and .250" (6.35 mm) quick connects for contacts.
Enclosure: Unsealed, plastic dust cover or immersion cleanable, tape sealed plastic cover.
Weight: 3 oz. (86 g) approximately.

CONDITIONS

All parametric, environmental and life tests are performed according to EIA Standard RS-407-A at standard test conditions (25°C ambient, 20-50% RH, 29.5 ± 1" Hg.) unless otherwise noted.

NOTES:

(1) FLA, LRA ratings are compatible with 3.5 ton compressor applications.
(2) Nominal voltage, no coil suppression, excluding bounce.

ORDERING INFORMATION

Typical Part Number➤	T92	S	11	D	1	2	-24

1. **BASIC SERIES:**
   T92 = Printed circuit board / panel mount power relay.
2. **ENCLOSURE:**
   P = Plastic dust cover (unsealed). S = Immersion cleanable, tape sealed plastic case.*
3. **CONTACT ARRANGEMENT:**
   7 = 2 form A (DPST-NO). 11 = 2 form C (DPDT).
4. **COIL INPUT:**
   A = AC voltage. D = DC voltage.
5. **MOUNTING & TERMINATION:**
   1 = Printed circuit board mount; printed circuit board terminals for coil and contacts.
   2 = Panel mount via flanged cover; .250" (6.35mm) quick connect terminals for coil and contacts.
   3 = Panel mount via flanged cover; .187" (4.75mm) x .032" (.81mm) quick connect terminals for coil and .250" (6.35mm) for contacts.
   4 = Panel mount via flanged cover, .187" (4.75mm) x .020" (.51mm) quick connect terminals for coil and .250" (6.35mm) for contacts.
6. **CONTACT MATERIAL:**
   2 = Silver cadmium oxide.
7. **COIL VOLTAGE:**
   6 = 6VDC 24 = 24VDC/VAC 110 = 110VDC 208 = 208VAC 277 = 277VAC
   12 = 12VDC 48 = 48VDC 120 = 120VAC 240 = 240VAC

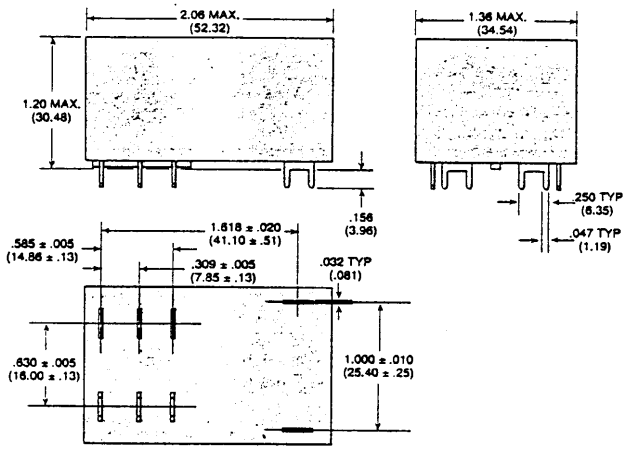
* Flanged mount version supplied without tape over vent hole.

STOCK ITEMS – The following items are normally maintained in stock for immediate delivery.

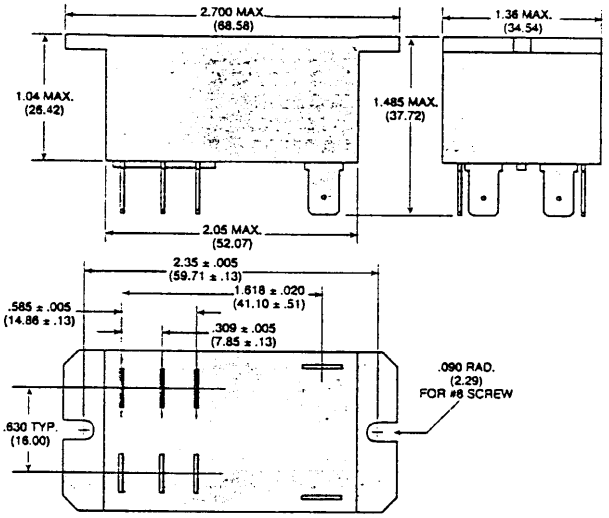
T92P7A22-24	T92P11D22-12	T92S7D12-12	T92S7D22-24	T92S11D12-12	T92S11D22-24
T92P7D22-12	T92P11D22-24	T92S7D12-24	T92S7D22-110	T92S11D12-24	T92S11D22-110
T92P7D22-24	T92S7A22-24	T92S7D12-48	T92S11A22-24	T92S11D12-48	
T92P11A22-120	T92S7A22-120	T92S7D12-110	T92S11A22-120	T92S11D12-110	
T92P11A22-240	T92S7A22-240	T92S7D22-12	T92S11A22-240	T92S11D22-12	

OUTLINE DIMENSIONS

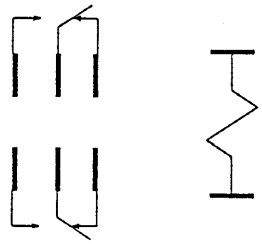
Mounting & Termination Type 1



Mounting & Termination Types 2, 3 & 4

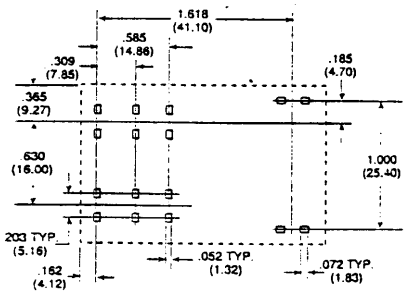


WIRING DIAGRAM



Only necessary terminals are present on single throw models.

SUGGESTED PC BOARD LAYOUT (Bottom View)



Note: An alternate PC board layout utilizes .076 ± .003 (1.93 ± .076) diameter holes on the same center-to-center spacing shown above. Use of the rectangular holes is recommended for improved solderability.