

RoHS Ready

Features

- 30A DPST-NO and DPDT switching capabilities.
- 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" (8mm) through air, .375" (9.5mm) over surface.

- Meets requirements of VDE 8mm spacing, 4kV dielectric coil-to-contacts.
- Meets requirements of UL Class F construction.
- UL approved for 600VAC switching (1.5HP).
- Conforms to VDE 0435, 0631, and 0700.
- New screw terminal version

Contact Ratings @ 25°C with relay properly vented. Remove tape over vent hole after soldering and cleaning.

Arrangements: 2 Form A (DPST-NO) and 2 Form C (DPDT). Materials: Silver cadmium oxide and silver tin indium oxide

Max. Load Rating, Silver Cadmium Oxide Contacts:

Normally Open Contacts: 40A @ 277VAC, resistive; 6K Ops. (Flange Mount);

30A @ 120/277VAC, resistive;

10A @ 600VAC, resistive;

1 HP @ 120VAC, 3 HP @ 240VAC; 1.5 HP @ 480VAC, 1.5 HP @ 600VAC

110 LRA, 25.3 FLA, @ 240VAC with DC coil(1);

60 LRA, 14 FLA @ 240VAC with AC coil;

3A @ 240VAC pilot duty;

20A @ 28VDC;

TV10 @ 120VAC

VDE Rating (Flange Mount): 20A @ 400VAC, 100K Ops. (30K Ops. for Form C Models

VDE Rating (PC Mount): 30A @ 400VAC, 100K Ops. (30K Ops. for Form C Models)

Normally Closed Contacts:

3A @ 28VDC or 277VAC, 2A @ 480VAC, 1A @ 600VAC

VDE Rating (Flange or PC Mount): 3A @ 400VAC, 30K Ops.

Max. Load Rating, Silver Tin Indium Oxide Contacts

Normally Open Contacts Only:

30A @ 120/277VAC, resistive; 200K Ops., DC Coil; 100K Ops, AC Coil

20A @ 480VAC, resistive;

1.5 HP @ 120VAC, 2 poles making/breaking (see Fig. 1)

3 HP @ 240VAC, 3 phase, DC coil only;

3 HP @ 480VAC, 3 phase, DC coil only; 2 HP @ 600VAC, 3 phase, DC coil only.

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, except as

specifically noted otherwise.

T92 series Two-Pole, 30 Amp **PC Board or Panel Mount Relay**

FII File E22575 (File LR15734 (F) (type 2,3,4,5)

File No. 5386 (type 1,2,3,4)

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.

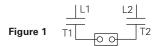
Contact Ratings (continued)

ARI 780-86 Endurance Test (section 6.6):

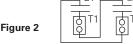
HVAC Definite Purpose Contactor Standard

Normally Open Contacts

Single Phase/Two Pole (Both poles together switching a single load) 110 LRA, 25.3 FLA, 200K operations (DC Coil)



Single Phase Per Pole (Single load per pole) 110 LRA, 18 FLA, 200K operations (DC Coil). 60 LRA, 14 FLA, 200K operations (AC Coil).



Notes: Vent hole tape must be removed to achieve all listed ratings.

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: 109 ohms, min. @ 500VDC.

Coil Data

Voltage: 12 through 110VDC and 12 through 277VAC

Resistance: See Coil Data table.

Nom. Power: AC Coil: 4.0VA; DC Coil: 1.7W.

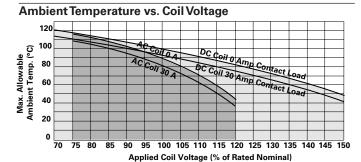
Coil Temp. Rise: 35°C/W. Max. Coil Temp.: 155°C Duty Cycle: Continuous.

Coil Data (@ 25°C Coil Temperature)

DC Coils (1.7W)						
Nom. Voltage (VDC)		DC Resist. 10% (Ohms)	Nom. Voltage (VDC)		DC Resist. ±10% (Ohms)	
12		86	48		1,390	
24		350	110		7,255	
AC Coils (4.0VA)						
Nom. Voltage (VAC)	Freq.	DC Resist. ±10% (Ohms)	Nom. Voltage (VAC)	Freq.	DC Resist. ±10% (Ohms)	
12	60	9.1	110/120	50/60	950	
24	60	36.6	200/208	50/60	2,841	
			220/240	50/60	3,800	
			250/277	50/60	5,485	

Notes

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



Assumptions:

- 1. Thermal resistance = 35°C per Watt (DC only.)
- 2 Still air
- 3. Nominal coil resistance.
- 4. Max. mean coil temperature = 155°C (change of resistance method).
- 5. Coil temperature rise due to load = 6.3°C @ 30 amps.
- 6. Curves are based on 1.7W 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. 15 ms typical, (25 ms max. w/bounce). Initial Operate Time(2): 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: Silver cadmum oxide contacts: -40°C to +85°C. Silver tin indium oxide contacts: -40°C to +70°C.

Vibration: 0.065" (1.65mm) double amplitude for 10-55 Hz., functional. Shock, Operational: 10g for 11 ms, 1/2 sine wave pulse with no contact

opening > 100µs.

Mechanical Data

Termination: Printed circuit terminals; .250" (6.35mm) quick connects for coil and contacts; .187" (4.75mm) quick connects for coil

and .250" (6.35mm) quick connects for contacts; or M4 screws with captive pressure plates for coil and contacts.

Enclosure: Dust protected plastic case or wash-tight, tape sealed, (washable) plastic case.

Weight: 3 oz. (86g) 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

S **T92** D 2 11 2 -24 Typical Part Number ▶ 1. Basic Series:

T92 = Printed circuit board / panel mount power relay.

2. Enclosure:

P = Dust protected plastic case

S = Wash-tight, tape sealed, plastic case (Mounting & Termination Type 1).

Top sealed, not wash-tight, not tape sealed on bottom (Mounting & Termination Types 2, 3 & 4).

3. Contact Arrangement:

7 = 2 form A (DPST-NO)11 = 2 form C (DPDT).

4. Coil Input:

A = AC voltage, 60 Hz. or 50/60 Hz. (See Coil Data Table) D = DC voltage

5. Mounting & Termination:

1 = Printed circuit board mount; printed circuit board terminals. 2 = Panel mount via flanged cover; .250" (6.35mm) x .032" (.81mm) quick connect terminals.

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. 5 = Panel mount via flanged cover, M4 screw terminals w/ captive pressure plates. Requires Enclosure P and Contact Arrangement 7.

6. Contact Material:

4 = Silver tin indium oxide 2 = Silver cadmium oxide

Coil Voltage: (See Coil Data Table)

(DC) 12 = 12VDC24 = 24VDC48 = 48VDC110 = 110VDC

(60Hz.) 12 = 12VAC24 = 24VAC(50/60Hz.) 110 = 100/110VAC120 = 110/120VAC 208 = 200/208VAC240 = 220/240VAC277 = 250/277VAC

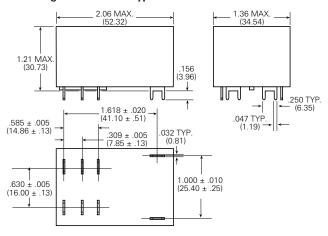
NOTE: All part numbers are RoHS compliant.

Stock Items - We recommend that our authorized distributors stock the following items for immediate delivery.

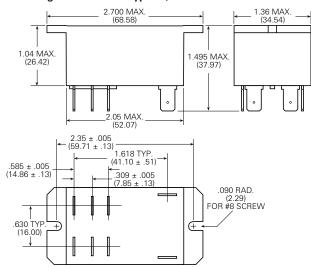
T92P7A22-24 T92P7A22-240 T92P7D12-24 T92P7D22-24 T92P11A22-120 T92S7D12-12 T92P11D22-12 T92S11D22-12 T92P7A22-120 T92P7D12-12 T92P7D22-12 T92P11A22-24 T92P11A22-240 T92P11D22-24 T92S7D12-24 T92S11D22-24

Outline Dimensions

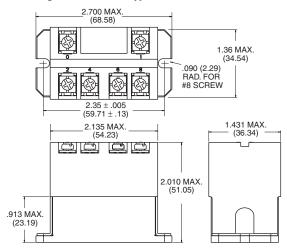
Mounting & Termination Type 1



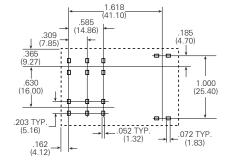
Mounting & Termination Types 2, 3 & 4



Mounting & Termination Type 5

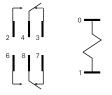


Suggested PC Board Layout (Bottom View)



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.

Wiring Diagram



Only necessary terminals are present on single throw models.