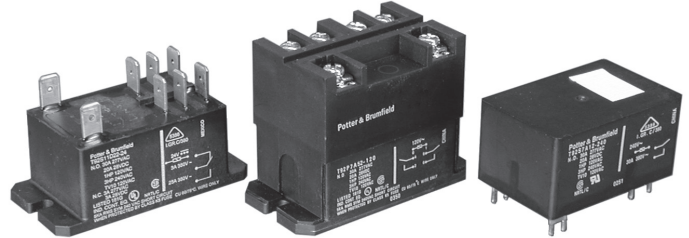


T92 Series Two-pole 30A PCB or Panel Mount Relay

- 40A, 2 form A (NO) and 2 form C (CO) switching capability
- Designed to control compressor loads to 3.5 tons, 110LRA / 25.3FLA
- Meets requirements of UL 508 and UL 873 spacings - 8mm through air, 9.5mm over surface
- Meets requirements of VDE 8mm spacing, 4kV dielectric coil-to-contact
- Meets requirements of UL Class F construction
- UL approved for 600VAC switching (1.5HP)
- New screw terminal version (consult factory for availability, ratings)

Typical applications
HVAC, residential / commercial appliances, industrial controls.



Approvals

UL E58304 (Recognized and Listed); CSA LR48471; VDE 40019600
Technical data of approved types on request.

Contact Data

| | |
|---------------------------------------------|-------------------------------|
| Contact arrangement | 2 form A (NO); 2 form C (CO) |
| Rated voltage | 277VAC |
| Max. switching voltage | 600VAC |
| Rated current | 30A NO; 3A NC |
| Limiting continuous current | 40A NO; 3A NC |
| Limiting making current | 40A NO; 3A NC |
| Limiting breaking current | 40A NO; 3A NC |
| Contact material | AgSnInO, AgCdO |
| Min. recommended contact load | 500ma (NO)/ 100ma (NC), 12VAC |
| Frequency of operation, with load | 360hr |
| Operate/release time max., including bounce | 25/25ms |

Contact ratings ¹⁾

| Type | Load | Cycles |
|----------------------------|-----------------------------------------------|---------------------|
| UL508 | | |
| AgCdO | | |
| NO | 40A, 277VAC, resistive | 6x10 ³ |
| NO | 30A, 120/277VAC, resistive | 100x10 ³ |
| NO | 10A, 600VAC, general purpose | 100x10 ³ |
| NO | 1HP, 120VAC | 100x10 ³ |
| NO | 3HP, 240VAC | 1x10 ³ |
| NO | 1.5HP, 480 or 600VAC | 100x10 ³ |
| NO | 110LRA/25.3FLA, 240VAC (DC coil only) | 100x10 ³ |
| NO | 60LRA/14FLA, 240VAC (AC coil only) | 100x10 ³ |
| NO | 3A, 240VAC, pilot duty | 100x10 ³ |
| NO | 20A, 28VDC, resistive | 100x10 ³ |
| NO | TV10, 120VAC | 100x10 ³ |
| NC | 3A, 277VAC | 100x10 ³ |
| NC | 2A, 480VAC | 100x10 ³ |
| NC | 1A, 600VAC | 100x10 ³ |
| AgSnInO | | |
| NO | 30A, 120/277VAC, resistive (DC coil only) | 200x10 ³ |
| NO | 30A, 120/277VAC, resistive (AC coil only) | 100x10 ³ |
| NO | 20A, 480VAC, resistive | 100x10 ³ |
| NO | 1.5HP, 120VAC, 2 pole making/breaking (Fig.1) | 100x10 ³ |
| NO | 3HP, 240VAC, 3 phase (DC coil only) | 100x10 ³ |
| NO | 3HP, 480VAC, 3 phase (DC coil only) | 100x10 ³ |
| NO | 2HP, 600VAC, 3 phase (DC coil only) | 100x10 ³ |
| VDE | | |
| AgCdO, flange mount relays | | |
| NO | 20A, 400VAC | 100x10 ³ |
| NC | 3A, 400VAC | 30x10 ³ |
| CO | 20A NO / 3A NC, 400VAC | 30x10 ³ |
| AgCdO, PC mount relays | | |
| NO | 30A, 400VAC | 100x10 ³ |
| NC | 3A, 400VAC | 30x10 ³ |
| CO | 30A NO / 3A NC, 400VAC | 30x10 ³ |

Contact ratings ¹⁾ (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)

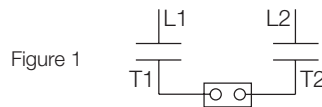


Figure 1

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

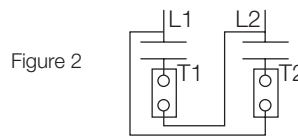


Figure 2

¹⁾ Contact ratings at 25°C (unless otherwise noted) with relay properly vented.
FLA, LRA ratings are compatible with 3.5 ton compressor applications.

| | |
|----------------------|-------------------------|
| Mechanical endurance | 10x10 ⁶ ops. |
|----------------------|-------------------------|

Coil Data

| | |
|-------------------------------------|---------------------------|
| Coil voltage range | 5 to 110VDC; 12 to 240VAC |
| Max. coil power | 1.7W; 4.0VA |
| Max. coil temperature | 155°C |
| Coil insulation system according UL | Class F |

Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power W |
|-----------|-------------------|---------------------|---------------------|-----------------------|--------------------|
| 6 | 6 | 4.5 | 0.6 | 22 | 1.7 |
| 9 | 9 | 6.75 | 0.9 | 48 | 1.7 |
| 12 | 12 | 9 | 1.2 | 86 | 1.7 |
| 18 | 18 | 13.5 | 1.8 | 197 | 1.7 |
| 24 | 24 | 18 | 2.4 | 350 | 1.7 |
| 48 | 48 | 36 | 4.8 | 1390 | 1.7 |
| 110 | 110 | 82.5 | 11 | 7255 | 1.7 |

Coil versions, AC coil

| Coil code | Rated voltage VAC | Frequency Hz | Operate voltage VAC, 60Hz | Release voltage VAC, 60Hz | Coil resistance Ω±10% | Rated coil power VA |
|-----------|-------------------|--------------|---------------------------|---------------------------|-----------------------|---------------------|
| 12 | 12 | 60 | 9.6 | 1.2 | 9.1 | 4 |
| 24 | 24 | 60 | 19.2 | 2.4 | 36.6 | 4 |
| 120 | 110/120 | 50/60 | 96 | 12 | 950 | 4 |
| 240 | 220/240 | 50/60 | 192 | 24 | 3800 | 4 |
| 277 | 250/277 | 50/60 | 222 | 28 | 5485 | 4 |

All figures are given for coil without preenergization, at ambient temperature +23°C.

T92 Series Two-pole 30A PCB or Panel Mount Relay (Continued)

Coil Data (continued)

Ambient temperature vs. coil voltage

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.).



Insulation Data

| | |
|---------------------------------|------------------------------|
| Initial dielectric strength | |
| between open contacts | 1500V _{rms} |
| between contact and coil | 4000V _{rms} |
| between adjacent contact | 2000V _{rms} |
| Initial surge withstand voltage | |
| between contact and coil | 6kV |
| Initial insulation resistance | |
| between insulated elements | 1x10 ⁹ Ω |
| Clearance/creepage | |
| between contact and coil | 8mm clearance/9.5mm creepage |

Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

| | |
|--------------------------------------|----------------------------------------------------------------|
| Ambient temperature | |
| DC coil | -55°C to 85°C |
| AC coil | -55°C to 65°C |
| Category of environmental protection | IEC 61810 |
| | RTI - dust protected, RTII - flux proof, RTIII - wash tight |
| Vibration resistance (functional) | 1.65mm max excursions, 10-55 Hz |
| Shock resistance (functional) | 10g for 11msec |
| Shock resistance (destructive) | 100g |
| Terminal type | PCB-tht or quick connect |
| Weight | 86g |
| Resistance to soldering heat THT | |
| IEC 60068-2-20 | 250°C |
| Packaging/unit | tray/30 pcs., box/120 pcs. |

Dimensions

T92 – Mounting and termination code 1



T92 – Mounting and termination code 2, 3 and 4



T92 Series Two-pole 30A PCB or Panel Mount Relay (Continued)

| Product Code | Enclosure | Contacts | Coil | Mounting | Contact Material | Coil | Part Number |
|---------------|--------------------|----------------|------|-------------------------------|------------------|---------|-------------|
| T92P7A22-24 | Plastic dust cover | 2 form A, 2 NO | AC | Panel mount + quick connect | AgCdO | 24 VAC | 6-1393211-0 |
| T92P7A22-120 | | | | | | 120 VAC | 5-1393211-7 |
| T92P7A22-240 | | | | | | 240 VAC | 6-1393211-2 |
| T92P7A22-277 | | | | | | 277 VAC | 6-1393211-3 |
| T92P7A24-240 | | | | Panel mount + screw terminals | AgSnOInO | 240 VAC | 3-1423008-3 |
| T92P7A52-120 | | | | | | 120 VAC | 1423008-8 |
| T92P7A52-240 | | | | | | 240 VAC | 1-1423008-2 |
| T92P7D12-12 | | | | | | 12 VDC | 6-1393211-5 |
| T92P7D12-24 | | | DC | PCB terminals | | 24 VDC | 6-1393211-6 |
| T92P7D22-12 | | | | | | 12VDC | 6-1393211-9 |
| T92P7D22-24 | | | | | | 24 VDC | 7-1393211-1 |
| T92P7D22-48 | | | | | | 48 VDC | 7-1393211-2 |
| T92P7D24-12 | | | | | AgSnOInO | 12VDC | 2-1423008-2 |
| T92P7D24-24 | | | | | | 24 VDC | 1423008-9 |
| T92P7D42-24 | | | | | | 24 VDC | 7-1393211-5 |
| T92P7D52-12 | | | | | | 12 VDC | 1-1423008-0 |
| T92P7D52-24 | | | | Panel mount + screw terminals | | 24 VDC | 1423967-1 |
| T92P11A12-120 | | | | | | 120 VAC | 3-1393211-8 |
| T92P11A22-12 | | | | | | 12 VAC | 3-1393211-9 |
| T92P11A22-24 | | | | | | 24 VAC | 4-1393211-3 |
| T92P11A22-120 | | | | | | 120 VAC | 4-1393211-0 |
| T92P11A22-240 | | | | | | 240 VAC | 4-1393211-4 |
| T92P11A22-277 | | | | | | 277 VAC | 4-1393211-6 |
| T92P11A24-240 | | | | | | 240 VAC | 3-1423008-7 |
| T92P11A42-120 | | | | | AgSnOInO | 120VAC | 4-1393211-8 |
| T92P11D12-12 | | | | | | 12 VDC | 5-1393211-0 |
| T92P11D22-12 | | | | | | 12 VDC | 5-1393211-3 |
| T92P11D22-24 | | | | | | 24 VDC | 5-1393211-4 |
| T92P11D24-12 | | | DC | PCB terminals | | 12 VDC | 3-1423008-5 |
| T92P11D24-24 | | | | | | 24 VDC | 3-1423008-6 |
| T92S7A12-24 | | | | | | 24 VAC | 9-1393211-8 |
| T92S7A12-120 | | | | | | 120 VAC | 9-1393211-7 |
| T92S7A12-240 | Wash tight | 2 form A, 2 NO | AC | PCB terminals | AgCdO | 240 VAC | 9-1393211-9 |
| T92S7A22-24 | | | | | | 24 VAC | 1393212-4 |
| T92S7A22-120 | | | | | | 120 VAC | 1393212-2 |
| T92S7A22-240 | | | | | | 240 VAC | 1393212-5 |
| T92S7D12-12 | Top sealed | | | Panel mount + quick connect | | 12 VDC | 1393212-8 |
| T92S7D12-24 | | | | | | 24 VDC | 1-1393212-0 |
| T92S7D12-48 | | | | | | 48 VDC | 1-1393212-1 |
| T92S7D12-110 | | | | | | 110 VDC | 1393212-7 |
| T92S7D14-24 | Wash tight | | DC | PCB terminals | AgSnOInO | 24 VDC | 1-1423008-8 |
| T92S7D22-12 | | | | | | 12 VDC | 1-1393212-4 |
| T92S7D22-18 | | | | | | 18 VDC | 1-1393212-5 |
| T92S7D22-24 | | | | | | 24 VDC | 1-1393212-7 |
| T92S7D22-110 | Top sealed | | | Panel mount + quick connect | AgCdO | 110 VDC | 1-1393212-3 |
| T92S11A12-24 | | | | | | 24 VAC | 8-1393211-1 |
| T92S11A12-120 | | | | | | 120 VAC | 8-1393211-0 |
| T92S11A12-240 | | | | | | 240 VAC | 8-1393211-2 |
| T92S11A22-12 | | | | Panel mount + quick connect | | 12 VAC | 8-1393211-3 |
| T92S11A22-24 | | | | | | 24 VAC | 8-1393211-6 |
| T92S11A22-120 | | | | | | 120 VAC | 8-1393211-4 |
| T92S11A22-240 | | | | | | 240 VAC | 8-1393211-7 |
| T92S11D12-12 | Wash tight | | DC | PCB terminals | | 12 VDC | 8-1393211-9 |
| T92S11D12-24 | | | | | | 24 VDC | 9-1393211-0 |
| T92S11D12-48 | | | | | | 48 VDC | 9-1393211-1 |
| T92S11D12-110 | | | | | | 110 VDC | 8-1393211-8 |
| T92S11D22-12 | Top sealed | | | Panel mount + quick connect | | 12 VDC | 9-1393211-3 |
| T92S11D22-24 | | | | | | 24 VDC | 9-1393211-4 |