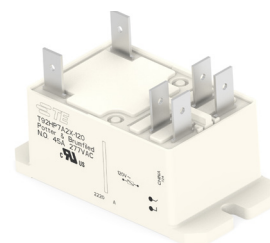


T92H Series Two-pole Power Relay

- 45A/50A switching capability
- Meets requirements of UL 508 and UL 873 spacings - 8mm through air, 9.5mm over surface
- Meets requirements of 8mm spacing, 4kV dielectric coil-to-contact
- Meets requirements of UL Class F construction

Typical applications

HVAC, residential / commercial appliances, industrial controls, charging



Approvals

UL E22575

Technical data of approved types on request.

Contact Data

Type	T92H
Contact arrangement	2 form A (NO)
Rated voltage	277VAC
Max. switching voltage	600VAC
Rated current	50A (DC coil) / 45A (AC coil)
Overload current*	75A (DC coil) / 67.5A (AC coil)
Contact material	Ag Alloy
Min. recommended contact load	500mA (NO), 12VAC or 5VDC
Frequency of operation, with load	360 cycles per hour
Operate/release time max., including bounce	25/25ms
Initial contact resistance	< 100 mΩ at 6VDC 1A

*Note: Minimum electrical endurance 50 cycles

Contact ratings¹⁾

UL508

Type	Load	Cycle
NO	50A, 277VAC, resistive, 85°C (DC coil)	6x10 ³
NO	45A, 277VAC, resistive, 85°C (AC coil)	6x10 ³

1) Contact ratings tested with relay properly vented. For wash tight version, recommend user remove the white tape on the product after the soldering, coating or washing process to ensure the product specification.

Mechanical endurance

T92H 1x10⁶ ops

Coil Data

Coil voltage range	12 to 48VDC; 12 to 277VAC
Max. coil power	1.7W (DC coil) / 4.0VA (AC coil)
Max. coil temperature	155°C
Coil insulation system according UL	Class F

Coil versions, DC coil²⁾ (D type)

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power W
12	12	9	1.2	86	1.7W/ Min. 0.41W hold
18	18	13.5	1.8	197	
22	22	16.5	2.2	294	
24	24	18	2.4	350	
36	36	27	3.6	767	
48	48	36	4.8	1390	

2) After the energization time of 100ms with rated voltage, the coil requires a reduction of the coil voltage to 50% of rated voltage.

Coil versions, AC coil³⁾ (A type)

Coil code	Rated voltage VAC ³⁾	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
110	110	60	88	11	793	4
120	110/120	50/60	96	12	950	4
208	208	60	166.4	20.8	2841	4
240	220/240	50/60	192	24	3800	4
277	250/277	50/60	221.6	27.7	5485	4

3) After the energization time of 100ms with rated voltage, the coil requires a reduction of the coil voltage to 90% of rated voltage.

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	8kV
Initial insulation resistance (@500VDC)	
between insulated elements	1x10 ⁹ Ω
Clearance/creepage	
between contact and coil	8mm clearance/9.5mm creepage

Other Data

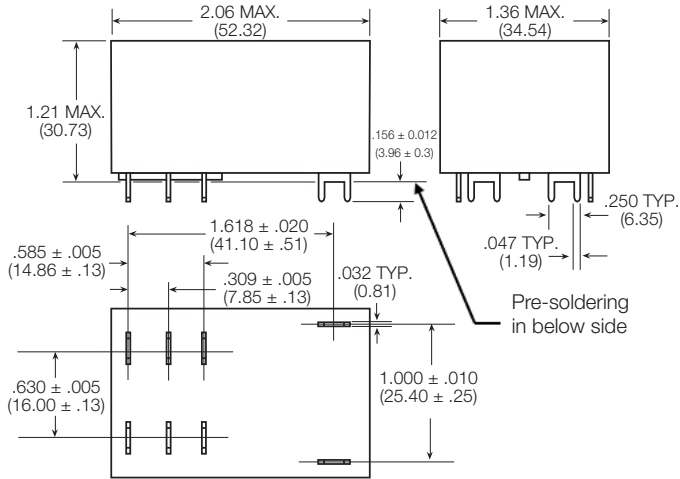
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

Ambient temperature	
DC coil	-55°C to 85°C
AC coil	-55°C to 85°C
Category of environmental protection	
IEC 61810	RTI - dust protected, RTII - flux proof, RTIII - wash tight
Vibration resistance (functional)	1.65mm max amplitude, 10-55 Hz
Shock resistance (functional)	10G for 11msec
Shock resistance (destructive)	100G
Terminal type	PCB / Quick Connect
Weight	86g
Resistance to soldering heat (for PCB Terminal)	
IEC 60068-2-20	260°C, 10s
Packaging/unit	tray/30 pcs., box/120 pcs.

T92H Series Two-pole Power Relay (Continued)

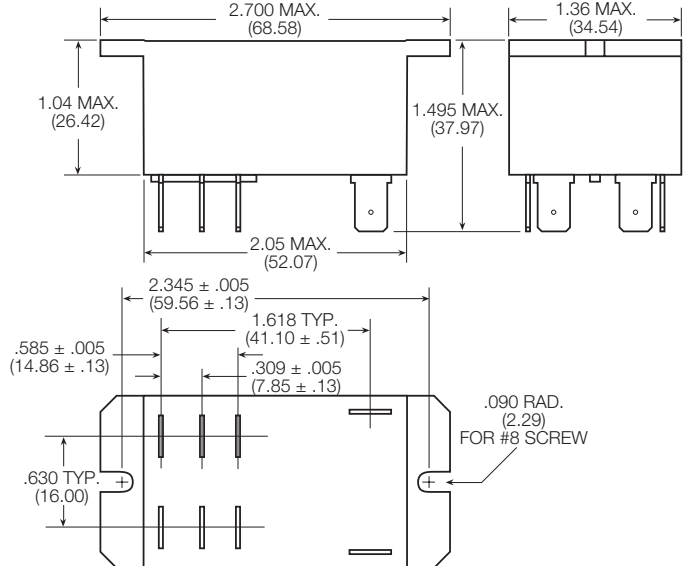
Dimensions

Mounting and termination code 1



Note: Dimensions of the pins after tin soldering
a) +0.3mm for the width and the thickness
b) +1.0mm for the length

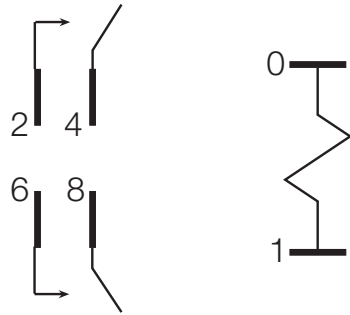
Mounting and termination code 2



Terminal assignment

Bottom view on pins

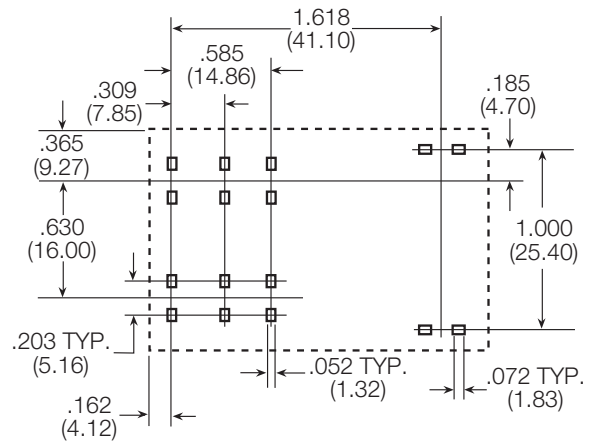
2 form A



PCB layout

Bottom view on pins

Mounting and termination code 1



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.

Only necessary terminals are present on single throw models. Consequently, some holes will be unnecessary for single throw models.

T92H Series Two-pole Power Relay (Continued)

Product code structure

Typical product code

T92H P 7 D 1 X -12
Type
T92H Power relay T92 High Performance

Enclosure
P Dust protected plastic case

S Wash-tight, tape sealed, plastic case (Mounting and termination code 1)

Contact arrangement
7 2 form A (2 NO)

Coil Input
D DC voltage

A AC Voltage

Mounting and termination
1 Printed circuit board mount; printed circuit board terminals.

2 Panel mount via flanged cover; .250" (6.35mm) x .032" (.81mm) QC terminal

Contact material
X Special Ag Alloy X (Cd Free)

Coil voltage

Coil code: please refer to coil versions table

Product code	Enclosure	Contacts	Coil	Mounting	Contact Material	Coil	Part number
T92HP7D1X-12	Plastic dust cover	2 form A, 2 NO	DC	PCB terminals	Special Ag Alloy X (Cd Free)	12VDC	6-1423008-6
T92HP7D1X-24						24VDC	6-1423008-7
T92HP7D1X-48						48VDC	6-1423008-9
T92HS7D1X-24	Wash-tight					24VDC	7-1423008-5
T92HP7A2X-120	Plastic dust cover	2 form A, 2 NO	AC	Panel mount + quick connect	Special Ag Alloy X (Cd Free)	120VAC	7-1423008-2

Note. This list represents the most common types and does not show all variants covered by this datasheet, other types on request.