

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-tocontact
- 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 E22575 (Recognized and Listed); CSA LR48471; VDE 40019600 Technical data of approved types on request.

Contact Data

Oundor 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	AgSnOlnO, AgCdO
Min. recommended contact load	500ma (NO)/ 100ma (NC), 12VAC
Frequency of operation, with load	360hr
Operate/release time max., including	bounce 25/25ms
Initial contact resistance	< 100 mΩ at 6VDC 1A

Contact ratings 1)

Туре	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
AgSnOlnO		
NO	40A, 240VAC, resistive 85°C	50x10 ³
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		
NO	20A, 400VAC	100x10 ³
NC	3A, 400VAC	30x10 ³
CO	20A NO / 3A NC, 400VAC	30x10 ³
AgCdO, PC mo		-
NO	30A, 400VAC	100x10 ³
NC	3A, 400VAC	30x10 ³
CO	30A NO / 3A NC, 400VAC	30x10 ³
11-2018 Bev 111	8 Catalog and product specification	n according

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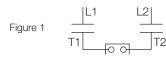
Contact ratings ¹⁾ (continued)

ARI 780-86 Endurance Test (section 6.6):

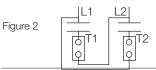
HVAC Definite Purpose Contactor Standard

Normally Open Contacts

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



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



 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

10x10⁶ ops.

Coil Data

0011 Du								
Coil volta	ge range		5 to 110VDC; 12 to 240VAC 1.7W; 4.0VA					
Max. coil								
Max. coil	temperature			155°C				
Coil insul	ation system	according UL		Class F				
Coil vers	sions, DC co	il (D type)						
Coil	Rated	Operate	Release	Coil	Rated coil			
code	voltage	voltage	voltage	resistance	power			
	VDC	VDC	VDC	Ω±10%	W			
5	5	3.75	0.6	14.9	1.7			
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			
22	22	16.5	2.2	294	1.7			
24	24	18	2.4	350	1.7			
36	36	27	3.6	767	1.7			
48	48	36	4.8	1390	1.7			
110	110	82.5	11	7255	1.7			
120	120	90	12	8514	1.7			

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

Insulation Data

Coil versions, AC coil (A type) (continued)

	con versions, ac con (a type) (continued)									
Coil	Rated	Frequency	Operate	Release	Coil	Rated coil				
code	voltage		voltage	voltage	resistance	power				
	VAC	Hz	VAC, 60Hz	VAC, 60Hz	Ω±10%	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				
Coil v	ersions, A	C coil (F ty	vpe)							
Coil	Rated	Frequency	Operate	Release	Coil	Rated coil				
code	voltage		voltage	voltage	resistance	power				
	VAC	Hz	VAC, 60Hz	VAC, 60Hz	Ω±10%	VA				
12	12	50	9.6	1.2	11.2	3.5				
24	24	50	19.2	2.4	44.4	3.5				
48	48	50	38.4	4.8	179.2	3.5				
240	240	50	192	24	4355	3.5				

All figures are given for coil without preenergization, at ambient temperature +23°C. For A type, 110V/120V, 50/60Hz. Signify 50Hz Operation at Nominal 110V, 60 Hz Operation at Nominal 120V.

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).

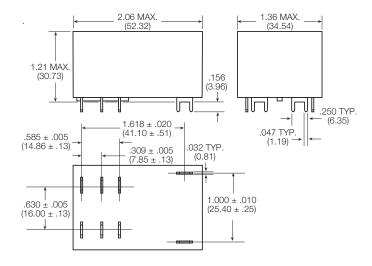
5. Coil temperature rise due to load = 6.3°C @ 30 amps.

6. Curves are based on 1.7W at 25°C (DC only.)

୍ଚି 120																
0 2 0 100					A	Coi	1		DC							
Allowable Ambient Temp. 00 00 00 00 00 00 00 00 00 00 00 00 00					AC		4//2	711		0il 0 2il 30	Amp	Com	act I	0.0.1		
qme 60							-4	X	Z	/// 30	Amp	Cont	acti	ad lad	/	
aldav 40										\backslash				2aQ		\geq
0 Max.																
_	70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 Applied Coil Voltage (% of Rated Nominal)															

Dimensions

T92 – Mounting and termination code 1



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

 between insulated elements
 1x10⁹Ω

 Clearance/creepage

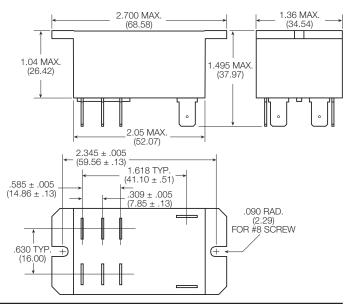
 between contact and coil
 8mm clearance/9.5mm creepage

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	1
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	260°C
Packaging/unit	tray/30 pcs., box/120 pcs.

T92 – Mounting and termination code 2, 3 and 4



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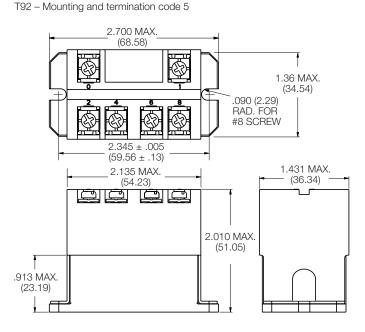
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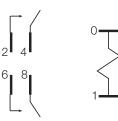


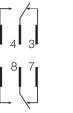
T92 Series Two-pole 30A PCB or Panel Mount Relay (Continued)

Dimensions



Terminal assignment Bottom view on pins





2 form C

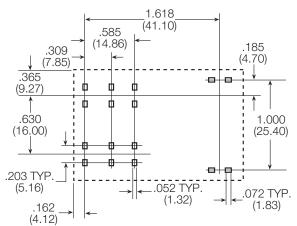
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PCB layout

2 form A

Bottom view on pins

T92 - Mounting and termination code 1



An alternate PC board layout utilizes .076 \pm .003 (1.93 \pm .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.

Draduat a	ode structure		Turbical preduct as do	T92	s	11	р	0	0	-24	
Product Co	de structure		Typical product code	192	3			2	2	-24	
Туре				_							
T92	Printed circuit board / panel mount power relay T92										
Enclosure					-						
Р	Dust protected plastic case										
S	Wash-tight, tape sealed, pla	stic case (Mounting and terr	nination code 1)								
	Top sealed, not wash-tight,	not tape sealed on bottom (I	Mounting and terminatio	n codes 2	2,3&4)						
Contact arra	angement										
7	2 form A (2 NO)	11 2 form C (2	CO)								
Coil Input											
Α	AC voltage, 60Hz or 50/60	Hz (consult coil versions table	e) D DC voltage	F AG	C voltage	e, 50Hz					
Mounting an	nd termination										
1	Printed circuit board mount;	printed circuit board termina	als.								
2	Panel mount via flanged cov	/er; .250" (6.35mm) x .032" (.81mm) QC terminal								
3	Panel mount via flanged cov	/er; .187" (4.75mm) x .032" (.81mm) QC terminals fo	r coil and	.250" (6	.35mm) f	or conta	ots			
4	Panel mount via flanged cover, .187" (4.75mm) x .020" (.51mm) QC terminals for coil and .250" (6.35mm) for contacts.										
5	Panel mount via flanged cover, M4 screws w/ captive pressure plates. Requires Enclosure P and Contact arrangement 7.										
Contact ma	terial								-		
2	AgCdO	4 AgSnOlnO									
Coil voltage										-	
	Coil code: please refer to co	il versions table									

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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					AgSnOlnO	240 VAC	3-1423008-3
T92P7A52-120				Panel mount + screw terminals	AgCdO	120 VAC	1423008-8
T92P7A52-240						240 VAC	1-1423008-2
T92P7D12-12			DC	PCB terminals		12 VDC	6-1393211-5
T92P7D12-24						24 VDC	6-1393211-6
T92P7D22-12				Panel mount + quick connect		12VDC	6-1393211-9
T92P7D22-24						24 VDC	7-1393211-1
T92P7D22-48						48 VDC	7-1393211-2
T92P7D24-12					AgSnOlnO	12VDC	2-1423008-2
T92P7D24-24					J. J	24 VDC	1423008-9
T92P7D42-24					AgCdO		7-1393211-5
T92P7D52-12				Panel mount + screw terminals	Ű	12 VDC	1-1423008-0
T92P7D52-24						24 VDC	1423967-1
T92P11A12-120		2 form C, 2 CO	AC	PCB terminals	-	120 VAC	3-1393211-8
T92P11A22-12		2 101111 0, 2 00	7.0	Panel mount + quick connect	-	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					AgSnOlnO	240 VAC	3-1423008-7
T92P11A42-120					AgCdO	120VAC	4-1393211-8
T92P11D12-12			DC	PCB terminals	Agouo	12 VDC	5-1393211-0
T92P11D12-12			DC	Panel mount + quick connect	-	12 000	5-1393211-3
T92P11D22-12				Panel mount + quick connect		24 VDC	5-1393211-3
T92P11D22-24					AgSnOlnO	12 VDC	3-1423008-5
-					Agonoino		
T92P11D24-24	Maab tight		AC	PCB terminals	Arcdo	24 VDC 24 VAC	3-1423008-6
T92S7A12-24	Wash tight	2 form A, 2 NO	AC	PCB terminais	AgCdO	120 VAC	9-1393211-8
T92S7A12-120							9-1393211-7
T92S7A12-240						240 VAC	9-1393211-9
T92S7A22-24	Top sealed			Panel mount + quick connect		24 VAC	1393212-4
T92S7A22-120						120 VAC	1393212-2
T92S7A22-240	147 1 11 1 1	-				240 VAC	1393212-5
T92S7D12-12	Wash tight		DC	PCB terminals		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					AgSnOlnO	24 VDC	1-1423008-8
T92S7D22-12	Top sealed			Panel mount + quick connect	AgCdO	12 VDC	1-1393212-4
T92S7D22-18						18 VDC	1-1393212-5
T92S7D22-24						24 VDC	1-1393212-7
T92S7D22-110						110 VDC	1-1393212-3
T92S11A12-24	Wash tight	2 form C, 2 CO	AC	PCB terminals		24 VAC	8-1393211-1
T92S11A12-120						120 VAC	8-1393211-0
T92S11A12-240						240 VAC	8-1393211-2
T92S11A22-12	Top sealed			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
						-	

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

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