

NT90T (T91)



32.4×27.5×28.0



32.4×27.5×20



(NT90T₂)



03001003503



E9930952E01



E160644 E233737



R2033977.06

Patent No. 99312549.2 02110881.1

Features

- Small size, light weight. Low coil power consumption, heavy contact load. Strong anti-shock and anti-vibration, high reliability, long life.
- Suitable for automobile, machine, electronic equipment, air conditioner and household appliances applications.
- PC board mounting and direct insert mounting available.

Ordering Information

NT90T H L A S DC12V C B 0.9

1 2 3 4 5 6 7 8 9

1 Part number: NT90T、NT90T₂

2 Load: H:30A; N:40A

3 High: NIL: Standard; L: Low profile type

4 Contact arrangement: A:1A; B:1B; C:1C

5 Enclosure: S: Sealed type; D: Dust cover;
E: Covered; O: Open type

6 Coil rated voltage(V): AC:12,24,110,120,220

DC:3,5,6,9,12,15,18,24,48,110

7 Contact material: C: AgCdO; S: AgSnO₂; I: AgSnO₂ In₂O₃

8 Resist heat class: B:130℃ F:155℃

9 Coil power consumption: 0.6:0.6W; 0.9:0.9W
NIL:2VA

Contact Data

Contact Arrangement	1A (SPSTBNO) 1B (SPSTNC) 1C (SPDT(B-M))
Contact Material	AgCdO AgSnO ₂ AgSnO ₂ In ₂ O ₃
Contact Rating (resistive)	NO:30A/240VAC,14VDC; NC:20A/240VAC;30A/14VDC NO:40A/250VAC,30VDC; NC:30A/250VAC,30VDC (0.9W) NO:30A/277VAC;NC:20A/277VAC Motor load: 2HP 250VAC ; 1.5HP 250V Lamp load: TV-5
Max. Switching Power	1100W 7200VA
Max. Switching Voltage	110VDC 250VAC Max. Switching Current:40A
Contact Resistance or Voltage drop	<30mΩ Item 3.12 of IEC255-7
Operation Life	Electrical 10 ⁵ Item 3.30 of IEC255-7
	Mechanical 10 ⁷ Item 3.31 of IEC255-7

Coil Parameter

AC Coil Parameter									
Dash numbers	Rated voltage VAC		Rated current mA	Coil resistance Ω ±10%	Pick up voltage VAC(max) (75%of rated voltage)	Release voltage VAC(min) (30%of rated voltage)	Coil power	Operate Time ms	Release Time ms
	Rated	Max							
012AC	12	15.6	187	27	9.0	3.6	2VA	—	—
024AC	24	31.2	95	120	18.0	7.2			
110AC	110	143	20	2360	82.5	33.0			
120AC	120	156	16.5	3040	90.0	36.0			
220AC	220	286	6.4	13490	165.0	66.0			

- CAUTION:**
- 1.The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.
 - 2.Pickup and release voltage are for test purposes only and are not to be used as design criteria.

Coil Parameter

DC Coil Parameter								
Dash numbers	Coil voltage V		Coil resistance $\Omega \pm 10\%$	Pick up voltage VDC(max) (75% of rated voltage)	Release voltage VDC(min) (10% of rated voltage)	Coil power W	Operate Time ms	Release Time ms
	Rated	Max.						
003-900	3	3.9	10	2.25	0.3	0.9	≤ 15	≤ 10
005-900	5	6.5	28	3.75	0.5			
006-900	6	7.8	40	4.50	0.6			
009-900	9	11.7	90	6.75	0.9			
012-900	12	15.6	160	9.00	1.2			
015-900	15	19.5	250	10.25	1.5			
018-900	18	23.4	360	13.50	1.8			
024-900	24	31.2	640	18.00	2.4			
048-900	48	62.4	2560	36.00	4.8			
110-900	110	143	13445	82.50	11.0			
003-600	3	3.9	15	2.25	0.3	0.6	≤ 15	≤ 10
005-600	5	6.5	42	3.75	0.5			
006-600	6	7.8	60	4.50	0.6			
009-600	9	11.7	135	6.75	0.9			
012-600	12	15.6	240	9.00	1.2			
015-600	15	19.5	375	10.25	1.5			
018-600	18	23.4	540	13.50	1.8			
024-600	24	31.2	960	18.00	2.4			
048-600	48	62.4	3840	36.00	4.8			
110-600	110	143	20167	82.50	11.0			

CAUTION: 1.The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.
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Operation condition

Insulation Resistance	1000M Ω min (at 500VDC)	Item 7 of IEC255-5
Dielectric Strength		
Between contacts	50Hz 1500V	Item 6 of IEC255-5
Between contact and coil	50Hz 2500V	Item 6 of IEC255-5
Shock resistance	200m/s ² 11ms	IEC68-2-27 Test Ea
Vibration resistance	10~55Hz double amplitude 1.5mm	IEC68-2-6 Test Fc
Terminals strength	10N	IEC68-2-21 Test Ua1&Ua2
Solderability	235 \pm 2 $^{\circ}$ C 3 \pm 0.5s	IEC68-2-20 Test Ta method 1
Ambient Temperature	-55~100 $^{\circ}$ C -55~125 $^{\circ}$ C	
Relative Humidity	85% (at 40 $^{\circ}$ C)	IEC68-2-3 Test Ca
Mass	31g (Low profile type) 35g	

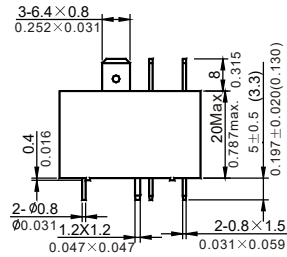
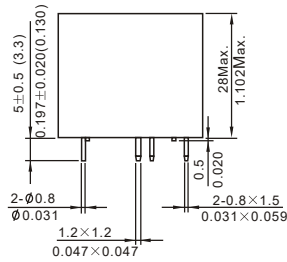
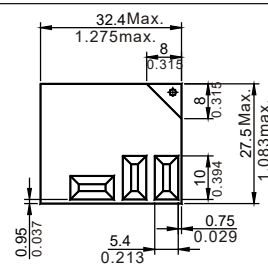
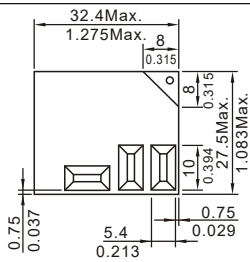
Qualification inspection:

Perform the qualification test as specified in the table IV of IEC255-19-1 and minimum sample size 24.

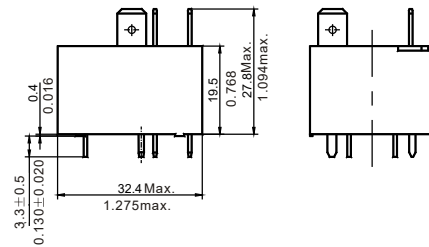
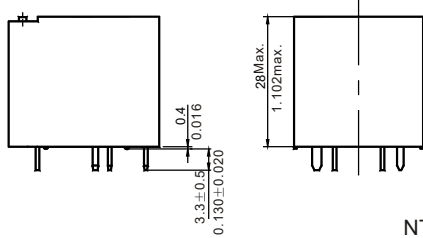
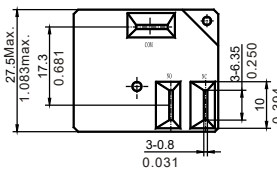
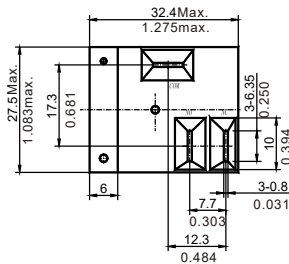
NT90T (T91)

Dimensions

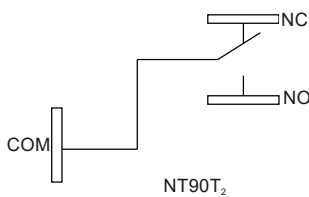
mm /inch



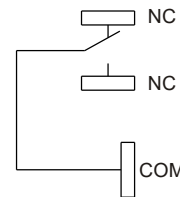
NT90T



NT90T₂
Dimensions

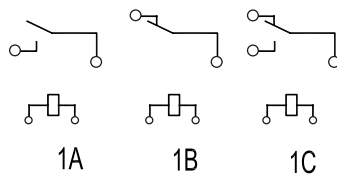


NT90T₂

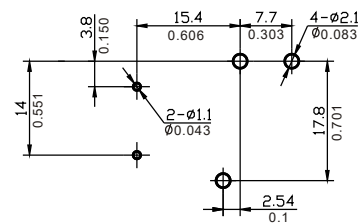


NT90T

Wiring diagram(Top view)



Wiring diagram(Bottom view)



Mounting (Bottom view)

NOTES 1).Dimensions are in millimeters.

2).Inch equivalents are given for general information only.

Safety approvals

Safety approval	UL&CUR	TüV	CQC
Load	NO: 40A/240VAC 30A/277VAC NC: 30A/240VAC 20A/277VAC 2HP 250VAC 1- $\frac{1}{2}$ HP 250VAC TV-5 HP:A 1HP/16AFLA/120VAC 2HP/12AFLA/240VAC B 30LRA/10AFLA/120VAC 30LRA/10AFLA/240VAC Insulation: B-class F-class	NO: 40A/240VAC 14VDC NC: 30A/240VAC 14VDC Insulation: B-class F-class	NO: 30A/240VAC NC: 20A/240VAC

Reference Data

