



32.4×27.5×28

NT90T (50A)

UL US E174722 R50126373

Features

- 50A contact switching capability.
- Available for DC coil 0.9W and 1.5W. 2.7VA available for AC coil.
- PC board mounting and QC terminals.
- Suitable for automobile, machine, electronic equipment, air conditioner and household appliances applications.

Ordering Information

NT90T **50** **A** **S** **24** **S** **F** **.9**
 1 2 3 4 5 6 7 8

- | | |
|---|--|
| 1 Part number: NT90T | 5 Coil rated voltage(V): DC:5,6,9,12,15,18,24,48 |
| 2 Contact rating: 50:50A | AC:24,110,220,240,277 |
| 3 Contact arrangement: A:1A; B:1B; C:1C | 6 Contact material: S:AgSnO ₂ |
| 4 Enclosure: S:Wash tight; E:Flux proof | 7 Insulation standard: F:155℃ |
| | 8 Coil power: .9:0.9W; Nil:1.5W,2.7VA |

Contact Data

Contact Arrangement	1A(SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M))	
Contact Material	AgSnO ₂	
Contact Rating ¹⁾	NO:50A/240VAC ; NC:35A/240VAC ; NO:35A/30VDC ; NC:25A/30VDC Motor load: 2HP 250VAC TV-8	
Max. Switching Power	1050W 12000VA	
Max. Switching Voltage	30VDC 280VAC	Max. Switching Current:50A
Contact Resistance	≤30mΩ	Item 4.12 of IEC 61810-7
Electrical Endurance	3×10 ⁴ (50A/277VAC,Resistive load,40℃,1s on 9s off) 6×10 ³ (50A/277VAC,Resistive load,85℃,1s on 9s off) 3×10 ⁴ (35A/277VAC,Resistive load,40℃,1s on 9s off) 2.5×10 ⁴ (TV-8)	
Mechanical Endurance	1×10 ⁷	Item 4.31 of IEC 61810-7

Notes: 1)The vent hole should be opened when testing enclosed relay.

Coil Parameter

DC Coil Parameter							
Coil voltage VDC		Coil resistance Ω ± 10%	Pick-up voltage VDC(max) (75%of rated voltage)	Drop-out voltage VDC(min) (10%of rated voltage)	Coil power W	Operate time ms	Release time ms
Rated	Max.						
5	6.5	28	3.75	0.5	0.9	≤15	≤10
6	7.8	40	4.50	0.6			
9	11.7	90	6.75	0.9			
12	15.6	160	9.00	1.2			
15	19.5	250	11.25	1.5			
18	23.4	360	13.50	1.8			
24	31.2	640	18.00	2.4			
48	62.4	2560	36.00	4.8	1.5	≤15	≤10
5	6.5	16.7	3.75	0.5			
6	7.8	24	4.50	0.6			
9	11.7	54	6.75	0.9			
12	15.6	96	9.00	1.2			
15	19.5	150	11.25	1.5			
18	23.4	216	13.50	1.8			
24	31.2	384	18.00	2.4			
48	62.4	1536	36.00	4.8			

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

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Coil Parameter

AC Coil Parameter								
Coil voltage VAC		Rated current mA	Coil resistance $\Omega \pm 10\%$	Pick-up voltage VAC(max) (75% of rated voltage)	Drop-out voltage VAC(min) (10% of rated voltage)	Coil power VA	Operate time ms	Release time ms
Rated	Max.							
24	28.8	112.5	96	18	7.2	2.7	—	—
110	132	22.5	2320	82.5	33			
220	264	12.3	9500	165	66			
240	288	11.3	11600	180	72			
277	332	9.7	15600	208	83			

Characteristics

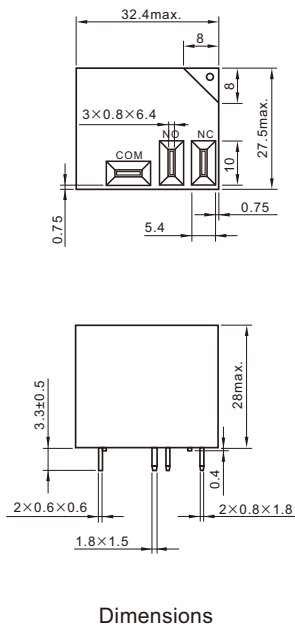
Insulation Resistance	1000M Ω min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength Between Open Contacts Between Contact and Coil	1500VAC 1min 2500VAC 1min	Item 4.9 of IEC 61810-7
Shock Resistance	Functional: 98m/s ² 11ms	Item 4.26 of IEC 61810-7
	Destructive: 980m/s ² 11ms	Item 4.26 of IEC 61810-7
Vibration Resistance	10Hz~55Hz Double amplitude 1.5mm	Item 4.28 of IEC 61810-7
Terminals Strength	10N	Item 4.24 of IEC 61810-7
Ambient Temperature	-55℃~85℃	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Weight (Approx.)	35g	Item 4.7 of IEC 61810-7

Safety Approvals

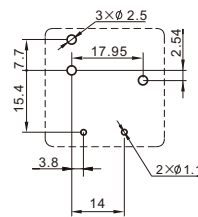
Safety approval	UL&CUR
Load	NO:50A/240VAC,277VAC 85℃ NC:35A/240VAC,277VAC 40℃

Dimensions

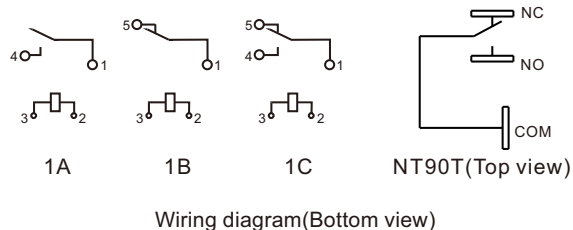
mm



Dimensions



Mounting(Bottom view)



Wiring diagram(Bottom view)

Remark: In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.