



32.5×27.6×20.5

# NT90L(50A)

 us E174722

## Features

- Single and double coils magnet latching relay available.
- Switching capacity up to 50A.
- Energy saving and environmental friendly product.

## Ordering Information

**NT90L** 50 C S 24-1.5 D  
 1 2 3 4 5 6 7

1 Part number: NT90L

2 Load: 50A/277VAC JResistive load;  
 3000W 240VACJIncandescent Lamp ;  
 16A/280VAC ; Electronic ballast;  
 5HP 250VAC ; Motor load;

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

4 Enclosure: S: Wash tight; E: Flux proof

5 Coil rated voltage(V): 5,12,24,48

6 Coil power: 1.5:1.5W

7 Coil: NIL:Single coil; D: Double coils

## Contact Data

Contact Arrangement	1A(SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M))		
Contact Material	AgSnO <sub>2</sub>		
Contact Rating(Resistive)	50A/277VAC Incandescent Lamp:3000W 240VAC Electronic Ballast:16A/280VAC Motor Load:5HP 250VAC		
Max. Switching Power	14000VA		
Max. Switching Voltage	440VAC	Max. Switching Current:50A	
Contact Resistance	≤20mΩ	Item 4.12 of IEC 61810-7	
Operation	Electrical	5×10 <sup>4</sup>	Item 4.30 of IEC 61810-7
Life	Mechanical	1×10 <sup>6</sup>	Item 4.31 of IEC 61810-7

## Coil Parameter

1 Coil								
Dash numbers	Rated voltage VDC	Coil resistance Ω ± 10%	Set/Reset voltage VDC (80%of rated voltage)	Operating voltage range VDC	Plus duration ms	Coil power W	Set time ms	Reset time ms
005-1500	5	16.7	4	5~6				
012-1500	12	96	9.6	12~14.4				
024-1500	24	384	19.2	24~28.8	≥50	1.5	≤15	≤15
048-1500	48	1536	38.4	48~57.6				

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2 Coils								
Dash numbers	Rated voltage VDC	Coil resistance $\Omega \pm 10\%$	Set/Reset voltage VDC (80% of rated voltage)	Operating voltage range VDC	Plus duration ms	Coil power W	Operate time ms	Reset time ms
005-3000	5	2×8.3	4	5~6	≥50	2×3.0	≤15	≤15
012-3000	12	2×48	9.6	12~14.4				
024-3000	24	2×192	19.2	24~28.8				
048-3000	48	2×768	38.4	48~57.6				

**CAUTION:** 1. When latching relays are installed in equipment, the latch and reset coil should not be powered simultaneously. Coil should not be pulsed with less than the nominal coil voltage and pulse width should be a minimum of three times the specified operate time of the relay. If these conditions are not followed, it is possible for the relay to be in the magnetically neutral position .  
2. Switching voltage is for test purpose only and are no to be used as design criteria.

## Safety Approvals

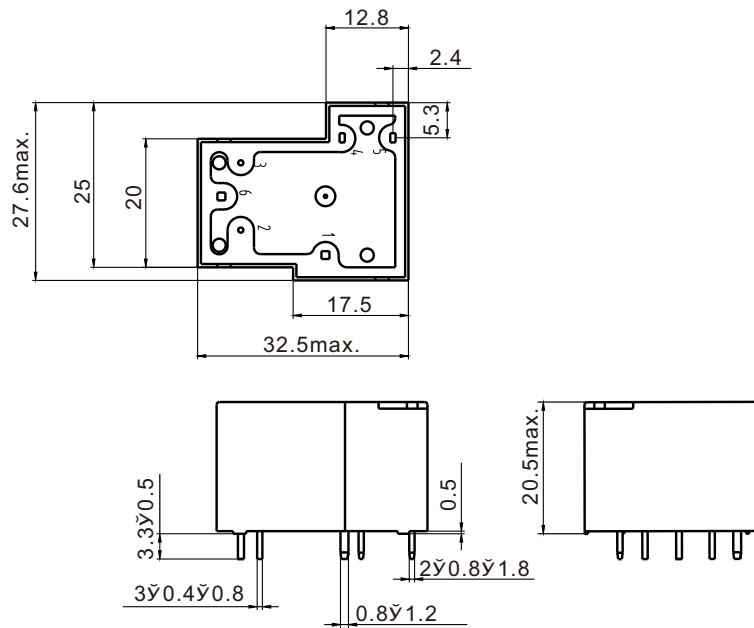
Safety approval	UL&CUR
Load	50A/277VAC

## Characteristics

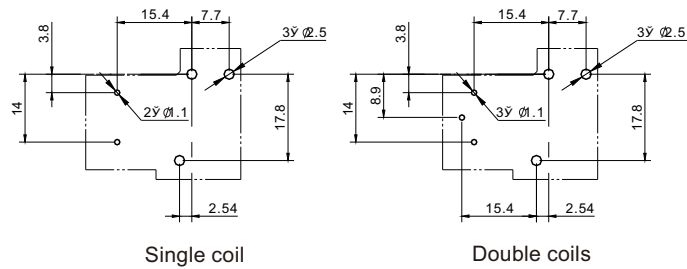
Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength		
Between Contacts	50Hz 1500V 1min	Item 4.9 of IEC 61810-7
Between Contact and Coil	50Hz 2500V 4000V (Without Pin 6)1min	Item 4.9 of IEC 61810-7
Shock Resistance	196m/s <sup>2</sup> 11ms	Item 4.26 of IEC 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	-40°C~85°C	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Mass	25g (Unenclosed) 27g	Item 4.7 of IEC 61810-7

## Dimensions

mm



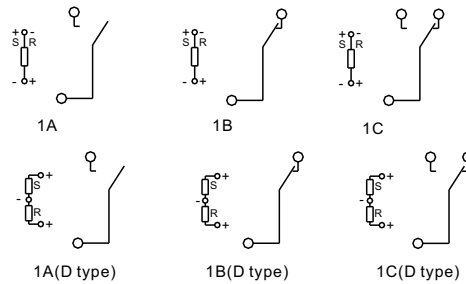
Dimensions



Single coil

Double coils

Mounting (Bottom view)



S:Set R:Reset

Wiring diagram(Bottom view)

- CAUTION: 1.Relays shall have plus(+) signs or "+" and "-" placed on the circuit diagram as shown.  
 2.In case of no tolerance shown in outline dimension: outline dimension ≤1mm,tolerance should be±0.2mm ;  
 outline dimension >1mm and ≤5mm, tolerance should be±0.3mm; outline dimension >5mm, tolerance should be±0.4mm.