



32.5 × 27.6 × 20.5

# NT90L(50A)



13002104039



us E160644

### 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	4 Enclosure: S: Sealed type; E: Covered; N:Open
2 Load: 1A,1B: 50A/277VAC (Resistive load) ; 5000W 240VAC (Incandescent Lamp) ; 16A/280VAC (Electronic ballast) ; 5HP 277VAC (Motor load)	5 Coil rated voltage(V): 5,12,24,48
1C: 40A/277VAC(Resistive load)	6 Coil power consumption: 1.5:1.5W
3 Contact arrangement: A:1A; B:1B; C:1C	7 Coil : NIL:Singal coil; D: Double coils

### Contact Data

Contact Arrangement	1A (SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M))		
Contact Material	AgSnO <sub>2</sub>		
Contact Rating	1A,1B:50A/277VAC 5 × 10 <sup>4</sup> OPS (Resistive load) ; 5000W 240VAC 3 × 10 <sup>4</sup> OPS (Incandescent Lamp) ; 16A/280VAC 6000 OPS (Electronic ballast) ; 5HP 277VAC 3 × 10 <sup>4</sup> OPS (Motor load) ; 1C: 40A/277VAC 3 × 10 <sup>4</sup> OPS (Resistive load)		
Max. Switching Power	1500W 12500VA		
Max. Switching Voltage	110VDC 300VAC	Max. Switching Current:50A	
Contact Resistance or Voltage drop	≤ 20mΩ	Item 4.12 of IEC 61810-7	
Operation life	Electrical	See contact rating	Item 4.30 of IEC 61810-7
	Mechanical	10 <sup>6</sup>	Item 4.31 of IEC 61810-7

### Coil Parameter

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

# NT90L(50A)

Dash numbers	Rated voltage VDC	Coil resistance $\Omega \pm 10\%$	Switching voltage VDC (<80%of rated voltage)	Operating voltage range VDC	Plus magnitude ms	Coil power W	Operate Time ms	Reset Time ms
Double Coil Parameter								
005-3000	5	2x8.3	4	5~6				
012-3000	12	2x48	9.6	12~14.4				
024-3000	24	2x192	19.2	24~28.8	$\geq 50$	2X3.0W	$\leq 15$	$\leq 15$
048-3000	48	2x768	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 in be the magnetically neutral position .  
2.Switching voltage is for test purpose only and are no to be used as design criteria.

## Safety approvals

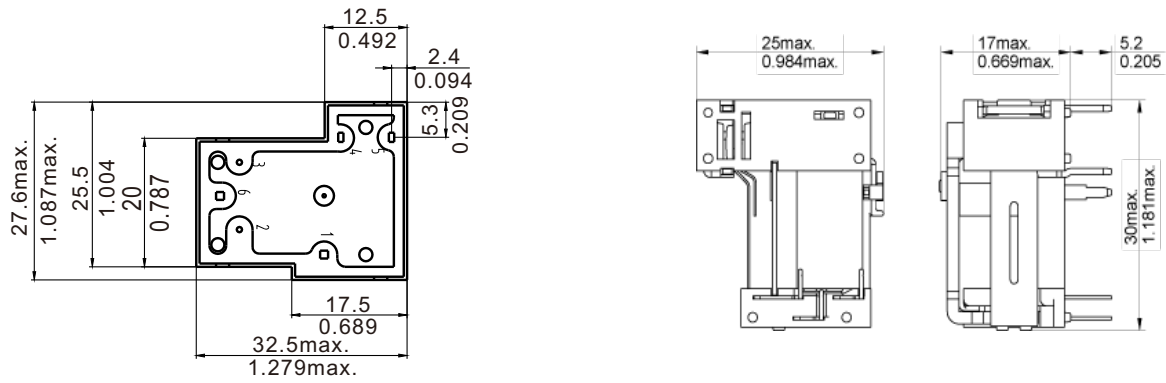
Safety approval	UL&CUR	CQC
Load	50A/277VAC	50A/277VAC

## Operation condition

Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 7 of IEC 60255-5
Dielectric Strength		
Between contacts	50Hz 1500V 1min	Item 6 of IEC 60255-5
Between contact and coil	50Hz 2500V 4000V(without pin 6) 1min	Item 6 of IEC 60255-5
Shock resistance	200m/s <sup>2</sup> 11ms	IEC 68-2-27 Test Ea
Vibration resistance	10Hz~55Hz double amplitude 1.5mm	IEC 68-2-6 Test Fc
Terminals strength	10N	IEC 68-2-21 Test Ua1
Solderability	235 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C 3s $\pm$ 0.5s	IEC 68-2-20 Test Ta method 1
Ambient Temperature	-40 $^{\circ}$ C~85 $^{\circ}$ C	
Relative Humidity	85% (at 40 $^{\circ}$ C)	IEC 68-2-3 Test Ca
Mass	24g	

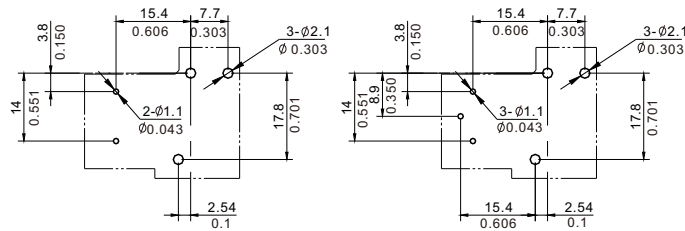
## Dimensions

mm /inch



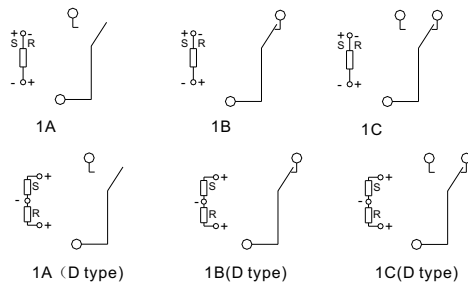
Open type

## Dimensions



Mounting (Bottom view)

D type



S:Set R:Reset

Wiring diagram(Bottom view)

NOTES 1).Dimensions are in millimeters.

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

3).Relays shall have plus (+) or plus (-) and minus signs placed on the circuit diagram as shown.