



32.5 × 27.6 × 20.5

NT90 (50A)

UL US E160644 R50126373

CQC 13002098872

Features

- Small size, light weight, low coil power consumption and the contact rating can achieve 50A.
- Strong shock and vibration resistance, high reliability and long service life.
- PC board mounting is available.
- Suitable for EV charger, machine control unit, electronic equipment, air conditioner, photovoltaic device and various home applications.

Ordering Information

NT90 R 50 A S 12 S F
 1 2 3 4 5 6 7 8

1 Part number: NT90(T90)
 2 Terminal: R:without Pin 6; Nil:with Pin 6
 3 Load: 50: 50A
 4 Contact arrangement: A:1A; B:1B; C:1C
 5 Enclosure: S: Wash tight ; E: Flux proof

6 Coil rated voltage(V): DC:5,6,9,12,15,18,24,48
 7 Contact material: S: AgSnO₂
 8 Resist heat class: F:155°C

Contact Data

Contact Arrangement	1A(SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M))		
Contact Material	AgSnO ₂		
Contact Rating (Resistive)	NO:50A/240VAC; NC:35A/240VAC Motor Load: 2HP 250VAC TV-5		
Max. Switching Power	12000VA		
Max. Switching Voltage	277VAC		
Max. Switching Current	50A		
Contact Resistance	≤ 30mΩ	Item 4.12 of IEC 61810-7	
Operation Life	Electrical	2×10 ⁶	Item 4.30 of IEC 61810-7
	Mechanical	1×10 ⁷	Item 4.31 of IEC 61810-7

Coil Parameter

Dash numbers	Rated voltage VDC		Coil resistance Ω ±10%	Pick-up voltage V(max) (75%of rated voltage)	Drop-out voltage V(min) (10%of rated voltage)	Coil power W	Operate time ms	Release time ms
	Rated	Max						
005-1500	5	6.5	16.7	3.75	0.5	1.5	≤15	≤10
006-1500	6	7.8	24	4.50	0.6			
009-1500	9	11.7	54	6.75	0.9			
012-1500	12	15.6	96	9.00	1.2			
015-1500	15	19.5	150	10.25	1.5			
018-1500	18	23.4	216	13.50	1.8			
024-1500	24	31.2	384	18.00	2.4			
048-1500	48	62.4	1536	36.00	4.8			

Characteristics

Insulation Resistance	1000M Ω min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength Between Contacts Between Contact and Coil	50Hz 1500V 50Hz 2500V 4000V*	Item 4.9 of IEC 61810-7 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 $^{\circ}$ C~85 $^{\circ}$ C	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Mass	27g	Item 4.7 of IEC 61810-7

* Without Pin 6 ,Dielectric strength between coil and contact :4000VAC is the option.

Safety Approvals

Safety approval	UL&CUR	TüV	CQC
Load	NO: 50A/240VAC NC: 35A/240VAC	NO:50A/240VAC NC:35A/240VAC	NO:50A/240VAC NC:35A/240VAC

Dimensions

mm

Dimensions

Wiring diagram(Bottom view)

1A 1B 1C

CAUTION: 1.In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension >1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension >5 mm, tolerance should be ± 0.4 mm.