



32.5×27.6×20.5

# NT90W

US E160644    R50126373  
 20002278697

Features
<ul style="list-style-type: none"> <li>▪ 50A/60A switching capability.</li> <li>▪ Contact gap: 1.8mm.</li> <li>▪ Ideal for charger.</li> <li>▪ Applicable to inverter used for photovoltaic power generation systems.</li> <li>▪ Product in accordance to IEC 60335-1 available.</li> </ul>

Ordering Information	
<u>NT90W</u>	<u>50</u> <u>A</u> <u>S</u> <u>12</u> <u>S</u> <u>S</u> <u>L</u> <u>W</u>
1	2 3 4 5 6 7 8 9
1 Part number: NT90W 2 Load: 50:50A; 60:60A 3 Contact arrangement: A:1A; B:1B J C:1C 4 Enclosure: S: Wash tight; E: Flux proof	5 Coil rated voltage(V): DC:5,6,9,12,15,18,24,48 6 Contact material: S: AgSnO <sub>2</sub> 7 Contact gap: S:1.8mm; Nil: Standard gap 8 Coil power: Nil:2.25W; L:1.2W 9 W:335 compliant: Nil:Standard

1: Wash tight plastic case with knock off nib.

Contact Data		1.2W	2.25W
Contact Power		1A(SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M))	1A(SPSTNO)
Contact Arrangement		AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Contact Material		NO:50A,60A/277VAC NC:35A/277VAC NO:35A/30VDC NC:25A/30VDC	50A/277VAC 35A/277VAC(S Gap) 40A/30VDC
Contact Rating (Resistive)		1050W 16620VA	1050W 13850VA
Max. Switching Power		30VDC 280VAC	30VDC 280VAC
Max. Switching Voltage		60A	
Max. Switching Current		≤30mΩ	Item 4.12 of IEC 61810-7
Contact Resistance		2×10 <sup>4</sup> (60A/277VAC,Resistive load, 40°C, 1s on 9s off) 3×10 <sup>4</sup> (50A/277VAC,Resistive load, 40°C, 1s on 9s off) 5×10 <sup>4</sup> (35A/277VAC,Resistive load, 85°C, 1s on 9s off) 5×10 <sup>4</sup> (35A/277VAC,Resistive load, 85°C, 1s on 9s off)	Item 4.30 of IEC 61810-7
Operation Life	Electrical	1×10 <sup>6</sup>	Item 4.31 of IEC 61810-7
	Mechanical		

2)Remove vent nib after soldering and cleaning.

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						
005-1200	5	6.5	20.8	3.75	0.5	1.2	≤15	≤10
006-1200	6	7.8	30	4.50	0.6			
009-1200	9	11.7	67.5	6.75	0.9			
012-1200	12	15.6	120	9.00	1.2			
015-1200	15	19.5	187.5	11.25	1.5			
018-1200	18	23.4	270	13.50	1.8			
024-1200	24	31.2	480	18.00	2.4			
048-1200	48	62.4	1920	36.00	4.8			
012-2250	12	15.6	64	9.00	1.2	2.25	≤15	≤10
024-2250	24	31.2	256	18.00	2.4			

After the energization time of 100 ms with rated voltage, the coil voltage can be reduced to 40%~50% of the rated voltage.

**Characteristics**

Insulation Resistance	1000MΩ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength Between Contacts Between Contact and Coil	50Hz 1500V 2500V(S Gap) 50Hz 2500V 4000V*	Item 4.9 of IEC 61810-7 Item 4.9 of IEC 61810-7
Shock Resistance	Functional: 98m/s <sup>2</sup>	Item 4.26 of IEC 61810-7
	Destructive: 980m/s <sup>2</sup>	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
Surge Voltage (Between Coil & Contacts)	6kV(1.2/50μs)	Item 4.10 of IEC 61810-7
Ambient Temperature	-40℃~85℃	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Mass	27g	Item 4.7 of IEC 61810-7

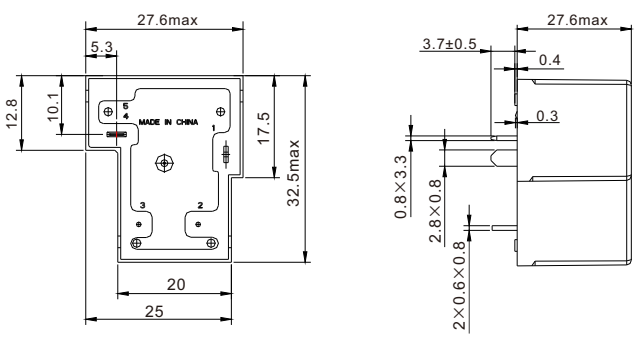
\* Please contact the sales representative if 4000V is required.

**Safety Approvals**

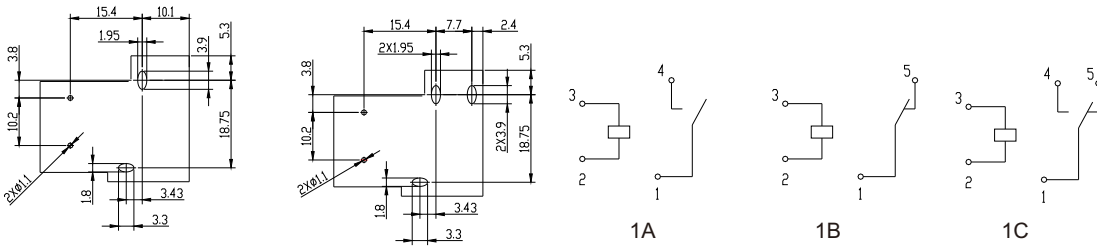
Safety approval	UL&CUR	TÜV	CQC
Load	50A,60A/277VAC 40℃ 35A/277VAC 85℃	35A,40A,50A/277VAC 35A,40A,50A/250VAC	50A/277VAC 40A/277VAC,250VAC 35A/277VAC,250VAC

**Dimensions**

mm



**Dimensions**



1A

Mounting (Bottom view)

1C

Mounting (Bottom view)

1A

Wiring diagram(Bottom view)

1B

Wiring diagram(Bottom view)

1C

Wiring diagram(Bottom view)

**CAUTION:** 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.