

# NT90TP



Features
<ul style="list-style-type: none"> <li>▪ Heavy contact load.</li> <li>▪ Small size, light weight.</li> <li>▪ Low coil power consumption.</li> <li>▪ Strong anti-shock and anti-vibration, high reliability, long life.</li> <li>▪ Suitable for automobile, machine, electronic equipment, air conditioner and household appliances applications.</li> </ul>

Ordering Information								
<b>NT90TP</b> 1	<b>H</b> 2	<b>L</b> 3	<b>A</b> 4	<b>D</b> 5	<b>12</b> 6	<b>C</b> 7	<b>B</b> 8	<b>0.9</b> 9
1 Part number: NT90TP, NT90TP <sub>2</sub> 2 Load: H:30A; N:40A 3 High: NIL: Standard; L: Low profile type 4 Contact arrangement: A:1A; B:1B; C:1C 5 Enclosure: D: Dust protected; E: Flux proof					6 Coil rated Voltage(V): AC:12,24, 110,120,220,240,277 DC:3,5,6,9,12,15,18,24,36,48,110 7 Contact material: S:AgSnO <sub>2</sub> ; C: AgCdO 8 Resist heat class: B:130°C; F:155°C 9 Coil power: 0.6:0.6W; 0.9:0.9W; 2:2VA			

Contact Data	
Contact Arrangement	1A(SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M))
Contact Material	AgSnO <sub>2</sub> AgCdO
Contact Rating	NO: 30A/240VAC,14VDC; NC:20A/240VAC;30A/14VDC NO: 40A/240VAC,30VDC; NC:30A/240VAC,30VDC (0.9W) NO: 30A/277VAC; NC:20A/277VAC Motor load: NO:2HP 250VAC; NC:1½HP 250VAC 5A/280VAC(Ballast) TV-5
Max. Switching Power	1200W 10000VA
Max. Switching Voltage	30VDC 280VAC Max. Switching Current:40A
Contact Resistance	≤30mΩ Item 4.12 of IEC 61810-7
Electrical Endurance	1×10 <sup>5</sup> Item 4.30 of IEC 61810-7
Mechanical Endurance	1×10 <sup>7</sup> Item 4.31 of IEC 61810-7

Coil Parameter									
AC Coil Parameter									
Dash numbers	Coil voltage VAC		Rated current mA	Coil resistance Ω ± 10%	Pick-up voltage VAC(max) (75%of rated voltage)	Drop-out voltage VAC(min) (30%of rated voltage)	Coil power VA	Operate time ms	Release time ms
	Rated	Max							
012AC	12	15.6	166.6	27	9	3.6	2	—	—
024AC	24	31.2	83.3	120	18	7.2			
110AC	110	143	18.1	2360	82.5	33.0			
120AC	120	156	16.6	3040	90	36.0			
220AC	220	286	9.1	13490	165	66.0			
240AC	240	312	8.3	15740	180	72			
277AC	277	360.1	7.2	20300	207.8	83.1			

**Notes:** 1.The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.  
 2.Pick-up and drop-out voltage are for test purposes only and are not to be used as design criteria.

## Coil Parameter

DC Coil Parameter								
Dash numbers	Coil voltage VDC		Coil resistance $\Omega \pm 10\%$	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						
003-900	3	3.9	10	2.25	0.3	0.9	$\leq 15$	$\leq 10$
005-900	5	6.5	28	3.75	0.5			
006-900	6	7.8	40	4.50	0.6			
009-900	9	11.7	90	6.75	0.9			
012-900	12	15.6	160	9.00	1.2			
015-900	15	19.5	250	11.25	1.5			
018-900	18	23.4	360	13.50	1.8			
024-900	24	31.2	640	18.00	2.4			
036-900	36	46.8	1440	27.00	3.6			
048-900	48	62.4	2560	36.00	4.8			
110-900	110	143	13445	82.50	11.0			
003-600	3	3.9	15	2.25	0.3	0.6	$\leq 15$	$\leq 10$
005-600	5	6.5	42	3.75	0.5			
006-600	6	7.8	60	4.50	0.6			
009-600	9	11.7	135	6.75	0.9			
012-600	12	15.6	240	9.00	1.2			
015-600	15	19.5	375	11.25	1.5			
018-600	18	23.4	540	13.50	1.8			
024-600	24	31.2	960	18.00	2.4			
048-600	48	62.4	3840	36.00	4.8			
110-600	110	143	20167	82.50	11.0			

**Notes:** 1. The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.  
2. Pick-up and drop-out voltage are for test purposes only and are not to be used as design criteria.

## Characteristics

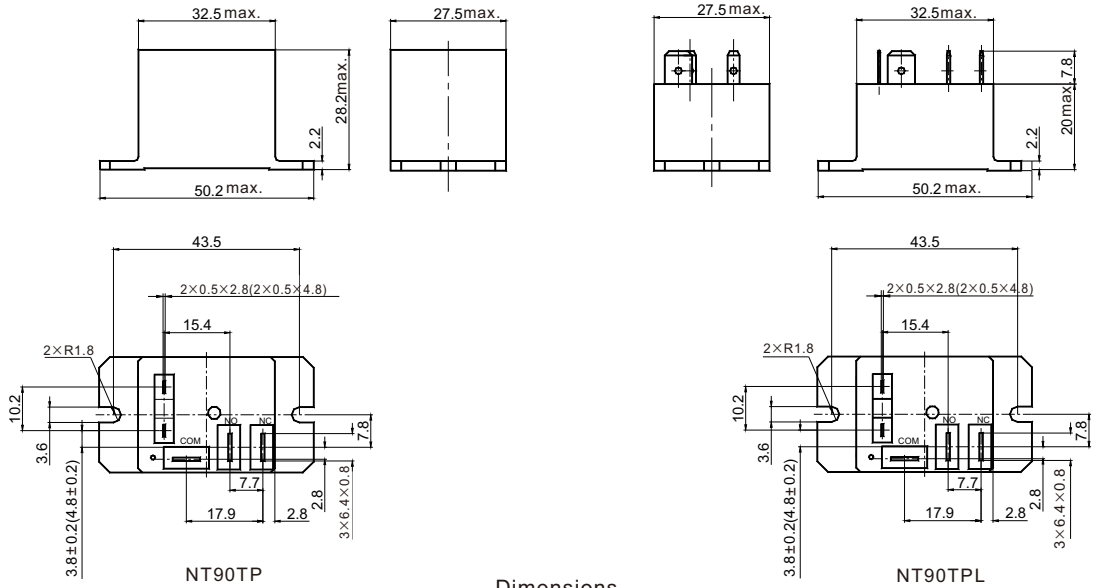
Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength Between Contacts Between Contact and Coil	1500VAC 1min 2500VAC 1min	Item 4.9 of IEC 61810-7
Shock Resistance	Functional: 98m/s <sup>2</sup> 11ms	Item 4.26 of IEC 61810-7
	Destructive: 980m/s <sup>2</sup> 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	-55 $^{\circ}$ C~85 $^{\circ}$ C	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Weight (Approx.)	35g ( Low profile type ) 37g	Item 4.7 of IEC 61810-7

## Safety Approvals

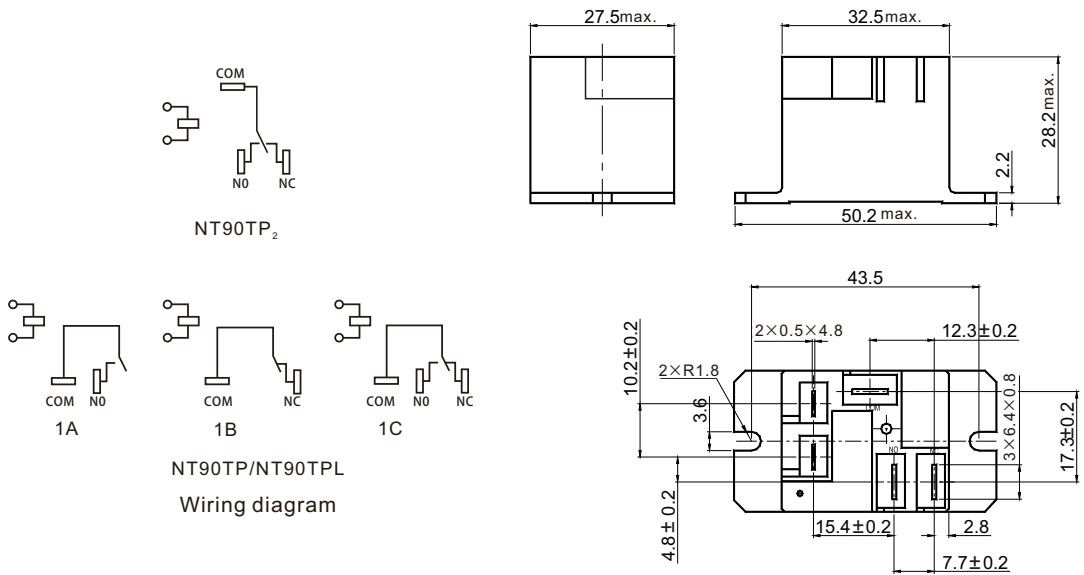
Safety approval	UL&CUR	TüV	CQC
Load	NO:40A/240VAC ;30A/277VAC NC:30A/240VAC,30VDC;20A/277VAC Ballast:5A/280VAC TV-5 HP:NO:2HP 250VAC A:1HP/16FLA/120VAC 2HP/12FLA/240VAC NC:1½HP 250VAC B:30LRA/10FLA/120VAC 30LRA/10FLA/240VAC	NO:40A/240VAC, 14VDC 30A/277VAC NC:30A/240VAC ,14VDC 20A/277VAC	NO:40A/240VAC 30A/240VAC NC:30A/240VAC 20A/240VAC

## Dimensions

mm



## Dimensions



**Remark:** 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.

## Dimensions

## Reference Data

