



29×21.5×15.3

# NT99

c  us E160644  R50597348

## Features

- 50A switching capability.
- Max. switching power can achieve 13850VA.
- Size decreased of 1/3 compared with the same pin relay.
- 4kV dielectric strength between the coil and contact.
- New energy relay.
- Operated in machine tool electric appliance, electric equipment, air conditioner and various household appliances.

## Ordering Information

**NT99** W A E S 1.2 DC12V  
 1 2 3 4 5 6 7

1 Part number: NT99

2 Common pin and N.O pin width: Nil:stand; W:3.3mm

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

4 Enclosure: S: Wash tight<sup>1)</sup>; E: Flux proof

5 Contact material: S:AgSnO<sub>2</sub>

6 Coil power: 0.9:0.9W; 1.2:1.2W

7 Coil rated voltage(V): DC:5,6,9,12,24,48

1) Wash tight plastic case with knock off nib.

## Contact Data

Contact Arrangement	1A(SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M))	
Contact Material	AgSnO <sub>2</sub>	
Contact Rating <sup>2)</sup> (Resistive)	0.9W	1.2W
	NO:30A,40A/277VAC NC:20A,30A/277VAC NO:30A/30VDC NC:20A/30VDC	NO:50A/277VAC; NC:35A/277VAC NO:35A/30VDC; NC:25A/30VDC
	TV-8 5A/280VAC(Ballast) Motor load:NO:2HP 250VAC; NC:1½HP 250VAC	
Max. Switching Power	1050W 13850VA	
Max. Switching Voltage	30VDC 280VAC	Max. Switching Current:50A
Contact Resistance	≤ 30mΩ	Item 4.12 of IEC 61810-7
Operation Life	Electrical	NO:50A/277VAC 40°C 1×10 <sup>4</sup> NC:35A/277VAC 40°C 1×10 <sup>4</sup> NO:30A,40A/277VAC 40°C 3×10 <sup>4</sup> NC:20A,30A/277VAC 40°C 3×10 <sup>4</sup> NO:2HP 250VAC 3×10 <sup>4</sup> NO:1½HP 250VAC 3×10 <sup>4</sup> TV-8 2.5×10 <sup>4</sup> Item 4.30 of IEC 61810-7
	Mechanical	1×10 <sup>7</sup> Item 4.31 of IEC 61810-7

2) Remove vent nib after soldering and cleaning.

## Coil Parameter

Dash numbers	Rated voltage VDC		Coil resistance Ω ± 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						
005-1500	5	6.5	20.8	3.75	0.5	1.2	≤15	≤10
006-1500	6	7.8	30	4.50	0.6			
009-1500	9	11.7	67.5	6.75	0.9			
012-1500	12	15.6	120	9.00	1.2			
024-1500	24	31.2	480	18.00	2.4			
048-1500	48	62.4	1920	36.00	4.8			

## Coil Parameter

Dash numbers	Rated 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						
005-900	5	6.5	28	3.75	0.5	0.9	$\leq 15$	$\leq 10$
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			
024-900	24	31.2	640	18.00	2.4			
048-900	48	62.4	2560	36.00	4.8			

**CAUTION:** 1.The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.  
2.Pickup and release voltage are for test purposes only and are not to be used as design criteria.

## Safety Approvals

Safety approval	UL&CUR	TÜV
Load	NO:50A/277VAC NC:35A/277VAC NO:40A/277VAC NC:30A/277VAC HP NO: 2HP 250VAC NC: 1½HP 250VAC TV-8 250VAC	NO:50A/277VAC NC:35A/277VAC NO:40A/277VAC NC:30A/277VAC

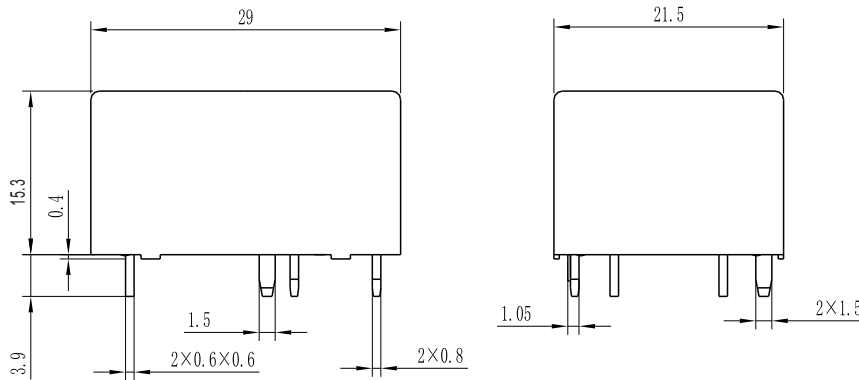
## Characteristics

Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength		
Between Contacts	50Hz 1500V	Item 4.9 of IEC 61810-7
Between Contact and Coil	50Hz 4000V	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	-40°C~85°C	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Mass	21g	Item 4.7 of IEC 61810-7

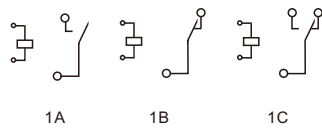
## Dimensions

mm

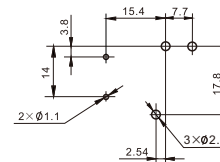
30A&40A



## Dimensions

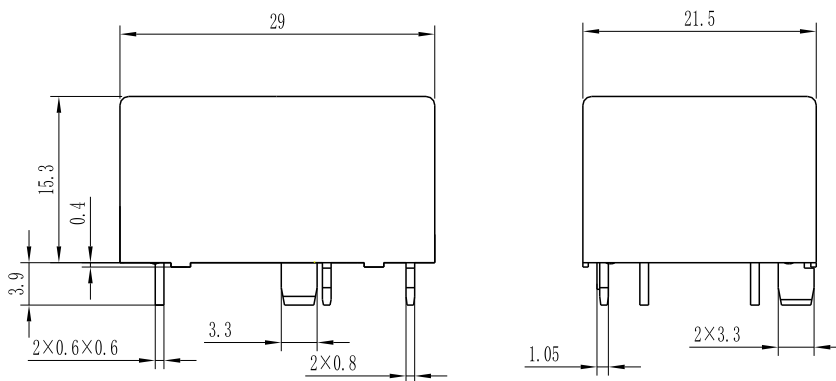


Mounting (Bottom view)

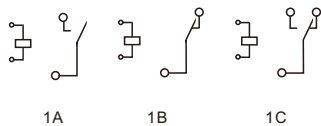


Wiring diagram (Bottom view)

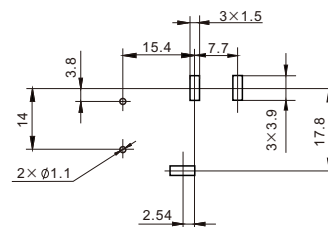
Common pin and N.O pin width: Stand



## Dimensions



Mounting (Bottom view)



Wiring diagram (Bottom view)

Common pin and N.O pin width: W

**CAUTION:** In case of no tolerance shown in outline dimension: outline dimension  $\leq 1$ mm, tolerance should be  $\pm 0.2$ mm ; outline dimension  $> 1$ mm and  $\leq 5$ mm, tolerance should be  $\pm 0.3$ mm; outline dimension  $> 5$ mm, tolerance should be  $\pm 0.4$ mm.