



29×21.5×15.3

NT99



us E160644



R50597348

Features

- 50A switching capability.
- Max. switching power can achieve 13850VA.
- Size decreased of 1/3 compared with the same pin relay.
- Pin width: 1.5mm, 3.3mm.
- 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 Part number: NT99
 2 Common pin width: Nil:standard ; W:3.3mm
 3 Contact arrangement: A:1A; C:1C
 4 Enclosure: S:Wash tight; E:Flux proof

- 5 Contact material: S:AgSnO₂
 6 Coil power: 0.9:0.9W; 1.2:1.2W; Nil:2VA; 2.7VA
 7 Coil rated voltage(V): DC:5,6,9,12,24,48
 AC:12,24,110,220,240,277

Contact Data

Contact Arrangement	1A(SPSTNO) 1C(SPDT(B-M))	
Contact Material	AgSnO ₂	
Contact Rating ¹⁾	0.9W,2VA	1.2W,2.7VA
	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
	Motor load:NO:2HP 250VAC; NC:1½HP 250VAC TV-8 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
Electrical Endurance	NO:50A/277VAC 40℃ 1×10 ⁴ NC:35A/277VAC 40℃ 1×10 ⁴ NO:30A,40A/277VAC 40℃ 3×10 ⁴ NC:20A,30A/277VAC 40℃ 3×10 ⁴ NO:2HP 250VAC 3×10 ⁴ NO:1½HP 250VAC 3×10 ⁴ TV-8 250VAC 2.5×10 ⁴ Item 4.30 of IEC 61810-7	
Mechanical Endurance	1×10 ⁷	Item 4.31 of IEC 61810-7

Notes: 1)The vent hole should be opened when testing enclosed relay.

Coil Parameter

AC Coil Parameter

Coil voltage VAC		Rated current mA	Coil resistance Ω ± 10%	Pick-up voltage VAC(max) (75%of rated voltage)	Drop-out voltage VAC(min) (10%of rated voltage)	Coil power W	Operate time ms	Release time ms
Rated	Max.							
12	15.6	166.6	27	9.0	3.6	2	—	—
24	31.2	83.3	120	18.0	7.2			
110	143	18.1	2360	82.5	33			
120	156	16.6	3040	90.0	36			
220	286	9.1	13490	165.0	66			
240	312	8.3	15740	180	72			
277	360.1	7.2	20300	207.8	83.1			

Coil Parameter

AC Coil Parameter								
Coil voltage VAC		Rated current mA	Coil resistance $\Omega \pm 10\%$	Pick-up voltage VAC(max) (75%of rated voltage)	Drop-out voltage VAC(min) (10%of rated voltage)	Coil power VA	Operate time ms	Release time ms
Rated	Max.							
24	28.8	112.5	96	18.0	7.2	2.7	—	—
110	132	24.5	2320	82.5	33			
120	144	22.5	2800	90.0	36			
220	264	12.3	9500	165.0	66			
240	288	11.3	11600	180	72			
277	332	9.7	15600	207.8	83.1			
DC Coil Parameter								
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.							
5	6.5	20.8	3.75	0.5	1.2	≤ 15	≤ 10	
6	7.8	30	4.50	0.6				
9	11.7	67.5	6.75	0.9				
12	15.6	120	9.00	1.2				
24	31.2	480	18.00	2.4				
48	62.4	1920	36.00	4.8				
5	6.5	28	3.75	0.5	0.9	≤ 15	≤ 10	
6	7.8	40	4.50	0.6				
9	11.7	90	6.75	0.9				
12	15.6	160	9.00	1.2				
24	31.2	640	18.00	2.4				
48	62.4	2560	36.00	4.8				

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 Ω min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength		
Between Open Contacts	1500VAC 1min	Item 4.9 of IEC 61810-7
Between Contact and Coil	4000VAC 1min	
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	-40℃~85℃	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Weight (Approx.)	21g	Item 4.7 of IEC 61810-7

Safety Approvals

Safety approval	UL&CUR	TüV	CQC
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	NO:50A/277VAC NC:35A/277VAC NO:40A/277VAC NC:30A/277VAC

Dimensions	mm
30A&40A Dimensions Wiring diagram(Bottom view) Mounting (Bottom view) Common pin width: Standard	
50A Dimensions Wiring diagram(Bottom view) Mounting (Bottom view) Common pin width: W	
Remark: In case of no tolerance shown in outline dimension: outline dimensions≤1mm,tolerance should be ±0.2mm ; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.	