



19×15.4×15

NT20

UL E169380



40061059

Features

- Small size, light weight and heavy switching power.
- 20A switching capability. TV-12 switching capability.
- Product in accordance to IEC60335-1 available.
- Suitable for household electrical appliances, automation system, electronic equipment, instrument and meter application. TV remote control TV receivers, monitor display, audio equipment high and rushing current application.

Ordering Information

NT20 **W** **C** **S** **20** **L** **DC12V**
 1 2 3 4 5 6 7

1 Part number: NT20

2 Terminal: Nil: Standard; W: Wide terminal
D: Double terminals

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

4 Enclosure: S: Wash tight; NIL: Flux proof

5 Contact rating: 20:20A; 16:16A

6 Coil power: NIL:0.36W; L:0.2W

7 Coil rated voltage(V): DC:3,5,6,9,12,24,48

Contact Data

Contact Arrangement	1A(SPSTNO) 1C(SPDT(B-M))		
Contact Material	AgSnO ₂		
Contact Rating ¹⁾	0.36W	NO	NC
		20A/250VAC 85℃ 5×10 ⁴ 16A/250VAC 105℃ 1×10 ⁵	12A/250VAC 105℃ 6×10 ³
		10A/28VDC 105℃ 2×10 ⁴ TV-10 240VAC 40℃ 2.5×10 ⁴ 1½HP 250VAC 40℃ 6×10 ³	7A/28VDC 105℃ 3×10 ⁴
	0.2W	16A/250VAC 105℃ 5×10 ⁴	7A/250VAC 105℃ 6×10 ³
Max. Switching Power	280W 5000VA		
Max. Switching Voltage	28VDC 277VAC		Max. Switching Current:20A
Contact Resistance	≤100mΩ		Item 4.12 of IEC 61810-7
Electrical Endurance	Refer to the table for the rating details		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

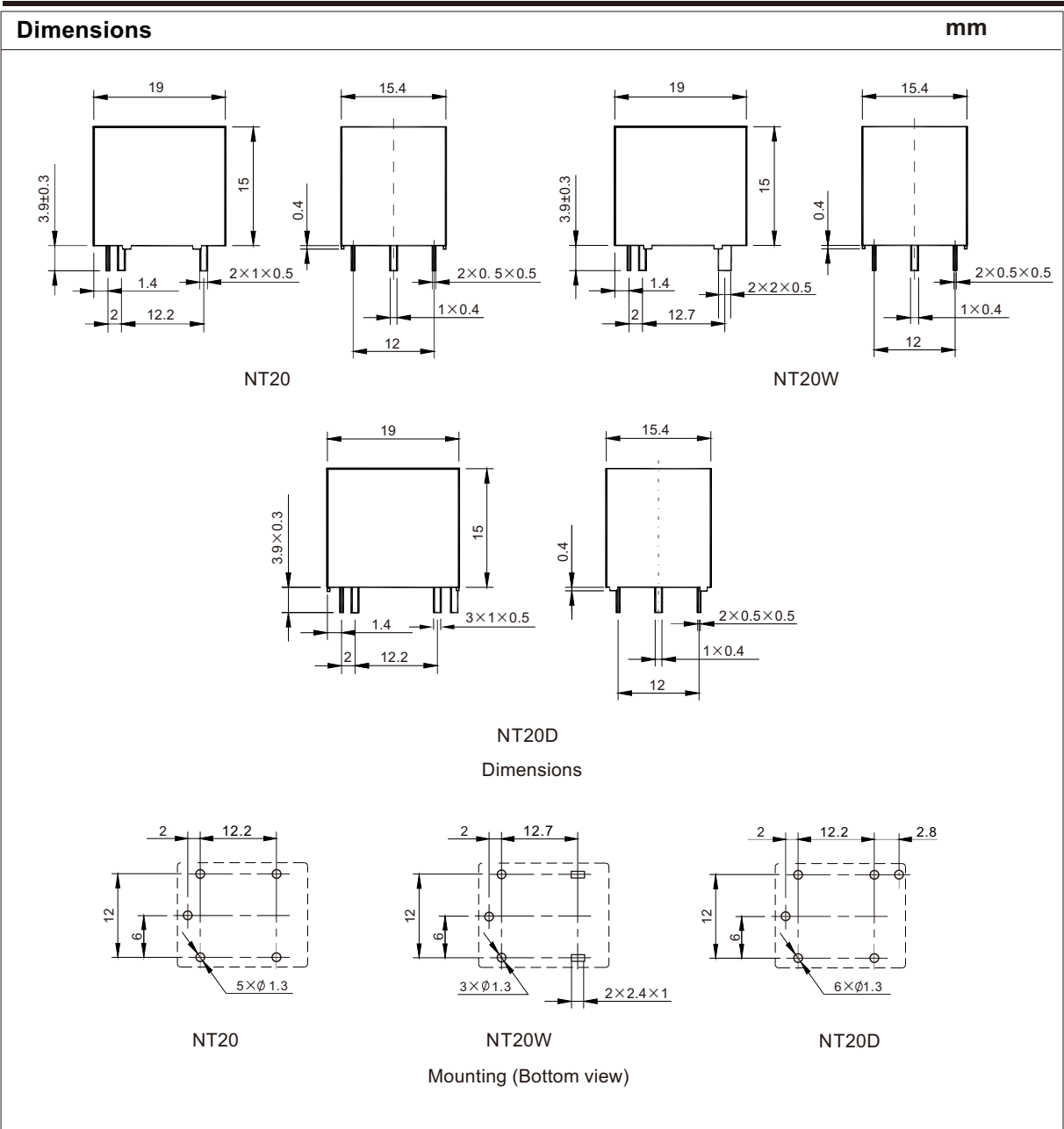
Coil voltage VDC		Coil resistance Ω ± 10%	Pick-up voltage VDC(max) (75%of rated voltage)	Drop-out voltage VDC(min) (10% of rated voltage)	Coil power W	Operate time ms	Release time ms
Rated	Max.						
3	3.9	45	2.25	0.3	0.2	≤10	≤5
5	6.5	125	3.75	0.5			
6	7.8	180	4.50	0.6			
9	11.7	405	6.75	0.9			
12	15.6	720	9.00	1.2			
24	31.2	2880	18.0	2.4			
48	62.4	11520	36.0	4.8	0.36	≤10	≤5
3	3.9	25	2.25	0.3			
5	6.5	69.4	3.75	0.5			
6	7.8	100	4.50	0.6			
9	11.7	225	6.75	0.9			
12	15.6	400	9.00	1.2			
24	31.2	1600	18.0	2.4			
48	62.4	6400	36.0	4.8			

Characteristics

Insulation Resistance	100MΩ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength Between Open Contacts Between Contact and Coil	1000VAC 1min 2500VAC 1min	Item 4.9 of IEC 61810-7
Shock Resistance	98m/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℃~105℃	
Relative Humidity	5%~85%	Item 4.16 of IEC 61810-7
Weight (Approx.)	10.5g	Item 4.7 of IEC 61810-7

Safety Approvals

Safety approval	UL&CUR	VDE	CQC
Load	NO: 20A/250VAC 85℃;16A/250VAC 105℃;10A/28VDC 105℃ 1½HP 250VAC 40℃; TV-10 240VAC 40℃ NC: 12A/250VAC 105℃;7A/28VDC 105℃	NO: 20A/250VAC 85℃ NO:16A/250VAC 105℃	NO: 20A 277/250VAC 85℃ NO:16A 277/250VAC 105℃ NC:12A 277/250VAC 105℃



Dimensions

mm

1A

1C

NT20,NT20W

1A

1C

NT20D

Wiring diagram (Bottom view)

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.

Reference Data

Contact Switching Capacity

This graph shows the relationship between contact current and voltage for different contact types. The y-axis represents Contact Current (A) from 0 to 20, and the x-axis represents Contact Voltage (V) from 0 to 300. Three curves are shown: NO (Normally Open), NO/NC (Normally Open/Normally Closed), and NC (Normally Closed). The NO and NO/NC curves are nearly identical, showing a constant current of approximately 16A up to 250V, then dropping to 10A at 300V. The NC curve shows a constant current of 10A up to 250V, then dropping to 5A at 300V.

Endurance Curve

This graph shows the endurance of the relay contacts. The y-axis represents Operations (x10000 ops) on a logarithmic scale from 5 to 50. The x-axis represents Contact Current (A) from 0 to 20. Two curves are shown: 20A/250VAC 85°C and 16A/250VAC 105°C. Both curves show a decrease in endurance as contact current increases, with the 16A/250VAC 105°C curve showing lower endurance than the 20A/250VAC 85°C curve.

Coil Temperature Rise

This graph shows the temperature rise of the relay coil. The y-axis represents Temperature Rise (K) from 20 to 70. The x-axis represents Percentage of Nominal Coil Voltage (%) from 80 to 120. Two curves are shown: 20A 85°C and 16A 105°C. Both curves show a linear increase in temperature rise with increasing voltage percentage, with the 16A 105°C curve showing higher temperature rise than the 20A 85°C curve.