

# NB901E/NB901



## Product Features

- ◆ High contact switching capability
- ◆ Dielectric strength between contact and coil 2500VAC
- ◆ Coil insulation Class F
- ◆ Flux tight and sealed type available
- ◆ Environmental friendly product
- ◆ Outline dimensions: 32\*27.2\*28.5mm & 32\*27.2\*20.5mm

UL E361440

CQC 12002069367  
12002069368

R 50193486

## Ordering Information

Model No.	NB901	E	-12	S	-S	-A	L	T-105°C	Φ3.1	X
E: Contact Load Max.30A type Nil: Contact Load Max.40A type										
Nominal Coil Voltage: 5,6,9,12,15,18,24,48,110V(DC)										
Construction: S:Sealed Type D:Flux tight Type										
Contact Material: AgSnO <sub>2</sub>										
Contact Form: A: Normally Open B: Normally Closed C: Normally Open&Close										
L: Low Profile(H:20.5mm) Nil:Tall Profile(H:28.5mm)										
T-105°C: Ambient Temperature Max.105°C Nil:Ambient Temperature Max.85°C										
Φ3.1: Quick Terminal Hole Dia.3.1mm Nil:Quick Terminal Hole Dia.1.6mm										
Customer Special Code										

- Notes:**(1)We recommend flux tight types for a clean environment(free from contaminations like H<sub>2</sub>S,SO<sub>2</sub>,NO<sub>2</sub>,dust,etc.).We suggest to choose plastic sealed types and validate it in real application for an unclean environment(with contaminations like H<sub>2</sub>S,SO<sub>2</sub>,NO<sub>2</sub>,dust,etc.).
- (2)Contact is recommended for suitable condition and specifications if water cleaning for surface process is involved in assembling relays on PCB.
- (3)Contact is recommended for requirement if dielectric strength between contact and coil exceed 2500VAC.
- (4)Avoid using relays under strong magnetic or shock conditions, or technical ratings will change.

### Contact Rating

Contact Form	1A,1B,1C		
Contact Material	Ag Alloy		
Contact Rating	NB901	NB901E	
	40A 240VAC/30VDC 40A 277VAC 1.5HP 1HP 240VAC TV-5 TV-15	30A/20A 240VAC/30VDC 30A 277VAC 1HP 1/2HP 240VAC TV-5	
Switching Power Max.	1200W 11000VA		
Switching Voltage Max.	30VDC/277VAC		
Switching Current Max.	40A		
Contact Resistance	≤50mΩ ( 1A , 24VDC )		
Endurance	Electrical	40A:5*10 <sup>4</sup> 30A:10 <sup>5</sup>	
	Mechanical	10 <sup>7</sup>	

### Safety Approval Rating

Approval	CQC	TÜV	UL
Load Rating	30A/40A 240VAC 30VDC	30A/40A 240VAC 30VDC	30A/40A 277VAC 1.5HP 1HP 1/2HP 240VAC TV-5 TV-15

### Coil Rating

No.	Coil Voltage (VDC)		Coil Resistance R(1 ± 10%) Ω	Pick up Max.(VDC) (75% of Nominal Voltage)	Drop out Min.(VDC) (10% of Nominal Voltage)
	900mW				
	Nominal	Max.			
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	10.25	1.5
018-900	18	23.4	360	13.50	1.8
024-900	24	31.2	640	18.00	2.4
048-900	48	62.4	2560	36.00	4.8
110-900	110	143	13445	82.50	11

## Coil Rating

600mW					
No.	Coil Voltage (VDC)		Coil Resistance R(1 ± 10%) Ω	Pick up Max.(VDC) (75% of Nominal Voltage)	Drop out Min.(VDC) (10% of Nominal Voltage)
	Nominal	Max.			
003-600	3	3.9	15	2.25	0.3
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	10.25	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

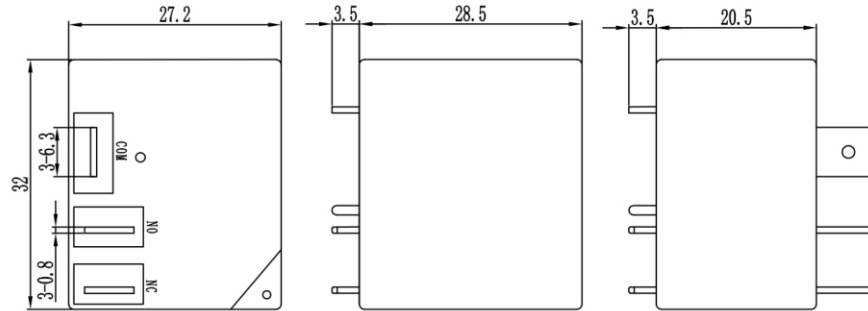
## Technical Rating

Insulation Resistance		1000MΩ (500VDC)	Item 7 of IEC 60255-5
Dielectric Strength	Between Open Contacts	1500VAC,50/60Hz1min	Item 6 of IEC 60255-5
	Between Coil&Contact	2500VAC,50/60Hz1min	Item 6 of IEC 60255-5
Operate Time		≤ 15ms	
Release Time		≤ 10ms	
Shock Resistance		Operation extremes 10G    Damage limits 100G	IEC 68-2-27 Test Ea
Vibration Resistance		10Hz ~ 55Hz double amplitude 1.5mm	IEC 68-2-6 Test Fc
Ambient Temperature		-55℃ ~ 85℃; -55℃ ~ 105℃	
Relative Humidity		85%RH,40℃	IEC 68-2-3 Test Ca
Weight		30.0g	
Construction		Flux tight Type, Sealed Type	

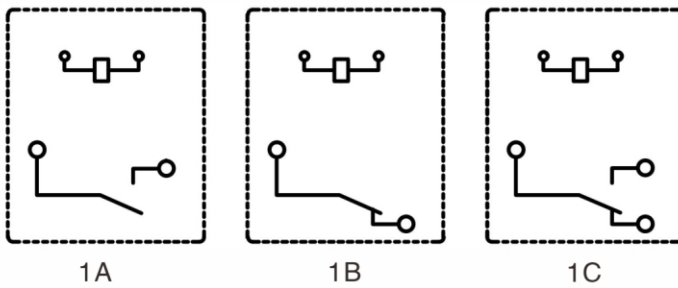
## Outline Dimensions, Wiring Diagram And PCB Layout

Unit:mm

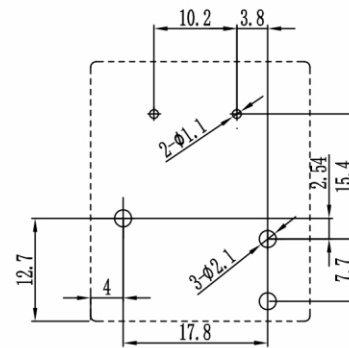
### Outline Dimensions



### Wiring Diagram (Bottom View)

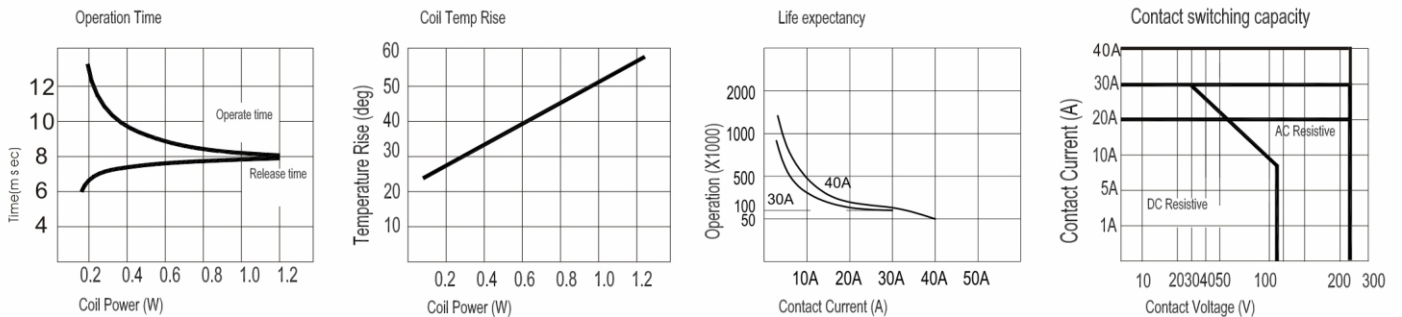


### PCB Layout (Bottom View)



Remarks: ( 1 ) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ .  
 ( 2 ) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

## Engineering Data



Note: Specification and dimensions in this catalogue are for reference only and subject to change without notice.