



30.6x16.2x24.8mm

NB160

 **R 50615304**
 **CQC24002419575**
 **E 361440**

Product Features

- ◆ Contacts switching capability: 50A
- ◆ Contact gap 1.5mm
- ◆ Used in new energy , EV charger, home appliance...etc.
- ◆ Pin type: PCB
- ◆ Coil insulation grade Class F

Contact Rating

Contact Form	1A
Contact Resistance	$\leq 20\text{m}\Omega(1\text{A } 24\text{VDC})$
Contact Material	AgSnO ₂
Contact Load	Resistive load: 50A 277VAC; Making 20A, Loading 50A, Breaking 20A 277VAC.
Switching Power Max.	13850VA
Switching Voltage Max.	480VAC
Switching Current Max.	Resistive load: 50A
Life expectancy	Electrical: 1: 50A 1×10^4 2: Making 20A, Loading 50A, Breaking 20A 5×10^4 3: 40A 3×10^4 4: 32A 10×10^4
	Mechanical: 1×10^7

Life test condition: normal temperature, pure resistant load, 1: 1S on, 9S off. 2: 1S on: making 0.1S, loading 0.8S, breaking: 0.1S.

Coil Rating

Coil Voltage(VDC)	Coil Resistance Ω $\pm 10\%$	Pick up (VDC) Max	Drop out (VDC) Min.	Sustaining voltage(VDC)	Power (w)	Coil Voltage Max(VDC)
5	20.8	3.75	0.5	3	1.2	6
9	67.5	6.75	0.9	5.4		10.8
12	120	9	1.2	7.2		14.4
24	480	18	2.4	14.4		28.8
48	1920	36	4.8	28.8		57.6

Technical Rating

Insulation Resistance	1000MΩ(500VDC)	IEC 60255-5
Dielectric Strength	Between Contacts	4500VAC / min IEC 60255-5
	Between Coil&Contact	3000VAC / min IEC 60255-5
Operate Time	≤20ms	
Release Time	≤10ms	
Shock Resistance	Functional 196m/s ² ; Destructive 980m/s ²	IEC 68-2-27 test Ea
Vibration Resistance	10Hz~55Hz double amplitude 1.5mm	IEC 68-2-6 test Fc
Ambient Temperature	- 40℃~85℃	
Construction	Flux proofed	
Weight	Approx.25.0g	

Designation
NB160 - 12S - S - A - X
1 2 3 4 5

- 1、 **NB160**: Model No.
- 2、 **12S**: Coil Rated Voltage:5V, 9V,12V, 24V,48V(DC)
- 3、 **S**: Contact Material: **S**:AgSnO₂
- 4、 **A**: Contact Form: **A**:Normally Open
- 5、 **X**: Customer special codeD109V: Load pin size: 2.8mm, contact gap:1.5mm.

Note: (1) Dust-proof type is recommended to clean environment; Sealed type is recommended to polluted environment (containing H₂S、 SO₂、 NO₂、 dust contaminants). Please test & confirm during actual use.

(2) If need to entire wash after installed in the PCB, please notice us before order, so as to provide proper model;

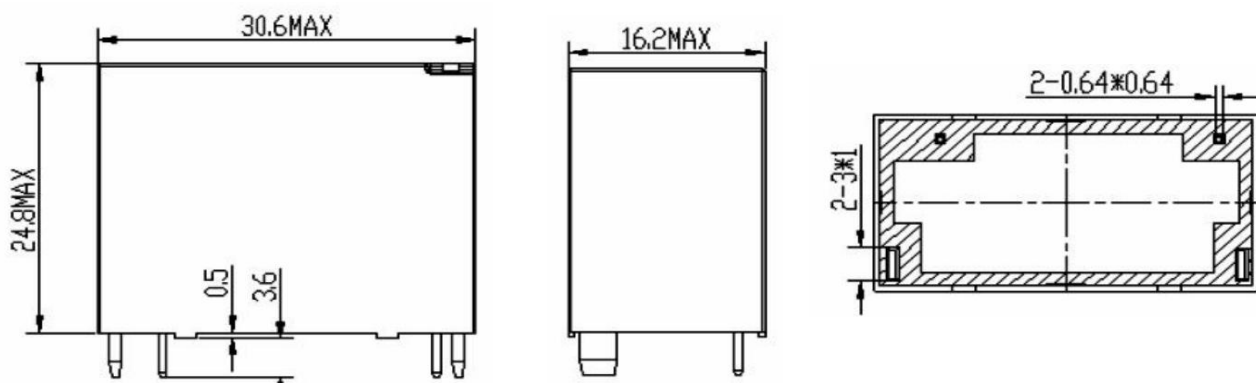
(3) Avoid being used under strong magnetic or shock extremes, or technical data will change.

Safety Certification

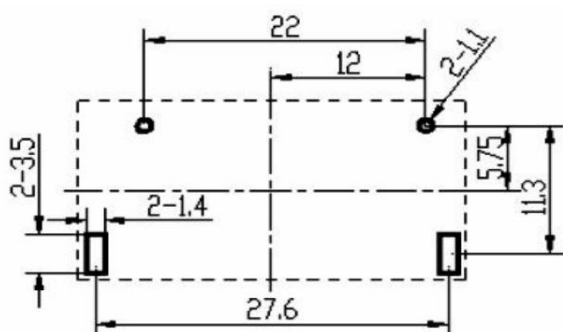
Approval	CQC	TUV	UL
Load	50A 277VAC Making 20A, Loading 50A, Breaking 20A 277VAC	50A 277VAC	50A 277VAC Making 20A, Loading 50A, Breaking 20A 277VAC

Dimensions

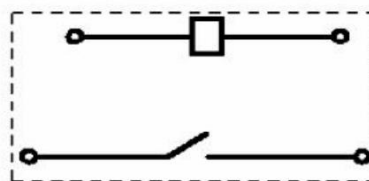
Outline Dimension



Bottom View Layout



Wiring Diagram

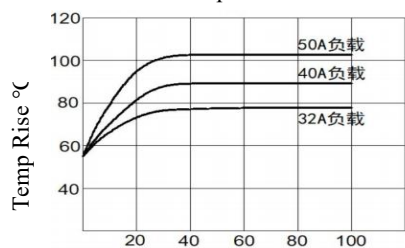


Note: (1) Tolerance is not marked on part of outline dimensions. Dimensions $\leq 1\text{mm}$, Tolerance $\pm 0.2\text{mm}$; Dimensions $(1\sim 5)\text{mm}$, Tolerance $\pm 0.3\text{mm}$; Dimensions $> 5\text{mm}$, Tolerance $\pm 0.4\text{mm}$;
 (2) Tolerance in bottom view layout is $\pm 0.1\text{mm}$.

Engineering Data

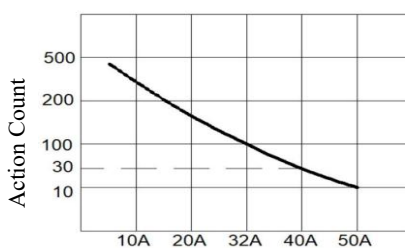
Pin Temperature Rise

(Ambient Temperature 55°C)



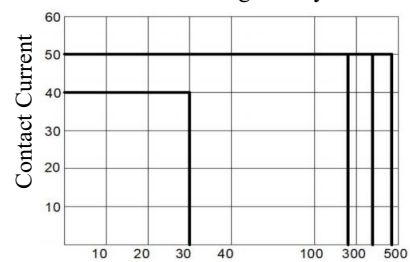
Time(minute)

Life Curve



Contact Current (A)

Contact Switching Ability



DC Load Voltage AC Load Voltage
Load Voltage (V)