



NVF7-2

26×26×22.7 (+15.2) 35.5×35.5×45.5 (+22.5)



NVF7-2b

# NVF7

## Features

- Small size, lightweight.
- 80A switching capability .
- 1 Form A contact arrangement.
- Various mounting way available.
- Diode or Resistor assembled available.

## Ordering Information

**NVF7- A Z 70 a R DC12V**

1 2 3 4 5 6 7

1 Part number: NVF7,  
 NVF7-2(Plastic Bracket)  
 NVF7-2a(Metal Bracket)  
 NVF7-2b(Shrouded With Metal Bracket)  
 2 Contact arrangement: A:1A  
 3 Enclosure: S: Wash tight ; Z: Flux proof  
 4 Contact current: 70A,80A  
 5 Terminals: a: Plug in type; b:PCB type

6 Coil transient suppression: D: with diode  
 R: with resistor  
 NIL: standard  
 7 Coil rated voltage(V): DC:12,24

## Contact Data

Contact Arrangement		1A(SPSTNO)	
Contact Material		AgSnO <sub>2</sub>	
Contact Rating (Resistive)		70A,80A/14VDC,25A/28VDC	
Max. Switching Power		1120W	
Max. Switching Voltage		75VDC	Max. Switching Current: 80A
Voltage Drop(Initial)		Typ. 50mV (at 10A)	Item 4.12 of IEC 61810-7
Operation	Electrical	80A/14VDC 85°C 5×10 <sup>4</sup> 70A/14VDC,25A/28VDC 105°C 1×10 <sup>5</sup> Item 4.30 of IEC 61810-7	
	Mechanical	1×10 <sup>7</sup> Item 4.31 of IEC 61810-7	
Life	Mechanical	1×10 <sup>7</sup> Item 4.31 of IEC 61810-7	

## Coil Parameter

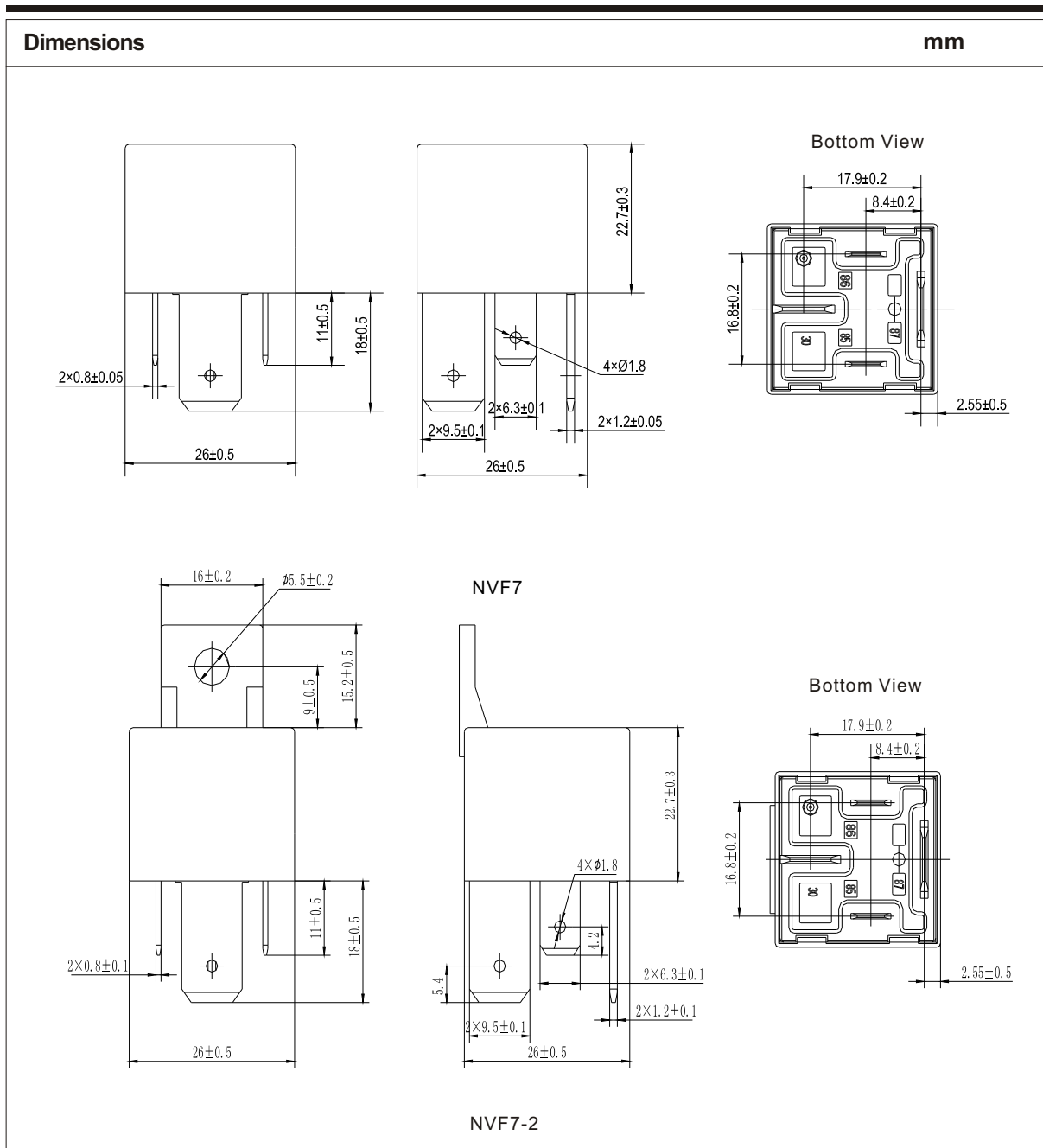
Dash numbers	Coil voltage VDC		Coil resistance Ω ±10%		Pick-up voltage VDC(max) (65% of rated voltage)	Drop-out voltage VDC(min) (10% of rated voltage)	Coil power W		Operate time ms	Release time ms
	Rated	Max.	Without resistor	With resistor			Without resistor	With resistor		
012-1600	12	15.6	90	80	7.8	1.2	Approx. 1.6	Approx. 1.8	≤10	≤10
024-1600	24	31.2	360	320	15.6	2.4	Approx. 1.6	Approx. 1.8	≤10	≤10

**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.

## Characteristics

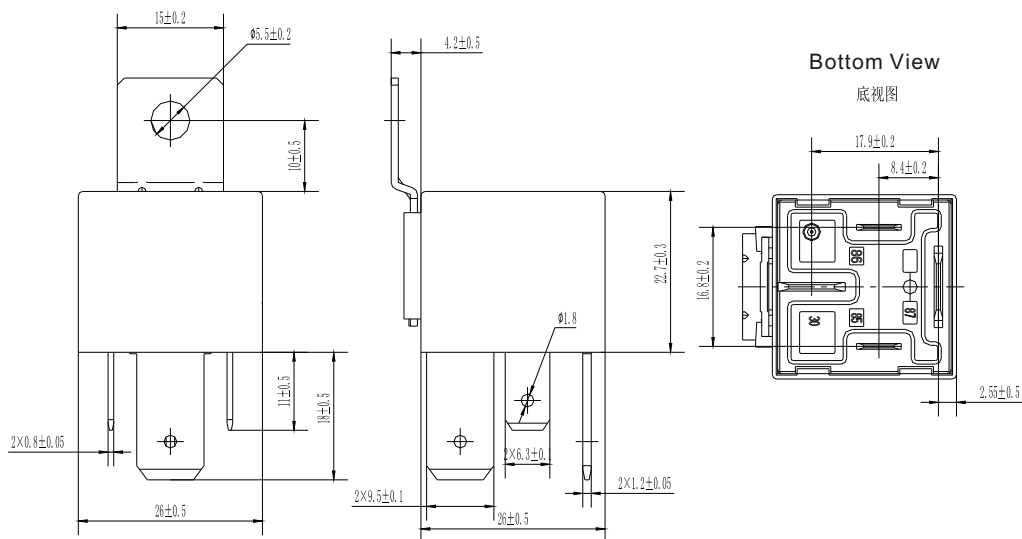
Insulation Resistance	100M $\Omega$ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength Between Open Contacts Between Contact and Coil	50~60Hz 500V 1min 50~60Hz 500V 1min	Item 4.9 of IEC 61810-7 Item 4.9 of IEC 61810-7
Shock Resistance	294m/s <sup>2</sup>	Item 4.26 of IEC 61810-7
Vibration Resistance	10~22.3Hz Double amplitude 10mm 22.3~500Hz 98m/s <sup>2</sup>	Item 4.28 of IEC 61810-7
Terminals Strength	Terminal retention(pull and push): $\geq$ 100N Terminal resistance to bending (front & side): $\geq$ 10N	Item 4.24 of IEC 61810-7
Ambient Temperature	-40 $^{\circ}$ C~125 $^{\circ}$ C	
Relative Humidity	5% to 85%	Item 4.16 of IEC 61810-7
Mass	38g	Item 4.7 of IEC 61810-7

Note: 1). When testing, coil terminals should be connected, If coil transient suppression is installed in relay .

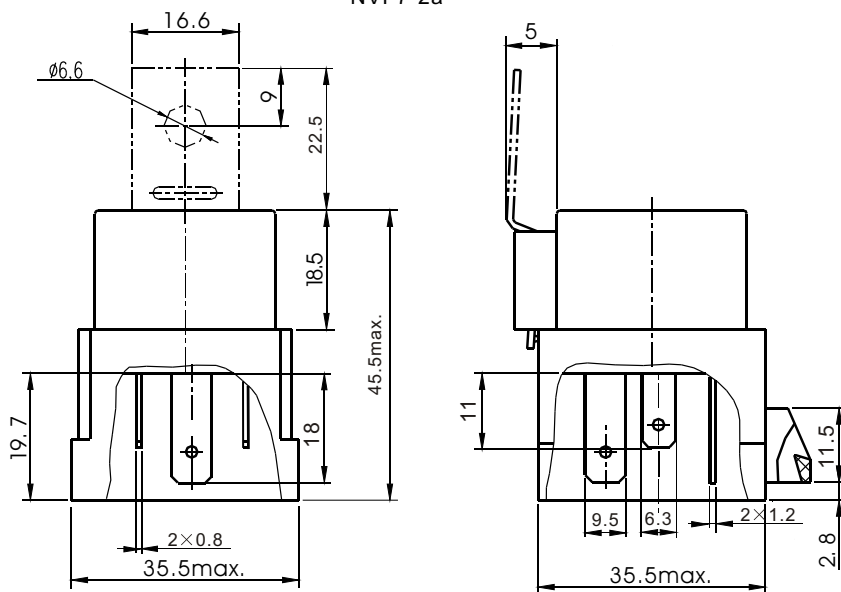


## Dimensions

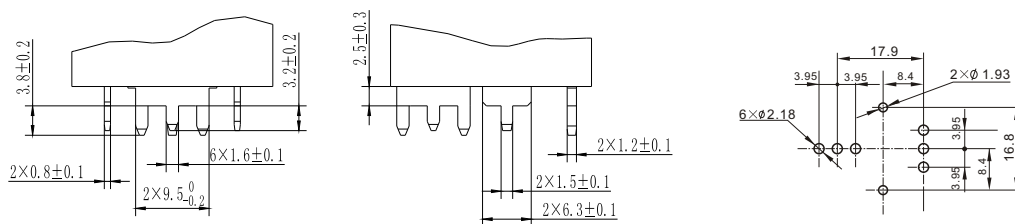
mm



NVF7-2a



NVF7-2b  
Dimensions

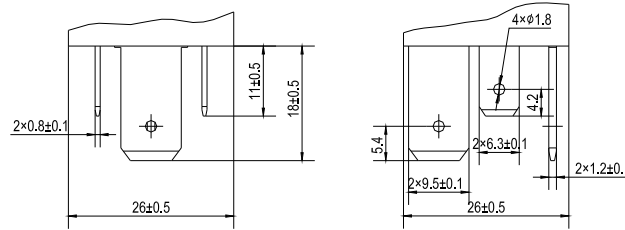


PCB type

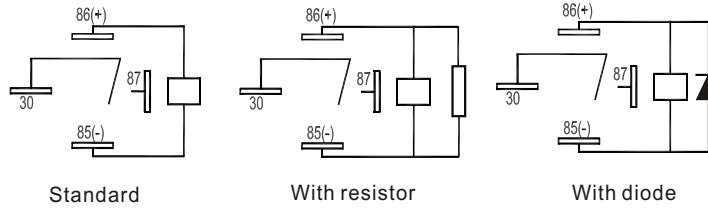
Mounting (Bottom view)

## Dimensions

mm



Plug in type  
Mounting (Bottom view)

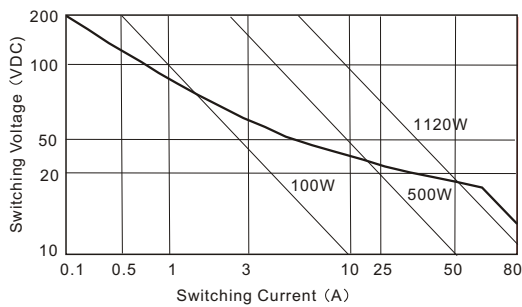


Wiring diagram (Bottom view)

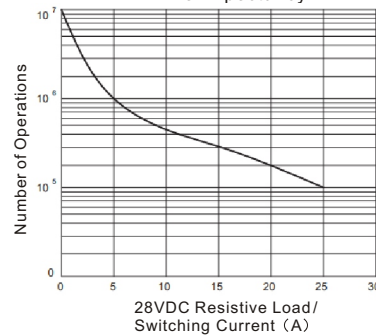
**CAUTION:** In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should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

## Reference Date

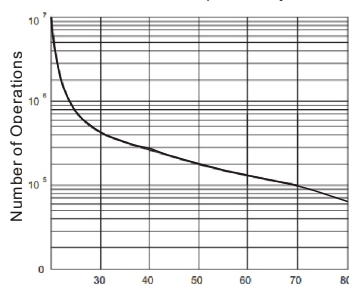
Safe Breaking, arc Extinguished  
(Normally open contact) for Resistive Loads



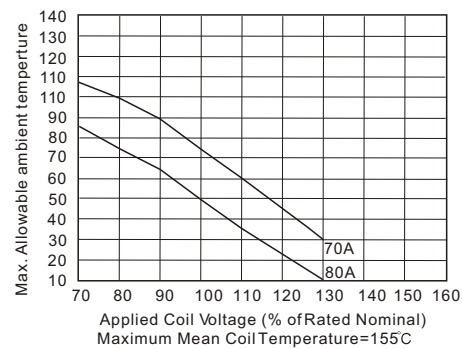
Life Expectancy



Life Expectancy



Ambient Temperature vs Coil Voltage for Continuous Contact Load



Operate Time/Release Time

