

# FORWARD RELAYS



NVF4-3  
29×29×26.5

NVF4-4  
29×29×26.5(+16)

## NVF4-3 & NVF4-4

### Features

- Small size.
- Contact load capacity up to 100A.
- Suitable for automobile.
- PC board mounting and direct insert mounting available.
- 24V versions with contact gap >0.8mm.

### Ordering Information

**NVF4-3** C Z 50 b DC12V 1.8 D

1 2 3 4 5 6 7 8

1 Part number: NVF4-3, NVF4-4 (Plastic Bracket), NVF4-4a (Metal Bracket)  
 2 Contact arrangement: A:1A; B:1B; C:1C; U:1U  
 3 Enclosure: S: Wash tight; Z: Flux proof  
 4 Contact current: A Form: 25A, 40A, 50A, 70A, 80A, 100A  
 B Form: 25A, 40A, 60A  
 C Form: 25A, 40A, 50A, 60A, 80A  
 U Form: 2×15A, 2×25A  
 5 Terminals: b: PCB type; a: plug in type

6 Coil rated voltage(V): DC: 6, 12, 24  
 7 Coil power: 1.8: 1.8W; 2.3: 2.3W; 2.6: 2.6W  
 8 Coil transient suppression: D: with diode  
 2D: with two diodes  
 R: with resistance  
 DR: with diode and resistance  
 NIL: standard

### Contact Data

Contact Arrangement	1A(SPSTNO) 1B(SPSTNC) 1C(SPDT(B-M)) 1U(SPSTNODM)			
Contact Material	AgSnO <sub>2</sub>			
Contact Rating (Resistive)	1A	1B	1C	1U
	50A, 70A, 80A, 100A/14VDC 25A, 40A/24VDC	40A, 60A/14VDC 25A, 40A/24VDC	NO: 50A, 80A/14VDC 25A, 40A/24VDC NC: 40A, 60A/14VDC 25A, 40A/24VDC	2×25A/14VDC 2×15A/24VDC
Max. Switching Power	1400W			
Max. Switching Voltage	75VDC		Max. Switching Current: 100A	
Voltage Drop (Initial)	Typ. 50mV (at 10A)		Item 4.12 of IEC 61810-7	
Operation	Electrical	70A/14VDC 3×10 <sup>5</sup> 80A/14VDC 2×10 <sup>5</sup> 100A/14VDC 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

**NOTE:** Special high performance 24V version with contact gap >0.8mm; Limiting continuous current at 125°C: NC/NO: 10A/15A, 1U: 2×11A.

### 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.						
006-1800	6	7.8	20	3.9	0.6	1.8	≤7	≤5
012-1800	12	15.6	80	7.8	1.2			
024-1800	24	31.2	320	15.6	2.4			
006-2300	6	7.8	15.6	3.9	0.6	2.3		
012-2300	12	15.6	62.6	7.8	1.2			
024-2300	24	31.2	250.4	15.6	2.4			
006-2600	6	7.8	13.8	3.9	0.6	2.6		
012-2600	12	15.6	55.4	7.8	1.2			
024-2600	24	31.2	221.5	15.6	2.4			

**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.

# NVF4-3 & NVF4-4

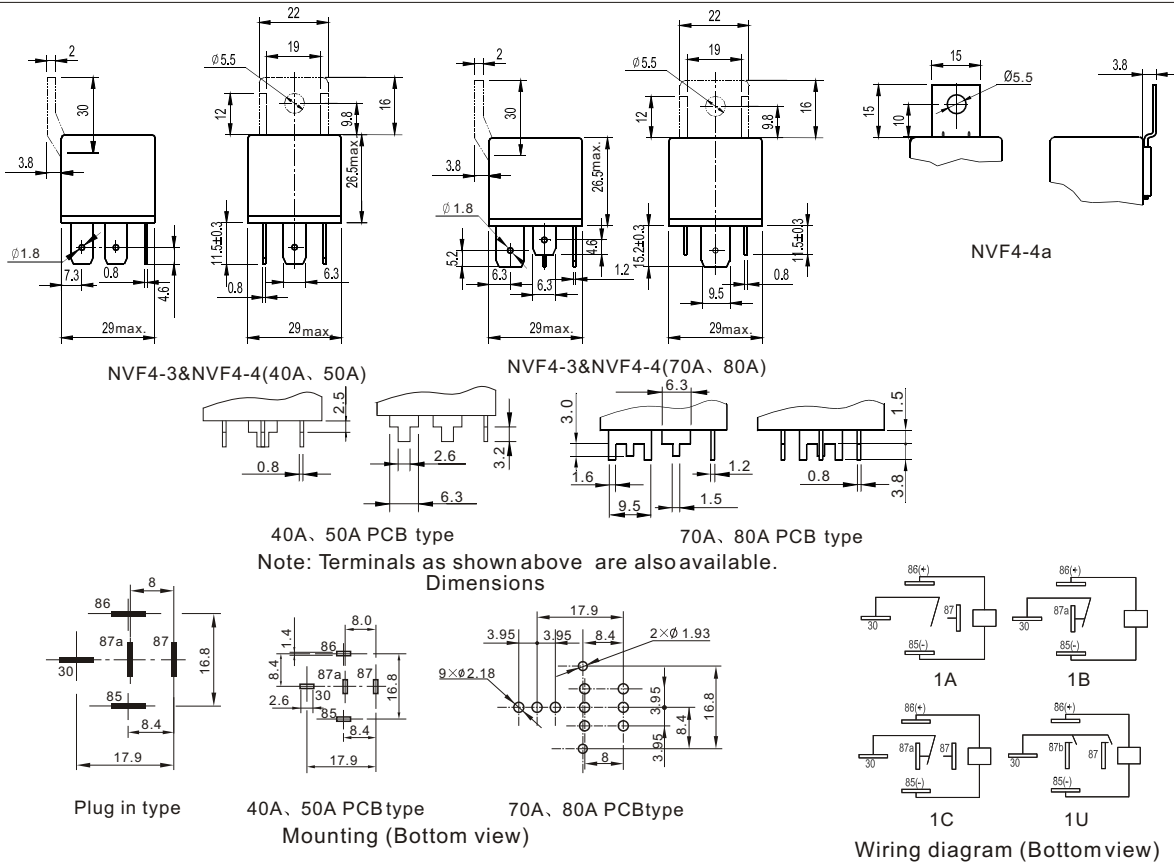
## Characteristics

Insulation Resistance <sup>1)</sup>	100M $\Omega$ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength <sup>1)</sup>		
Between Contacts	50Hz 500V	Item 4.9 of IEC 61810-7
Between Contact and Coil	50Hz 500V	Item 4.9 of IEC 61810-7
Shock Resistance	147m/s <sup>2</sup> 11ms	Item 4.26 of IEC 61810-7
Vibration Resistance	10Hz~40Hz Double amplitude 1.5mm	Item 4.28 of IEC 61810-7
Terminals Strength	10N 4N(PC type)	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	46g(NVF4-3);48g(NVF4-4)	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



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

## Reference Data

