

## Features

- Contact gap is 4.0mm
- 40A switching capability, 160A loading current capability
- Outline Dimensions:(45X40X43)mm
- UL insulation system:Class F
- Main application: PV inverter, Inverter precharge circuit control, Industrial control device



## ■ CHARACTERISTICS

Specifications	Item		160A
Contact Data	Contact arrangement		1A
	Contact resistance(initial)		$\leq 2\text{m}\Omega$ (6VDC 20A)
	Contact material		AgSnO <sub>2</sub>
Rated value	Rated load(Resistance load)		Connecting 40A, carrying 160A, breaking 40A 277VAC 85°C
	Max.switching voltage		830VAC
	Max.switching current		50A
	Max.switching capacity		41500VA
Electrical performance	Insulation resistance(initial)		1000MΩ(at500VDC)
	Dielectric strength (initial)	Disconnect between main contacts	2500VAC 1min(50Hz/60Hz)
		Between coil&contacts	5000VAC 1min(50Hz/60Hz)
	Operate time		$\leq 30\text{ms}$
	Release time		$\leq 10\text{ms}$
Mechanical performance	Shock resistance	Functional	98m/s <sup>2</sup> (10g)
		Destructive	980m/s <sup>2</sup> (100g)
Vibration resistance		10Hz~55Hz 1.5mm DA	
Endurance	Mechanical		$1\times 10^6$ ops
	Electrical	ON/OFF=1S/9S	Connecting 40A carrying 160A breaking 40A 277VAC Resistive $3\times 10^4$ ops
Surge voltage (Between coil&contacts)		10KV(1.2/50 μ s)	
Operate condition	Ambient temperature		-40°C~+85°C
	Humidity		5%~85%RH
Unit weight		Approx.142g	
Construction		Flux proofed	

Note: The above data are the initial values



## ■ COIL DATA(23°C)

Nominal Voltage	Operate Voltage VDC	Release Voltage VDC	Rated Current (±10%)A	Coil Resistance (±10%)Ω	Nominal Power	Sustaining voltage	Max Voltage VDC
DC 6V	≤4.5	≥0.3	0.533	11.3	3.2W	40%-100%Un (Ambient temperature25°C)	6.6
DC 9V	≤6.75	≥0.45	0.356	25.3			9.9
DC 12V	≤9	≥0.6	0.267	45		50%-60%Un (Ambient temperature85°C)	13.2
DC 24V	≤18	≥1.2	0.133	180			26.4
DC 48V	≤36	≥2.4	0.067	720			52.8

Remark:

- 1.the coil holding voltage is the voltage applied to coil 100ms after the rated voltage;
- 2.To avoid overheating and burning, the coil can not be consistently applied to with voltage larger than maximum holding voltage.

## ■ ORDERING INFORMATION

**FH66NE 160 -1A 1 T F -XXX -DC12V**

① Type

② Rated Current: 160=160A

③ Contact arrangement:1A=1 open contacts

④ Terminal: 1=Standard type

⑤ Contact material:T=AgSnO<sub>2</sub>

⑥ Insulation standard:Nil=Blank F=Class F

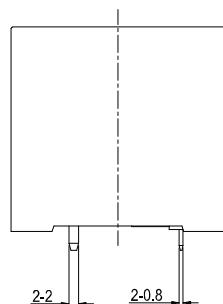
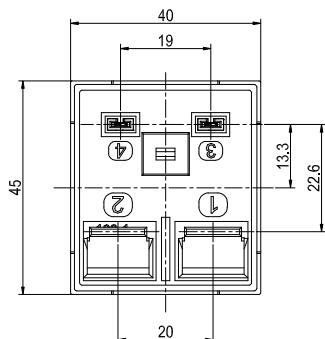
⑦ Customer special code:numbers or letters denote customer's requirements

⑧ Coil specification:DC6/9/12/24/48V

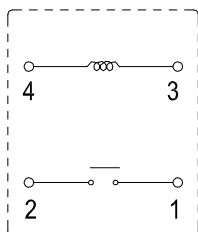


## ■ WIRING DIAGRAM AND PC BOARD LAYOUT(Unit:mm)

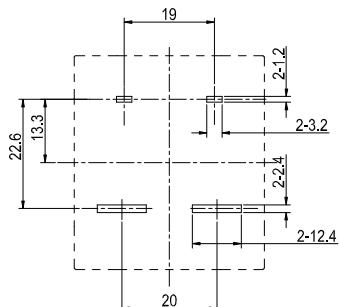
Outline Dimensions



Wiring Diagram  
(Bottom view)



PCB Layout  
(Bottom view)



Remark:(1)In case of no tolerance shown in outline dimension:outline dimension≤1mm,tolerance should be  $\pm 0.2$ mm;outline dimension >1mm and <5mm,tolerance should be  $\pm 0.3$ mm;outline dimension≥5mm,tolerance should be  $\pm 0.5$ mm.

(2) The tolerance without indicating for PCB layout is always  $\pm 0.1$ mm.

## ■ SAFETY APPROVAL RATINGS

Approval	File No.	Approved ratings
UL/C-UL	E475405	Connecting 50A/40A carrying 160A/150A breaking 50A/40A 830/277VAC Resistive 85°C 150A 30VDC Resistive 40°C
TUV	R 50601543	Connecting 50A/40A carrying 160A/150A breaking 50A/40A 830/277VAC Resistive 85°C 150A 30VDC Resistive 40°C
CQC	CQC23002405299	Connecting 50A/40A carrying 160A/150A breaking 50A/40A 830/277VAC Resistive 85°C 150A 30VDC Resistive 40°C

## ■ NOTICE

- In order to maintain the initial performance parameters of the relay, please be careful not to drop the product or be affected by external force;
- The soldering temperature of load extraction terminal with copper is  $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ,soldering time is 3~5S;
- The specification is for reference only.Specifications subject to change without notice.

