FH80NE-40 Direct Current Relay

Features

- 40A continuous carry current capability at 85° C.
- Safety certification comply with IEC 60664-1
- Environment-friendly product(RoHS compliant)
- Main Uses:Pre-charging and heating relay for new energy vehicles
- Outline Dimensions:(30x29.2x30.1)mm

■ CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A
	Contact resistance(initial)		≤5mΩ(6VDC 20A)
	Contact material		$AgSnO_2$
Rated value	Rated Current		40A
	Rated load(Resistance load)		40A 450VDC
	Max.switching voltage		750VDC
	Max. breaking current		50A(450 VDC)≥1op
	Max.switching capacity		22500VA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength(Initial)	Between open contacts	2000VAC,1min
		Between coil&contacts	3000VAC,1min
	Operate time (at rated volt.)		≤30ms
	Release time (at rated volt.)		≤10ms
Mechanical performance	Shock resistance	Functional	196m/s²(10g)
		Destructive	490m/s²(100g)
	Vibration resistance		10Hz～500Hz 49m/s²
Endurance	Mechanical		1×10^5ops
	Electrical(Resistive)		Swithing：1×10^3ops（450VDC,40A）
			Swithing：1×10^4ops（450VDC,10A）
			Swithing：4×10^3ops（650VDC,12A）
			Making ：7.5×10^4ops（450VDC,35A）
			Making ：5×10^4ops（750VDC,40A）
Current carrying capacity			40A
			60A:30min
			80A:60s
			160A：5s
			240A:3s
			400A：0.6s
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5%~85%RH
Unit weight			Approx.55g (Without attachment)
Construction			Flux proofed

Note:The above datas are the initial values

■ COIL DATA(23℃)

Nominal Voltage	Closing Voltage VDC	Opening Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 6V	≤4.50	≥0.30	500mA	12Ω	3W	DC 7.2V
DC 9V	≤6.75	≥0.45	333.3mA	27Ω		DC 10.8V
DC 12V	≤9.00	≥1	250mA	48Ω		DC 14.4V
DC 24V	≤18.00	≥2	125mA	192Ω		DC 28.8V
DC 48V	≤36.00	≥4	62.5mA	768Ω		DC 57.6V

Remark:(1)To prevent overheating and burnout, the voltage applied to the relay coil must not exceed the maximum hold-in voltage for extended periods.

(2)Maximum Voltage is the highest voltage that the relay can withstand for a brief period.

■ ORDERING INFORMATION

FH80NE **40** **-1A** **1** **T** **-XXX** **-DC12V**

① Type:

② Rated Current: 40=40A

③ Contact arrangement:1A=1 open contacts

④ terminal structure:1=PCB terminal

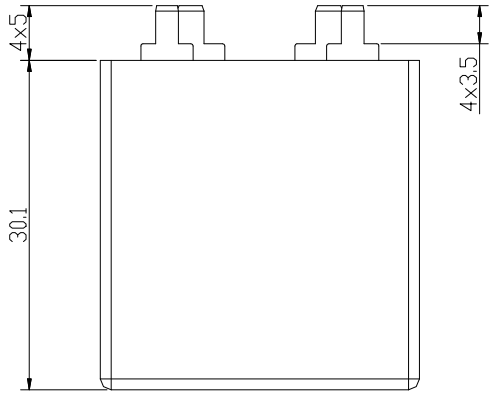
⑤ Contact material:T=$AgSnO_2$

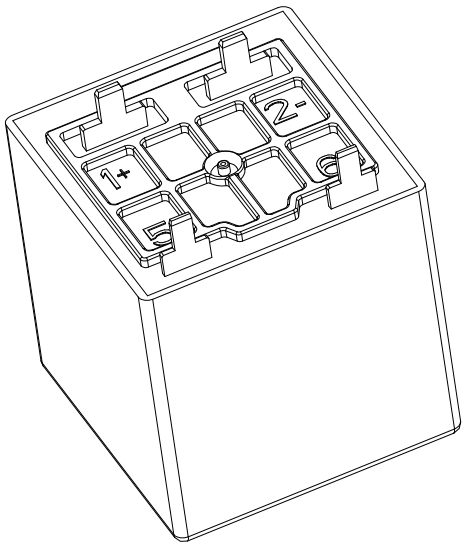
⑥ Customer special code:numbers or letters denote customer’s requirements

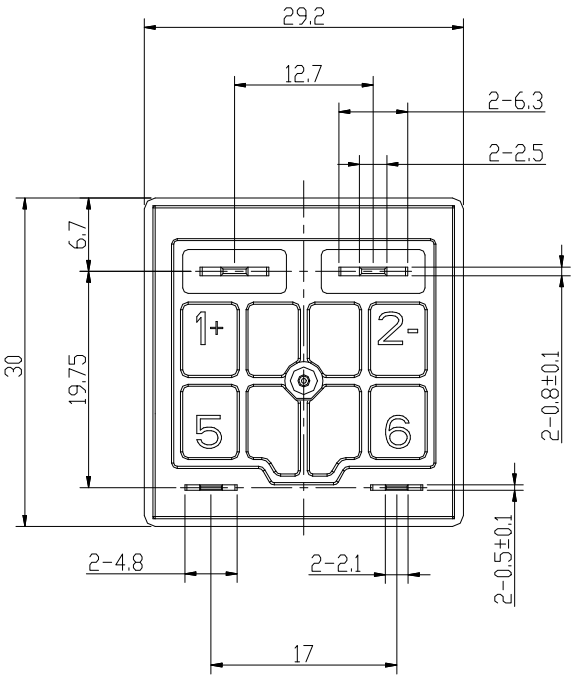
⑦ Coil specification:DC6/9/12/24/48V

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

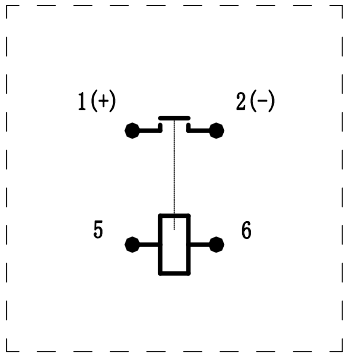
Outline Dimensions







Wiring Diagram
(Bottom view)



Notes: The load side has polarity.
No polarity on the coil side.

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

(2) The tolerance without indicating for PCB layout is always ±0.1mm.

■ SAFETY APPROVAL RATINGS

Approval	File No.	Contact materia	Approved ratings
UL/C-UL（Pending）	/	$AgSnO_2$	Resistive Switching：40A 450VDC 1000ops 85℃
TUV（Pending）	/	$AgSnO_2$	
CQC（Pending）	/	$AgSnO_2$	

■ NOTICE

① 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;

② The soldering temperature of load extraction terminal with copper is 260℃±5℃,soldering time is 3~5S;

③ This relay model is custom-engineered. The provided examples are for reference purposes only. For detailed assistance, we recommend contacting Zhejiang Fanhar Electronics Co.,Ltd directly;

The specification is for reference only.Specifications subject to change without notice.