FH59L

Latching Relay

Features

- 80A switching capability
- Low consumption,Pulse driven operation
- Strong resistance ability to shock and vibration,High reliability
- Breakdown voltage (between contact and coil):4KV
- Environment-friendly product(RoHS compliant)
- Meet standard of IEC62052-31:2005 UC2
- Outline Dimensions:(98.4×40.3×34.8)mm
- Main application: smart meter

■ CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		3A、3B
	Contact resistance(initial)		≤1.0mΩ
	Contact material		$AgSnO_2$
Rated value	Rated load(Resistance load)		80A 250VAC
	Max.switching voltage		250VAC
	Max.switching current		90A
	Max.switching capacity		20000VA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (Initial)	Between open contacts	2000VAC 1min 50/60Hz
		Between coil&contacts	4000VAC 1min 50/60Hz
	Closing time		≤20ms
	Opening time		≤20ms
	Creepage distance		8mm
Mechanical performance	Shock resistance	Functional	$98m/s^2$(10g)
		Destructive	$980m/s^2$(100g)
	Vibration resistance		10Hz~55Hz 1.5mm DA
Endurance	Mechanical		$1×10^5$ops
	Electrical		$1×10^4$ops
Operate condition	Ambient temperature		-40℃~70℃
	Humidity		5%~85%RH
Unit weight			Approx. 230g

■ COIL DATA(20℃)

■ Single coil latching

Nominal Voltage	Closing Voltage VDC	Opening Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤4.0	≤4.0	0.60A	8.3Ω	3W	DC 7.5V
DC 6V	≤4.8	≤4.8	0.50A	12.0Ω		DC 9V
DC 9V	≤7.2	≤7.2	0.33A	27.0Ω		DC 13.5V
DC 12V	≤9.6	≤9.6	0.25A	48.0Ω		DC 18V
DC 24V	≤19.2	≤19.2	0.13A	192.0Ω		DC 36V
DC 48V	≤38.4	≤38.4	0.06A	768.0Ω		DC 72V

■ Double coils latching

Nominal Voltage	Closing Voltage VDC	Opening Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤4.0	≤4.0	1.2/1.2A	4.2/4.2Ω	6W	DC 7.5V
DC 6V	≤4.8	≤4.8	1.0/1.0A	6.0/6.0Ω		DC 9V
DC 9V	≤7.2	≤7.2	0.67/0.67A	13.5/13.5Ω		DC 13.5V
DC 12V	≤9.6	≤9.6	0.5/0.5A	24.0/24.0Ω		DC 18V
DC 24V	≤19.2	≤19.2	0.25/0.25A	96.0/96.0Ω		DC 36V
DC 48V	≤38.4	≤38.4	0.13/0.13A	384.0/384.0Ω		DC 72V

■ ORDERING INFORMATION

FH59L	3B	1	T	-L1	R	-XXX	-DC6V

① Type

② Contact arrangement:3A=3 open contacts
3B=3 close contacts

③ PCB mounting:1=Standard、
7=Customized Accessories

④ Contact material:T=$AgSnO_2$

⑤ Coil type:L1=Single coil latching、L2=Double coils latching

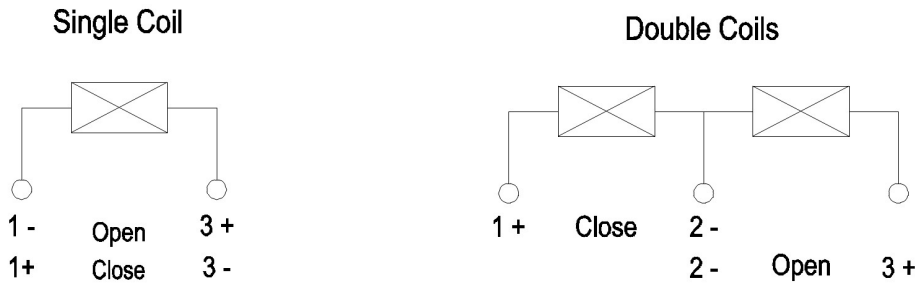
⑥ Polarity:Nil=standard polarity R=reversed polarity

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

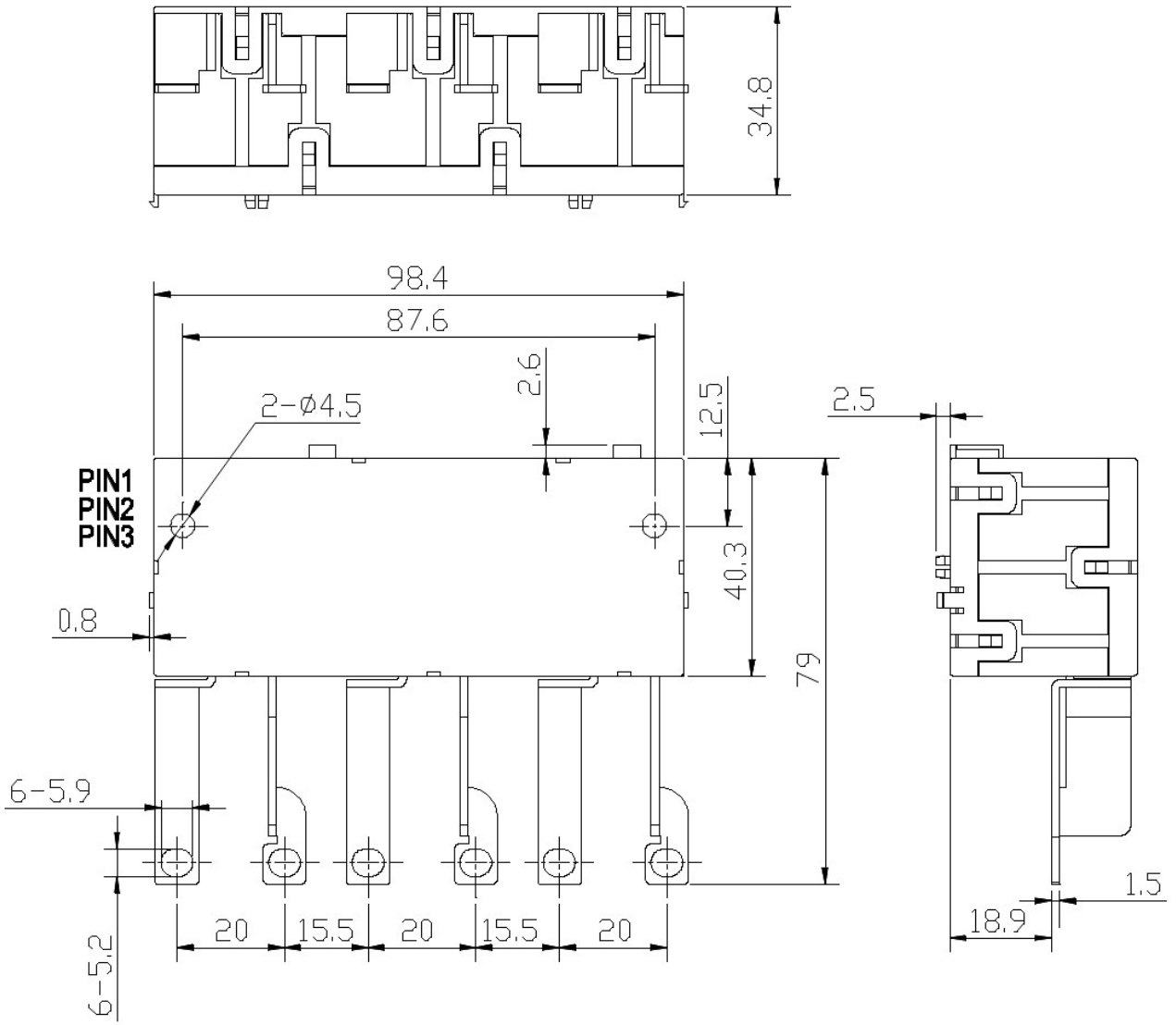
⑧ Coil specification:DC6/9/12/24V

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

Standard polarity wiring diagram



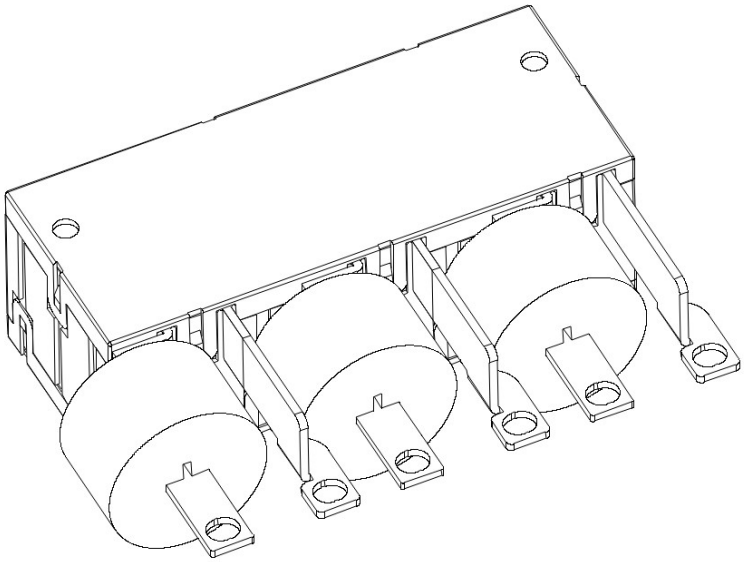
Standard shape drawing

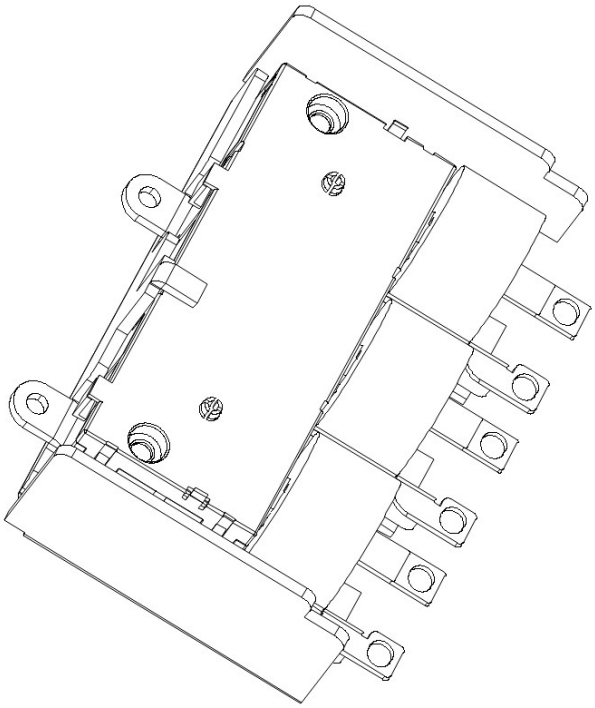


Remark:⑴In case of no tolerance shown in outline dimension:outline dimension≤1mm,tolerance should be±0.2mm;outline dimension >1mm and <5mm,tolerance should be ±0.3mm;outline dimension≥5mm,tolerance should be ±0.5mm.

⑵ The tolerance without indicating for PCB layout is always ±0.1mm.

■ TYPICAL CASES





■ NOTICE

① For the state of latching relay as delivered,If the customer has no special requirements, we default to the closed state before delivery,but due to transportation or relay installation by shock and other factors may change the state,so please reset it to the closed or open state as needed when using;

② 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;

③ In order to maintain "opening" or "closing" status,energized voltage applied across the coil should reach the rated voltage,it is recommended that the actual driving voltage be 1~1.5 times the rated voltage, Pulse width ≥100ms,and do not energize to "opening" coil and "closing" coil simultaneously,long energized time(more than 1 min) should also be avoided;

④ Normally the load terminals are not suitable for reflow solder, wave solder or tin solder, we suggest use spot welding. Load terminals shall be prevented from assembly stress;

⑤ Latching relays are customized products,the above cases are only for reference. If you have any questions, please contact Fanhar for more technical support;

⑥ The specification is for reference only.Specifications subject to change without notice.