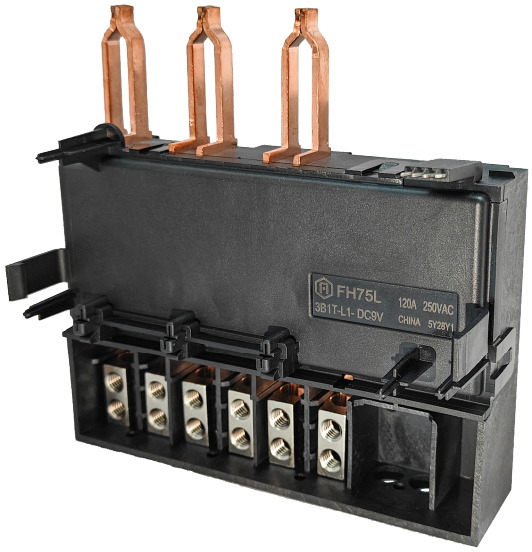
FH75L

Latching Relay



Features

- 120A switching capability
- External accessories such as manganese copper shunts and transformers can be ordered according to customer requirements
- The withstand voltage of the medium between the coil and the contact reaches 4KV
- Compliant to UC3 requirements of EN62052-31:2016 and 1EC62052-31:2015Standard, as well as AU NMIM 6-1 Standard
- Environment-friendly product(RoHS compliant)
- Outline Dimensions:(130.0×129.2×56.0)mm
- Main application: smart meter

■ CHARACTERISTICS

Specifications	Item				
Contact Data	Contact arrangement		3A、3B		
	Contact resistance(initial)		≤1.0mΩ(6VDC 1A)		
	Contact material		$AgSnO_2$		
Rated value	Rated load(Resistance load)		120A 250VAC		
	Max.switching voltage		440VAC		
	Max.switching current		120A		
	Max.switching capacity		52800VA		
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)		
	Dielectric strength (Initial)	Between open contacts	2000VAC(50/60Hz 60s)		
		Between coil&contacts	4000VAC(50/60Hz 60s)		
		Groups and between-groups	4000VAC(50/60Hz 60s)		
	Closing time		≤30ms		
	Opening time		≤30ms		
Mechanical performance	Shock resistance	Functional	$98m/s^2$(10g)		
		Destructive	$980m/s^2$(100g)		
	Vibration resistance		10Hz~55Hz 1.5mm double-amplitude		
Endurance	Mechanical		$1×10^6$ops		
	Electrical (1)	ON/OFF=10S/20S	120A 288VAC	5000ops(COS ϕ =1)	Total 10000ops
				5000ops(COS ϕ =0.5)	
Operate condition	Ambient temperature		-40℃~85℃		
	Humidity		5%~85%RH		
Termination			Plug-in needle type+Screw type(connection strap)		
Unit weight			Approx.430g (Without attachment)		
Construction			Flux proofed		

Note: (1) Electrical endurance ,do the inductive load test after the resistive load test.

■ COIL DATA(23℃)

■ Single coil latching

Nominal Voltage	Closing Voltage VDC	Opening Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 6V	≤4.50	≤4.50	0.83A	7.2Ω	5W	DC 9V
DC 9V	≤6.75	≤6.75	0.56A	16.2Ω		DC 13.5V
DC 12V	≤9.00	≤9.00	0.42A	28.8Ω		DC 18V
DC 24V	≤18.00	≤18.00	0.21A	115.2Ω		DC 36V

■ ORDERING INFORMATION

FH75L 3B 1 T -L1 R -XXX -DC9V

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

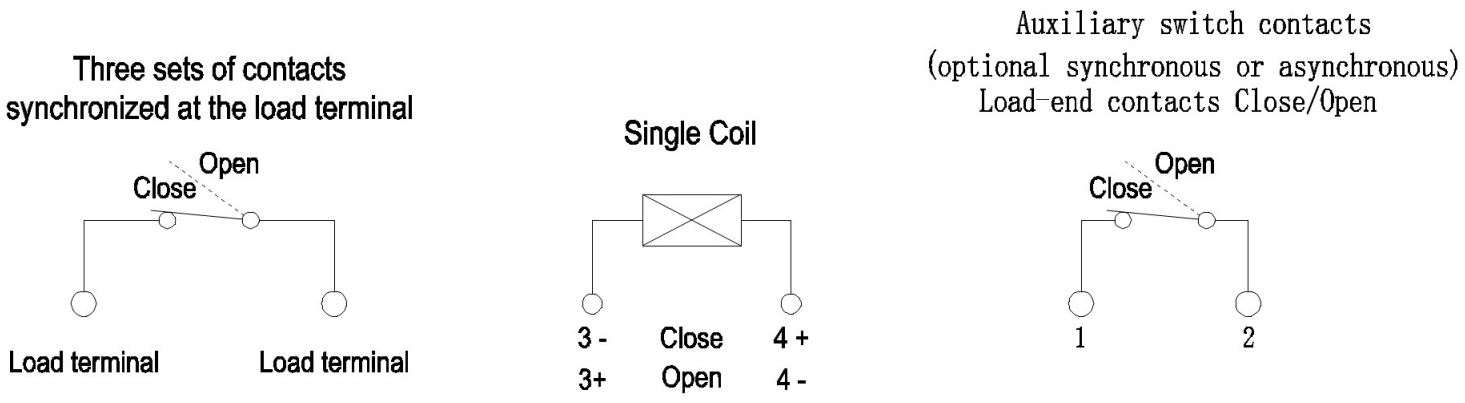
⑥ Polarity:Nil=standard polarity R=reversed polarity

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

⑧ Coil specification:DC6/9/12/24V

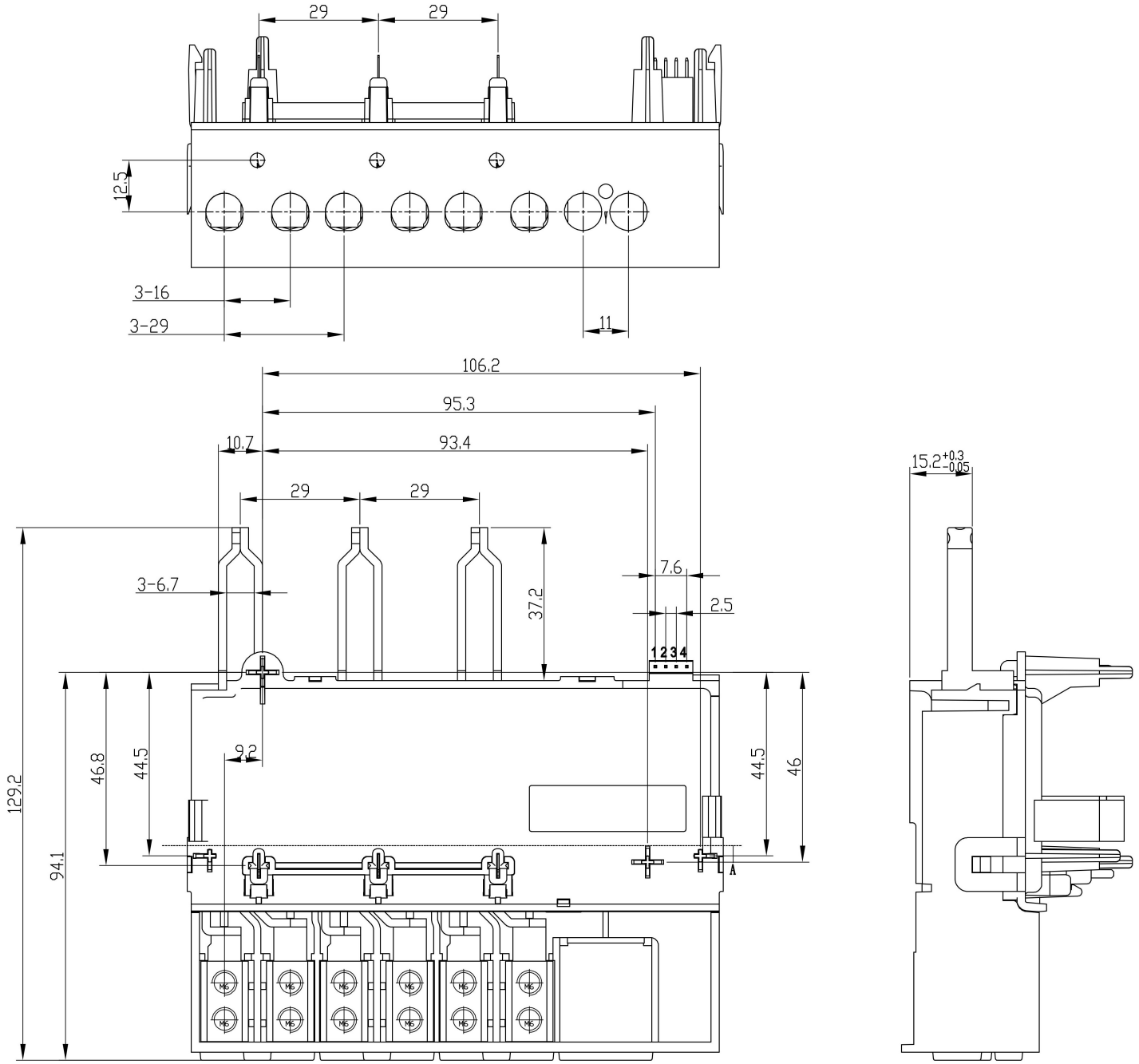
■ WIRING DIAGRAM AND PC BOARD LAYOUT(Unit:mm)

Standard polarity wiring diagram



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

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.