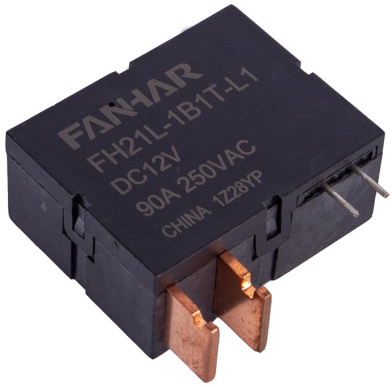
FH21L

Latching Relay

Features

- 90A switching capability
- Single coil and double coils are all available
- Can be customized the manganese copper shunt, transformer and other external accessories according to customer demand
- Breakdown voltage (between contact and coil):5KV
- Meet the standard of IEC62055-31：2005　UC2
- Environment-friendly product （RoHS compliant）
- Outline Dimensions：（38.0×30.0×16.5）mm
- Main application：Smart meter、Compound switch



■ CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A、1B
	Contact resistance(initial)		≤1mΩ(6VDC 1A)
	Contact material		$AgSnO_2$
Rated value	Rated load(Resistance load)		90A　250VAC
	Max.switching voltage		277VAC
	Max.switching current		90A
	Max.switching capacity		22500VA
	Min.allowing load		/
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial)	Between open contacts	2000VAC,1min
		Between coil&contacts	4000VAC,1min
	Set time		≤20ms
	Reset time		≤20ms
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(Room temperature)		90A　250VAC　　$1×10^4$ops (ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃～85℃
	Humidity		5% to 85%
Termination			Plug-in needle type+Screw type(XB)
Unit weight			Approx.50g(Without attachment)
Construction			Flux proofed

■ COILDATA(23℃)

■Single coil latching

Nominal Voltage	Set Voltage VDC	Reset Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≤3.75	312.5mA	16.6Ω	1.5W	DC 7.5V
DC 6V	≤4.50	≤4.50	250mA	24Ω		DC 9V
DC 9V	≤6.75	≤6.75	166.7mA	54Ω		DC 13.5V
DC 12V	≤9.00	≤9.00	125mA	96Ω		DC 18V
DC 24V	≤18.00	≤18.00	62.5mA	384Ω		DC 36V

■Double coils latching

Nominal Voltage	Set Voltage VDC	Reset Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≤3.75	625/625mA	8.3/8.3Ω	3W	DC 7.5V
DC 6V	≤4.50	≤4.50	500/500mA	12/12Ω		DC 9V
DC 9V	≤6.75	≤6.75	333.3/333.3mA	27/27Ω		DC 13.5V
DC 12V	≤9.00	≤9.00	250/250mA	48/48Ω		DC 18V
DC 24V	≤18.00	≤18.00	125/125mA	192/192Ω		DC 36V

■ ORDERINGINFORMATION

FH21L -1B 1 T -L1 R -XXX DC6V

① Type

② Contact arrangement：1A=1 open contacts
1B=1 close contacts

③ PCB mounting：1=A type、2=B type

④ Contact material：T=$AgSnO_2$

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

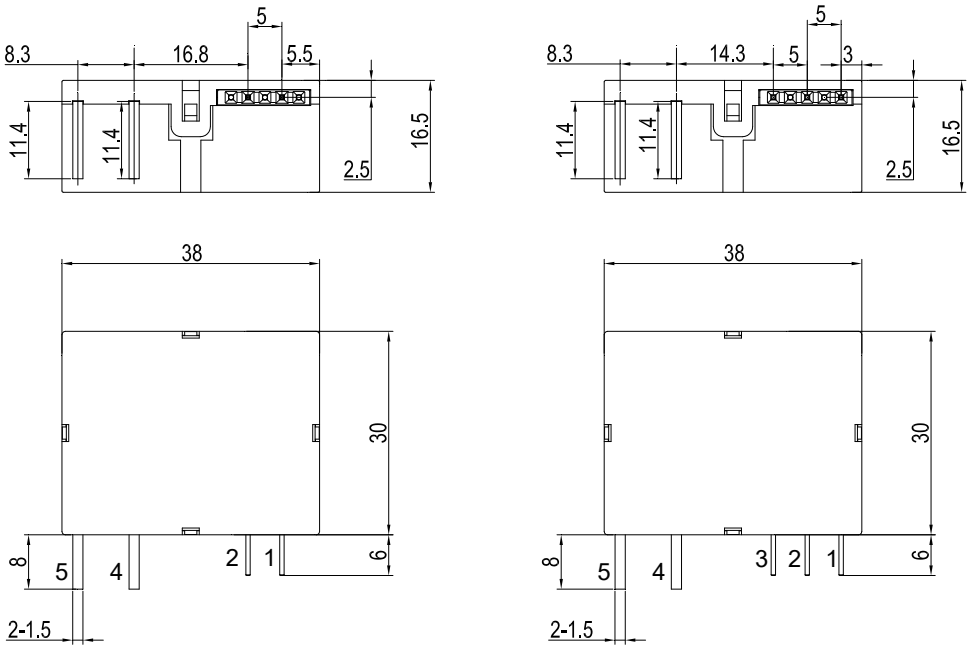
⑥ Operation polarity：Nil=standard polarity R=reversed polarity

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

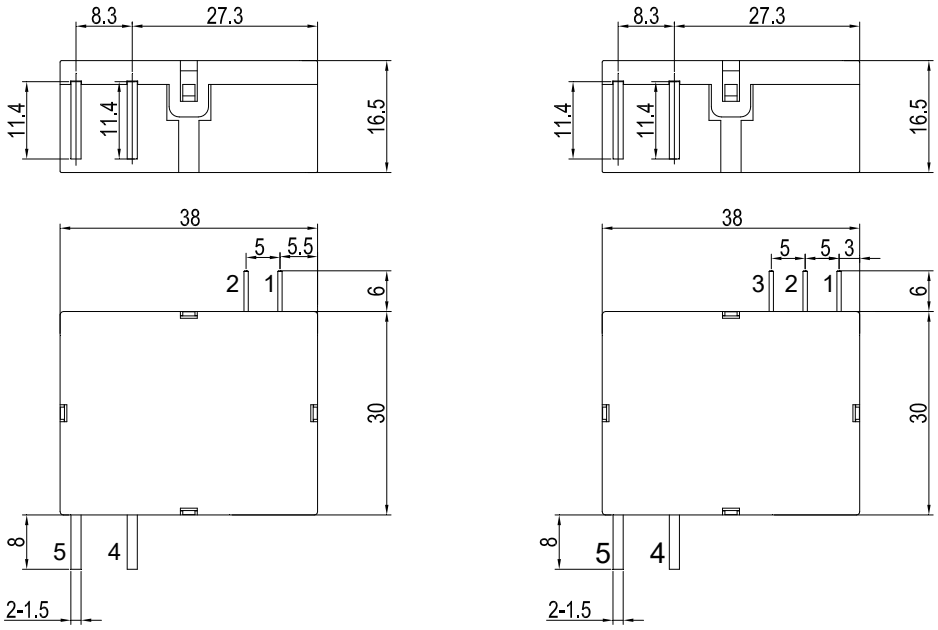
⑧ Coil specification：DC5/6/9/12/24V

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

A type Outline Dimensions

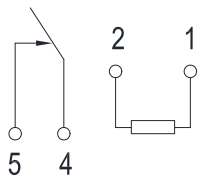


B type Outline Dimensions



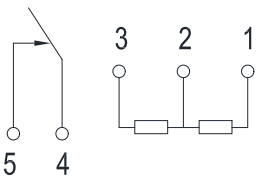
Wiring Diagram

Single coil latching



1(+)2(-) 4-5 Reset
2(+)1(-) 4-5 Set

Double coils latching



1(+)2(-) 4-5 Reset
3(+)2(-) 4-5 Set

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

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 arrangement	Contact material	Approved ratings
UL/C-UL	/	/	/	/
TUV	R 50376640	1A、1B	$AgSnO_2$	90A 250VAC 70℃
CQC	/	/	/	/

■ NOTICE

① With the consideration of shock risen from transit and relay mounting,relay's initial state might be changed ,please impose pulse voltage to reset the relay before using(rated coil voltage,impulse width≥5 times operation time.

② In order to maintain the initial performance parameters of the relay, please be careful not to drop the product;

③ In order to maintain the "set" or "reset" status, energized voltage to coil should reach the rated voltage, impulse width should be 5 times more than “set” or “reset” time. Do not energize the voltage to "set" coil and "reset" coil simultaneously.

④ The specification is for reference only.Specifications subject to change without notice.