FH35L-40 Latching Relay

Features

- 2 sets of 40A switching capability
- Single coil and double coils are all available
- The height of the product is 10mm,it is suit for flat mounting
- The contact can withstand 1020A 10ms short-circuit impulse current
- UL insulation system:Class F
- Environment-friendly product (RoHS compliant)
- Outline Dimensions:(30.0×20.0×10.0)mm
- Main application:Smart home、Ev Charge

■ CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		2A、2B
	Contact resistance(initial)		≤20mΩ(6VDC 1A)
	Contact material		$AgSnO_2$
Rated value	Rated load(Resistance load)		40A 250VAC
	Max.switching voltage		380VAC
	Max.switching current		40A
	Max.switching capacity		10000VA
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial)	Between open contacts	1000VAC,1min
		Between contact sets	2000VAC,1min
		Between coil&contacts	4000VAC,1min
	Set time		≤15ms
	Reset time		≤15ms
Mechanical performance	Shock resistance	Functional	$98m/s^2$(10g)
		Destructive	$980m/s^2$(100g)
	Vibration resistance		10Hz~55Hz 1.5mm DA
Endurance	Mechanical		3×10^5ops
	Electrical(Room temperature)		40A 250VAC 6×10^3ops(ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 85%
Termination			PCB
Unit weight			Approx.12g
Construction			Flux proofed

■ COIL DATA(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	300mA	16.7Ω	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	600/600mA	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

■ ORDERING INFORMATION

FH35L-40 -2A T -L1 R -XXX DC12V

① Type

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

③ Contact material:T=$AgSnO_2$

④ Coil type:L1=1 coil latching、L2=2 coils latching

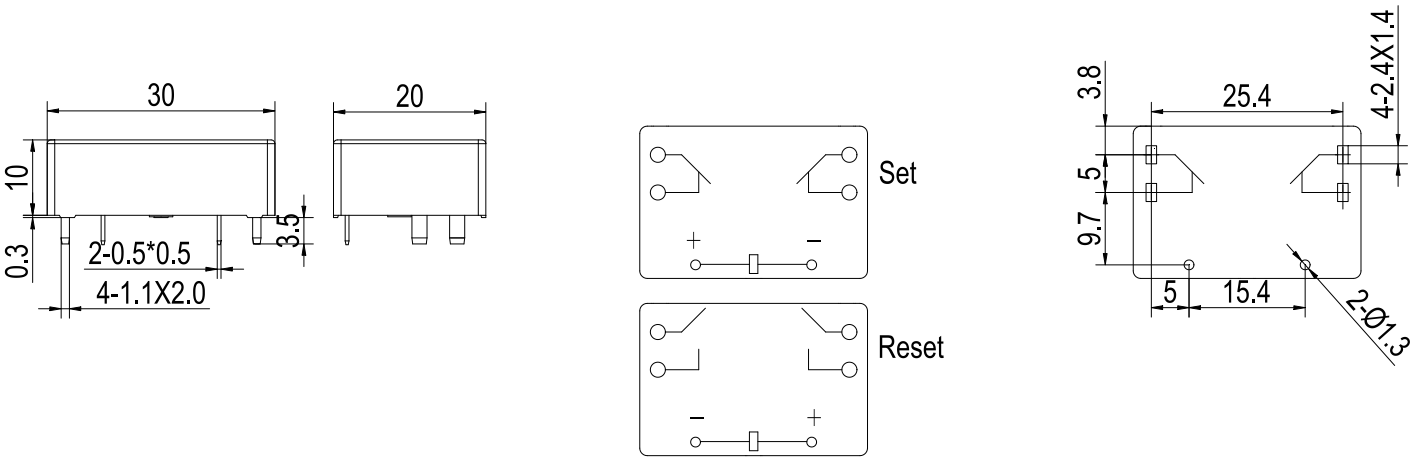
⑤ Operation polarity:Nil=standard polarity、R=reversed polarity

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

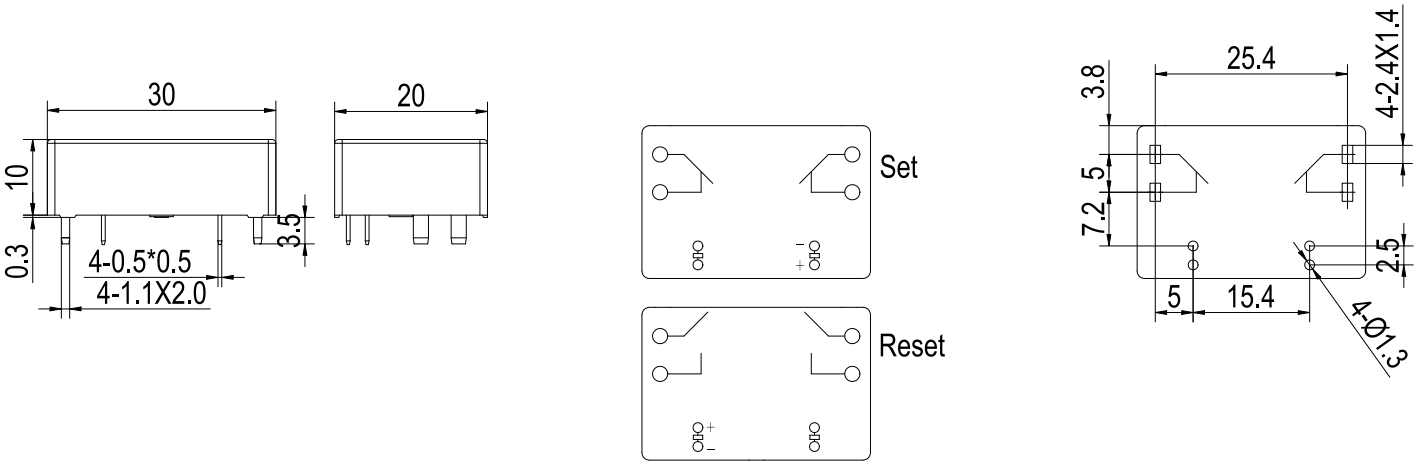
⑦ Coil specification:DC5/6/9/12/24V

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

2A/2B Outline Dimensions Wiring Diagram PCB Layout
(Single coil latching) (Bottom view) (Bottom view)



2A/2B Outline Dimensions Wiring Diagram PCB Layout
(Double coils latching) (Bottom view) (Bottom view)



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.

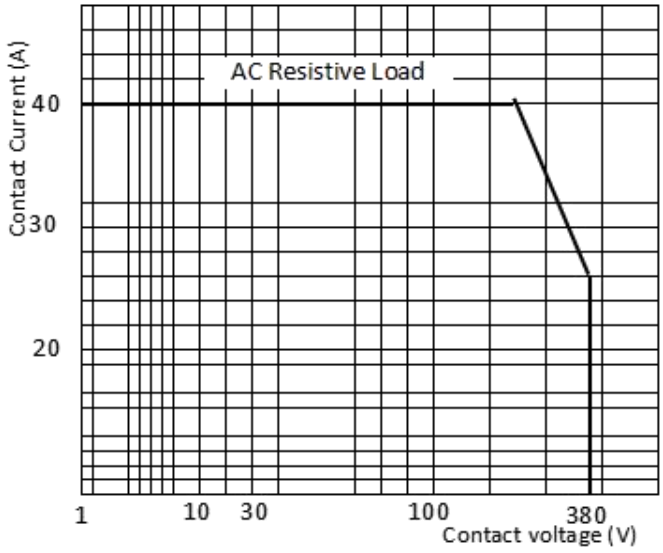
(2) The tolerance without indicating for PCB layout is always ±0.1mm.

■ SAFETY APPROVAL RATINGS

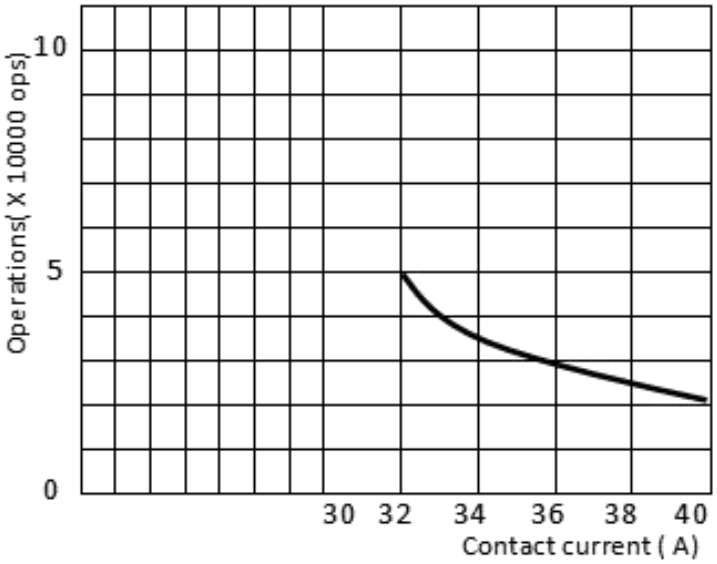
Approval	File No.	Contact arrangement	Contact material	Approved ratings
UL/C-UL	/	/	/	/
TUV	/	/	/	/
CQC	CQC23002378787	2A、2B	$AgSnO_2$	40A 277/250VAC 85℃

■ PERFORMANCE CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



■ 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.