

## Features

- Bifurcated welded double contact structure
- The thickness of the product is 5mm,suitable for high density installation
- High sensitive type,coil power is120mW
- UL insulation system:Class F
- Environment-friendly product(RoHS compliant)
- Outline Dimensions:(20.2×5.2×12.5)mm
- Main application:Industrial Control



## CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A
	Contact resistance(initial)		≤100mΩ(6VDC 1A)
	Contact material		AgNi
Rated value	Rated load(Resistance load)		5A 250VAC/30VDC
	Max.switching voltage		250VAC/30VDC
	Max.switching current		5A
	Max.switching capacity		1250VA/150W
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial)	Between open contacts	1000VAC,1min
		Between coil&contacts	3000VAC,1min
	Operate time		≤10ms
	Release time		≤5ms
Mechanical performance	Shock resistance	Functional	98m/s <sup>2</sup> (10g)
		Destructive	980m/s <sup>2</sup> (100g)
	Vibration resistance		10Hz~55Hz 1.5mm DA
Endurance	Mechanical		1×10 <sup>7</sup> ops
	Electrical(Room temperature)		5A 250VAC/30VDC 5×10 <sup>4</sup> ops(ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 90%
Termination			PCB
Unit weight			Approx.3g
Construction			Plastic sealed, Flux proofed

## ■ COIL DATA(23°C)

### ■ Standard Type

Nominal Voltage	Operate Voltage VDC	Release Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.25	≥0.15	40mA	75Ω	120mW	DC 3.9V
DC 5V	≤3.75	≥0.25	24mA	208.3Ω		DC 6.5V
DC 6V	≤4.50	≥0.30	20mA	300Ω		DC 7.8V
DC 9V	≤6.75	≥0.45	13.3mA	675Ω		DC 11.7V
DC 12V	≤9.00	≥0.60	10mA	1200Ω		DC 15.6V
DC 15V	≤11.25	≥0.75	8mA	1875Ω		DC 19.5V
DC 18V	≤13.50	≥0.90	6.7mA	2700Ω		DC 23.4V
DC 24V	≤18.00	≥1.20	5mA	4800Ω		DC 31.2V

### ■ High power consumption type

Nominal Voltage	Operate Voltage VDC	Release Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.25	≥0.15	60mA	50Ω	180mW	DC 3.9V
DC 5V	≤3.75	≥0.25	36mA	139Ω		DC 6.5V
DC 6V	≤4.50	≥0.30	30mA	200Ω		DC 7.8V
DC 9V	≤6.75	≥0.45	20mA	450Ω		DC 11.7V
DC 12V	≤9.00	≥0.60	15mA	800Ω		DC 15.6V
DC 15V	≤11.25	≥0.75	12mA	1250Ω		DC 19.5V
DC 18V	≤13.50	≥0.90	10mA	1800Ω		DC 23.4V
DC 24V	≤18.00	≥1.20	7.5mA	3200Ω		DC 31.2V

## ■ ORDERING INFORMATION

**FH19 -1A 1 S H -XXX DC12V**

- ① Type
- ② Contact arrangement: 1A=1open contacts
- ③ PCB mounting: 1=type 1, 2=type 2
- ④ Construction(1): Nil=Flux proofed, S=Plastic sealed
- ⑤ Coil power: Nil=120mW, H=180mW
- ⑥ Customer special code: numbers or letters denote customer's requirements. For example: G product stands for gold plated contacts
- ⑦ Coil specification: DC5/6/9/12/24V

- (1) When used in clean environment(excluding H<sub>2</sub>S,SO<sub>2</sub>,NO<sub>2</sub>,dust and other pollutants), it is recommended to choose the Flux proofed type;When used in unclean environment(contain H<sub>2</sub>S,SO<sub>2</sub>,NO<sub>2</sub>,dust and other pollutants), it is recommended to choose the Plastic sealed.

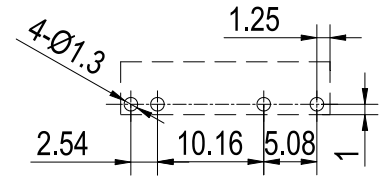
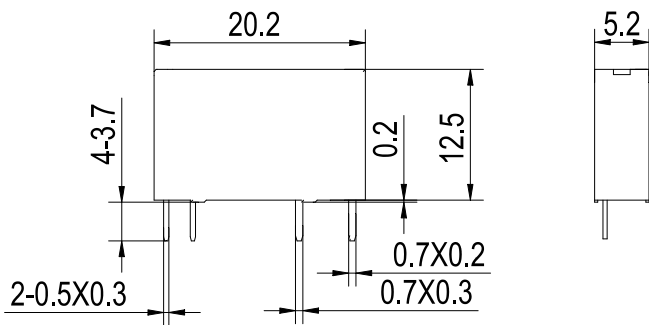
## ■ OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT (Unit:mm)

1A1

Outline Dimensions

Wiring Diagram  
(Bottom view)

PCB Layout  
(Bottom view)

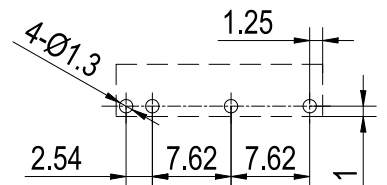
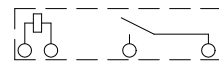
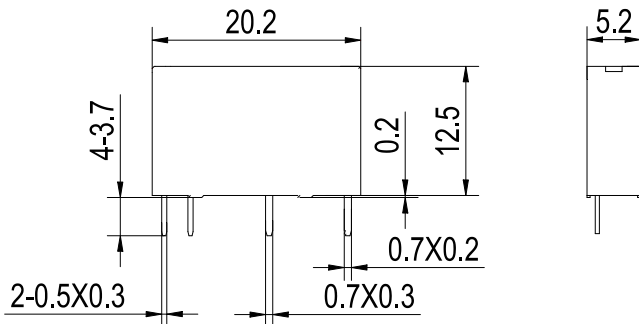


1A2

Outline Dimensions

Wiring Diagram  
(Bottom view)

PCB Layout  
(Bottom view)



Remark: (1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $< 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $\geq 5\text{mm}$ , tolerance should be  $\pm 0.5\text{mm}$ .

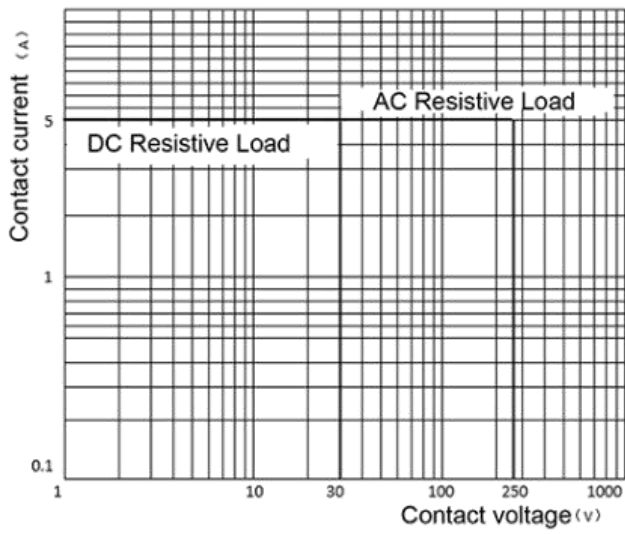
(2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

## ■ SAFETY APPROVAL RATINGS

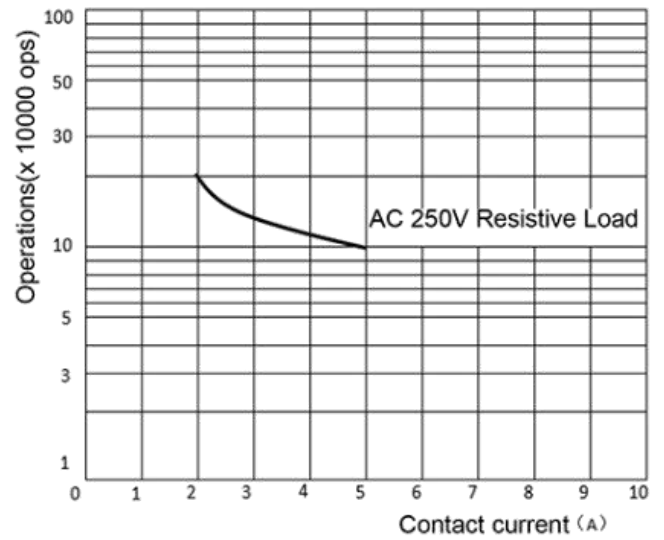
Approval	File No.	Contact arrangement	Contact material	Approved ratings	
UL/C-UL	E475405	1A	AgNi	5A 250VAC/30VDC	85/90°C
TUV	R 50565678	1A	AgNi	5A 250VAC/30VDC	85°C
CQC	CQC22002370207	1A	AgNi	5A 250VAC/30VDC	85°C

## ■ PERFORMANCE CURVES

### MAXIMUM SWITCHING POWER



### ENDURANCE CURVE



## ■ NOTICE

- ① In order to maintain the initial performance parameters of the relay, please be careful not to drop the product;
- ② The specification is for reference only. Specifications subject to change without notice.