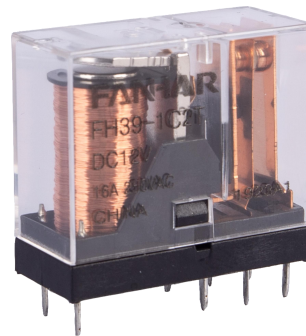


## Features

- 20A switching capability
- Contact arrangement:1A, 1C
- Contact opening distance of 1.5mm is available
- Optional relay socket,easy installation and use
- Breakdown voltage (between contact and coil):4KV
- Environment-friendly product (RoHS compliant)
- Outline Dimensions:FH39:(28.8×12.8×25.0)mm  
FH39S:(28.8×12.8×26.5)mm
- Main application:Industrial Control



FH39



FH39S



## CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A、1C
	Contact resistance(initial)		≤100mΩ(6VDC 1A)
	Contact material		AgSnO <sub>2</sub>
Rated value	Rated load(Resistance load)		16A 250VAC 20A 250VAC
	Max.switching voltage		277VAC
	Max.switching current		20A
	Max.switching capacity		5000VA
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial)	Between open contacts	1000VAC(Standard)/2500VAC,1min
		Between coil&contacts	4000VAC,1min
	Operate time		≤15ms
Release time		≤8ms	
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		5×10 <sup>6</sup> ops
	Electrical(Room temperature)		16A 250VAC 1×10 <sup>5</sup> ops(ON/OFF=1s/9s) 20A 250VAC 5×10 <sup>4</sup> ops(ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 85%
Termination			PCB
Unit weight			Approx. 18g
Construction			Plastic sealed, Flux proofed

## COIL DATA(23°C)

Nominal Voltage	Operate Voltage VDC	Release Voltage VDC	Rated Current ( $\pm 10\%$ )	Coil Resistance ( $\pm 10\%$ )	Nominal Power	Max Voltage
DC 5V	$\leq 3.75$	$\geq 0.25$	106.4mA	47 $\Omega$	530mW	DC 6.5V
DC 6V	$\leq 4.50$	$\geq 0.30$	88.2mA	68 $\Omega$		DC 7.8V
DC 9V	$\leq 6.75$	$\geq 0.45$	58.8mA	153 $\Omega$		DC 11.7V
DC 12V	$\leq 9.00$	$\geq 0.60$	44.1mA	272 $\Omega$		DC 15.6V
DC 24V	$\leq 18.00$	$\geq 1.20$	22.1mA	1087 $\Omega$		DC 31.2V
DC 48V	$\leq 36.00$	$\geq 2.40$	11mA	4347 $\Omega$		DC 62.4V

## ORDERING INFORMATION

**FH39/FH39S -1A 2 S T E -XXX DC12V**

- ① Type: FH39=Shell buckle type  
FH39S=Shell sealant type
- ② Contact arrangement: 1A=1 open contacts,  
1C=1 switched contacts
- ③ PCB mounting: 2=type 2
- ④ Construction(1): Nil=Flux proofed, S=Plastic sealed(Only FH39S)
- ⑤ Contact material: T=AgSnO<sub>2</sub>
- ⑥ Load: Nil=16A, E=High load 20A
- ⑦ Customer special code: numbers or letters denote customer's requirements
- ⑧ Coil specification: DC5/6/9/12/24/48V

- (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)

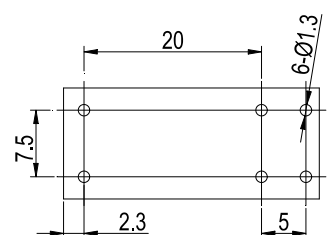
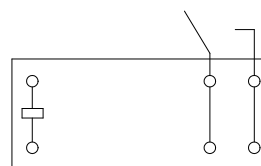
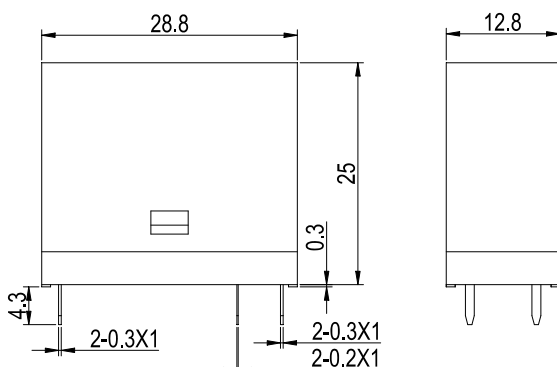
### FH39

#### 1A

Outline Dimensions

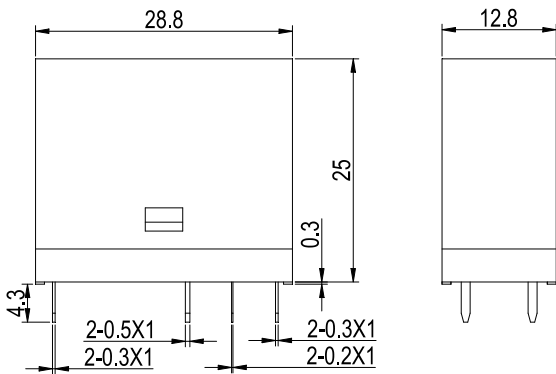
Wiring Diagram  
(Bottom view)

PCB Layout  
(Bottom view)

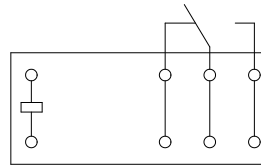


# OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT (Unit:mm)

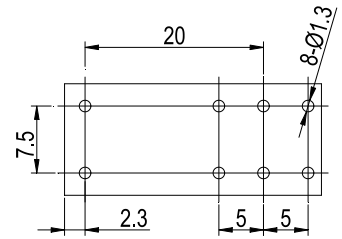
**1C** Outline Dimensions



Wiring Diagram  
(Bottom view)

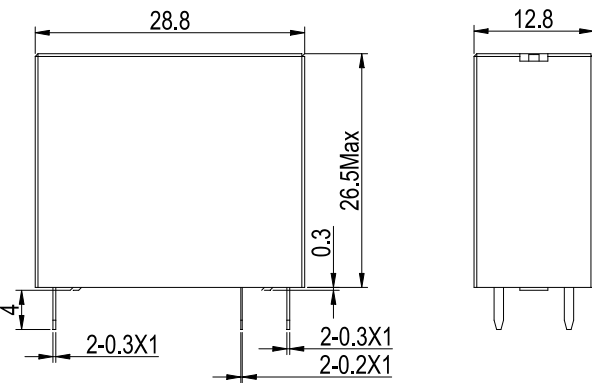


PCB Layout  
(Bottom view)

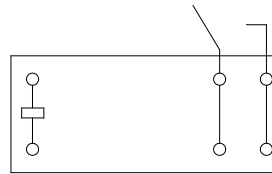


**FH39S**

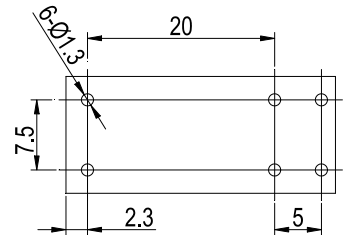
**1A** Outline Dimensions



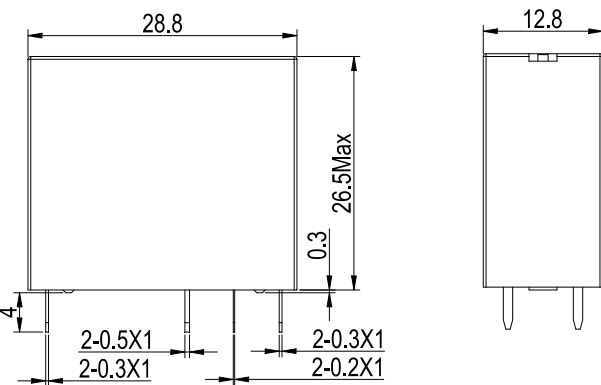
Wiring Diagram  
(Bottom view)



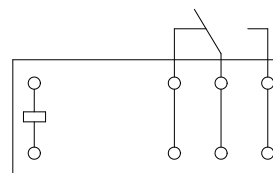
PCB Layout  
(Bottom view)



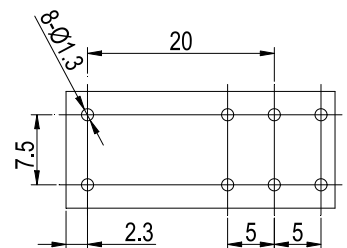
**1C** Outline Dimensions



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  $\pm 0.5\text{mm}$ .

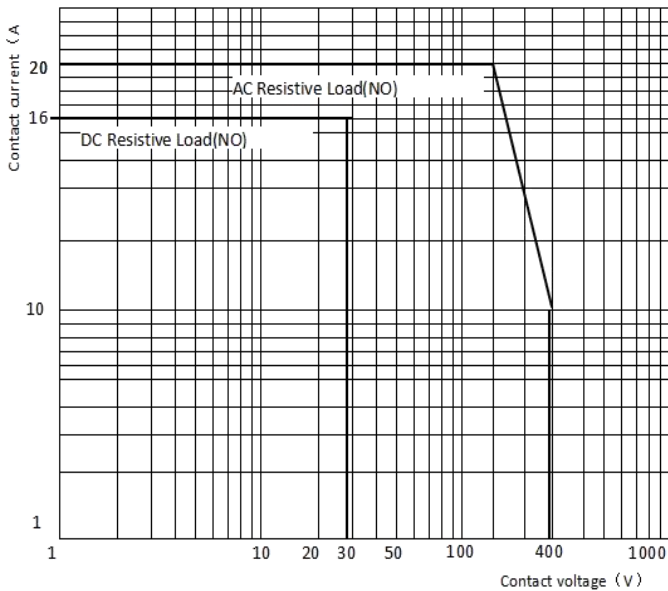
(2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

## SAFETY APPROVAL RATINGS

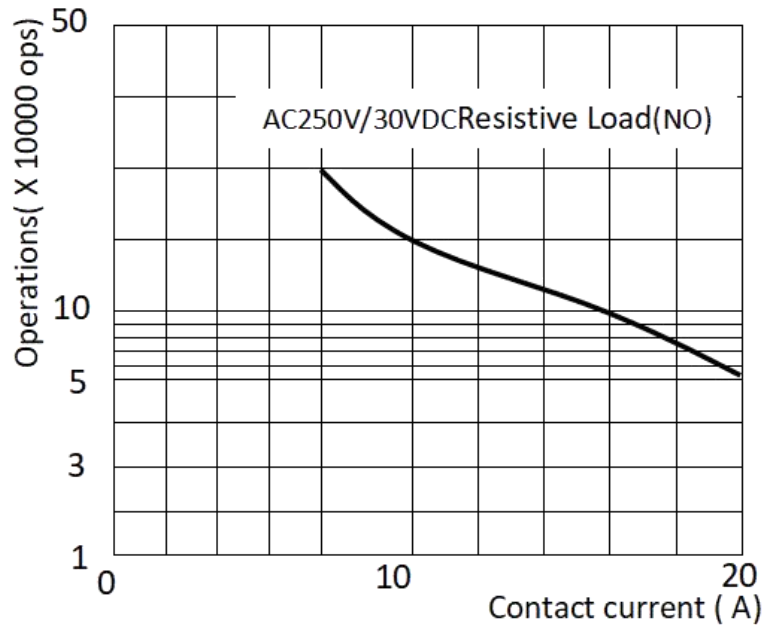
Approval	File No.	Contact arrangement	Contact material	Approved ratings		
UL/C-UL	E475405	1A、1B、1C	AgSnO <sub>2</sub>	16A	250VAC	85°C
				20A	250VAC	85°C
TUV	R 50580444	1A、1B、1C	AgSnO <sub>2</sub>	16A	250VAC	85°C
				20A	250VAC	85°C
CQC	CQC23002390596	1A、1B、1C	AgSnO <sub>2</sub>	16A	250VAC	85°C
				20A	250VAC	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.