FH56L Latching Relay

Features

- 150A switching capability
- Optional contact gap >2.0mm
- Only pulse excitation voltage is required, energy saving and environmental protection
- Environment-friendly product (RoHS compliant)
- Outline Dimensions:(39.4×22×27.5) mm
- Main application: Telecommunications, engineering machinery, electric vehicles, automobiles, trains, ships and other electronic control systems

■ CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A
	Contact resistance(initial)		≤1mΩ (6VDC 20A)
	Contact material		$AgSnO_2$
Rated value	Rated load (Resistance load)		Main contact: Making 50A, Carrying 125A, Breaking 50A,80VDC Making 50A, Carrying 150A, Breaking 50A,60VDC Making 50A, Carrying 125A, Breaking 50A,305VAC Making 50A, Carrying 150A, Breaking 50A,277VAC Auxiliary contact: 1A 6VDC
	Max. switching voltage		Main contact:305VAC/80VDC Auxiliary contact:6VDC
	Max. switching current		Main contact:50A Auxiliary contact:1A
	Max. switching capacity		Main contact:15250VA/4000W Auxiliary contact:6W
	Min. allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial)	Between open Main contacts	2000VAC,1min
		Between coil & Main contacts	4000VAC,1min
	Set time		≤20ms
	Reset time		≤20ms
Mechanical performance	Shock resistance		98m/s² (10g)
	Vibration resistancee		980m/s² (100g)
Endurance	Mechanical		1×10^5ops
	Electrical (Room temperature)		Main contact: 6×10^3次(ON/OFF=1s/9s,Resistive) Making 50A, Carrying 125A, Breaking 50A,80VDC Making 50A, Carrying 150A, Breaking 50A,60VDC Making 50A, Carrying 125A, Breaking 50A,305VAC Making 50A, Carrying 150A, Breaking 50A,277VAC
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 85%
Termination			PCB
Unit weight			Approx.60g
Construction			Flux proofed

■ COIL DATA (23℃)

■Single coil latching

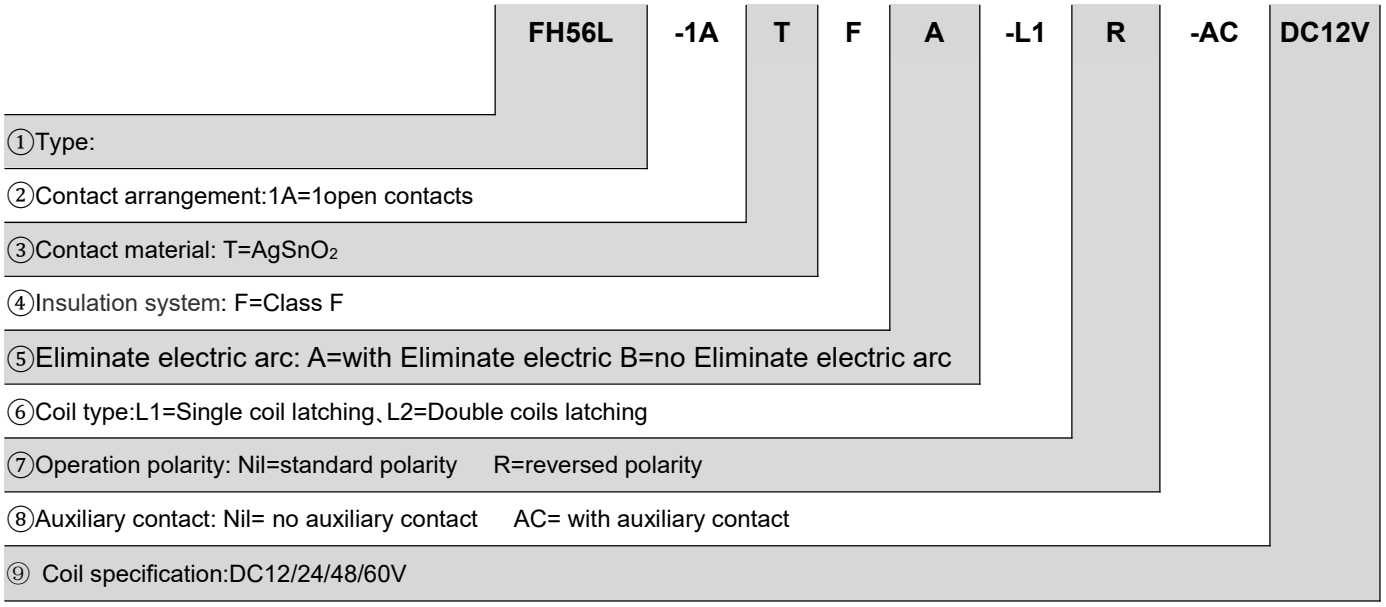
Nominal Voltage	Set Voltage VDC	Reset Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Pulse Duration
DC 12V	≤8.4	≤8.4	641.6mA	18.7Ω	7.7W	200ms
DC 24V	≤16.8	≤16.8	320.8mA	74.8Ω		200ms
DC 48V	≤33.6	≤33.6	160.4mA	299.2Ω		200ms
DC 60V	≤42	≤42	128.3mA	467.5Ω		200ms

■Double coils latching

Nominal Voltage	Set Voltage VDC	Reset Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Pulse Duration
DC 12V	≤8.4	≤8.4	1283/1283mA	9.4/9.4Ω	15.4W	200ms
DC 24V	≤16.8	≤16.8	641.6/641.6mA	37.4/37.4Ω		200ms
DC 48V	≤33.6	≤33.6	320.8/320.8mA	149.6/149.6Ω		200ms
DC 60V	≤42	≤42	256.7/256.7mA	233.7/233.7Ω		200ms

Note: To ensure reliable operation of the relay, apply 100%~130% of the rated voltage to the coil for 200±50ms during energization, after which the relay can complete switching.

■ ORDERING INFORMATION



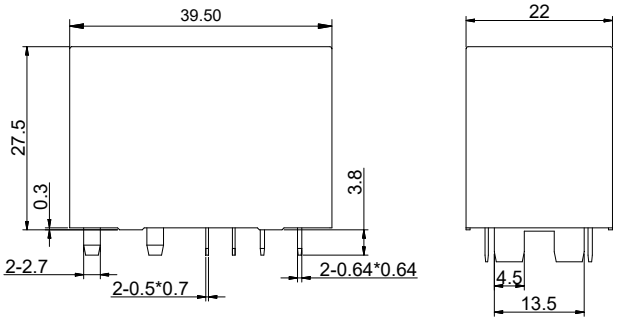
(1) When used in clean environment (excluding H_2S, SO_2, NO_2, dust and other pollutants), it is recommended to choose the Flux proofed type; If overall cleaning or surface treatment is required, please contact our company.

(2) The auxiliary contacts and main contacts have the same form;

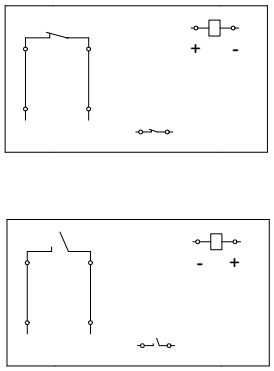
■ OUTLINE DIMENSIONS, WIRING DIAGRAM AND Mounting Dimensions (Unit: mm)

1A Single coil latching

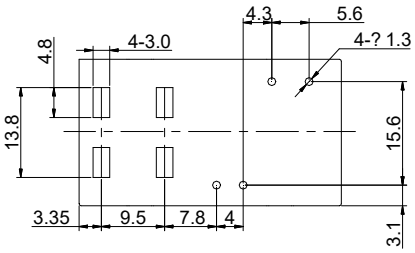
Outline Dimensions



Wiring Diagram (Bottom view)

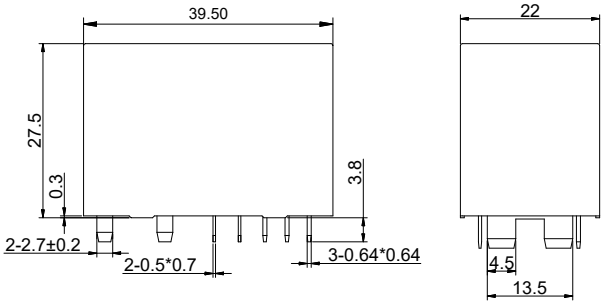


PCB Layout (Bottom view)

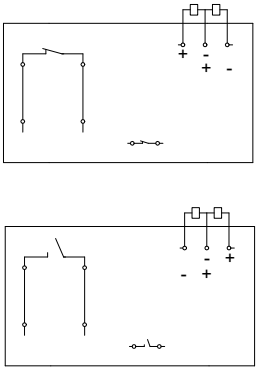


1A Double coil latching

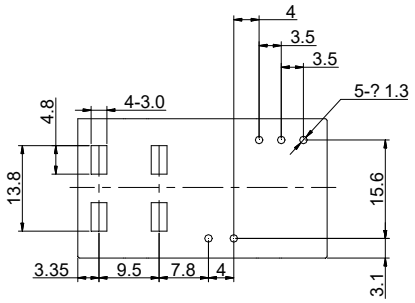
Outline Dimensions



Wiring Diagram (Bottom view)



PCB Layout (Bottom view)



Remark: (1) For outline dimensions without specified tolerances: Where outline dimension ≤ 1 mm, tolerance is ±0.2 mm; Where outline dimension is between 1 mm and 5 mm (inclusive), tolerance is ±0.3 mm; Where outline dimension ≥ 5 mm, tolerance is ±0.5 mm.

(2) The tolerance for mounting dimensions without specified tolerances is ±0.1 mm.

■ NOTICE

① Considering that the initial state of the relay may change during transportation or installation, apply a pulse voltage (rated voltage, pulse width ≥ 5 times the operate time) to uniformly reset the relay before use.

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 "opening" or "closing" status, energized voltage applied across the coil should reach the rated voltage, it is recommended that the actual driving voltage be 1~1.1 times the rated voltage, Pulse width 200±50ms,,and do not energize to "opening" coil and "closing" coil simultaneously, long energized time(＞1 min) should also be avoided;

④ Avoid magnetic fields greater than 200mt around the product, strong magnetic fields will affect the normal operation of the product;

⑤ The specification is for reference only. Specifications subject to change without notice.