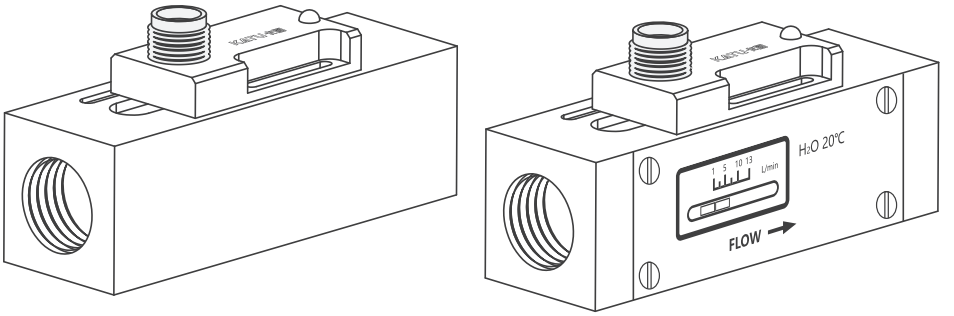
Sensor and controller

■ Flow ■ pressure ■ temperature ■ level ■ position

KATU 卡图

Operation instruction
Piston type flow switch
FC210/FC220/FC230 series



catalogue

catalogue

In-line installation, mechanical flow switch for liquid or gas media. Rugged plastic, aluminum or stainless steel housing available. Minimal pressure loss, good repeatability, anti-fouling ability, mechanical part and electronic part completely isolated, suitable for small flow economy. With switch setting scale, users do not need to set on site. LED display switch status, dual switch output is available.

Product application

Gas-liquid dual-use, Industrial automation/Mechanical equipment/Air compression

FC210 Technical specifications

◇ Setting range: See the parameter table

◇ Accuracy: ±5 total range

◇ Hysteresis: depending on the switch point, minimum 0.6L/min

◇ Switch setting scale: It is calibrated in the medium of water, temperature 20°C, horizontal installation state.

Installation position, media and temperature changes will have a slight impact on the switch value

◇LED display: DC power supply LED display switch status, AC no LED display

◇ Connection mode: M12 connector

◇ Output: reed switch, capacity 24VDC/250VAC,100mA

◇ Pressure resistance: 10bar(plastic), 50bar (aluminum), 100bar (stainless steel)

◇ Average pressure loss: 0.3bar (at 25L/min)

◇ Medium temperature: maximum 90°C

◇ Protection grade: IP67

◇FC210... P Material: Shell: P0M plastic piston: POM plastic

Spring: stainless steel seal: NBR

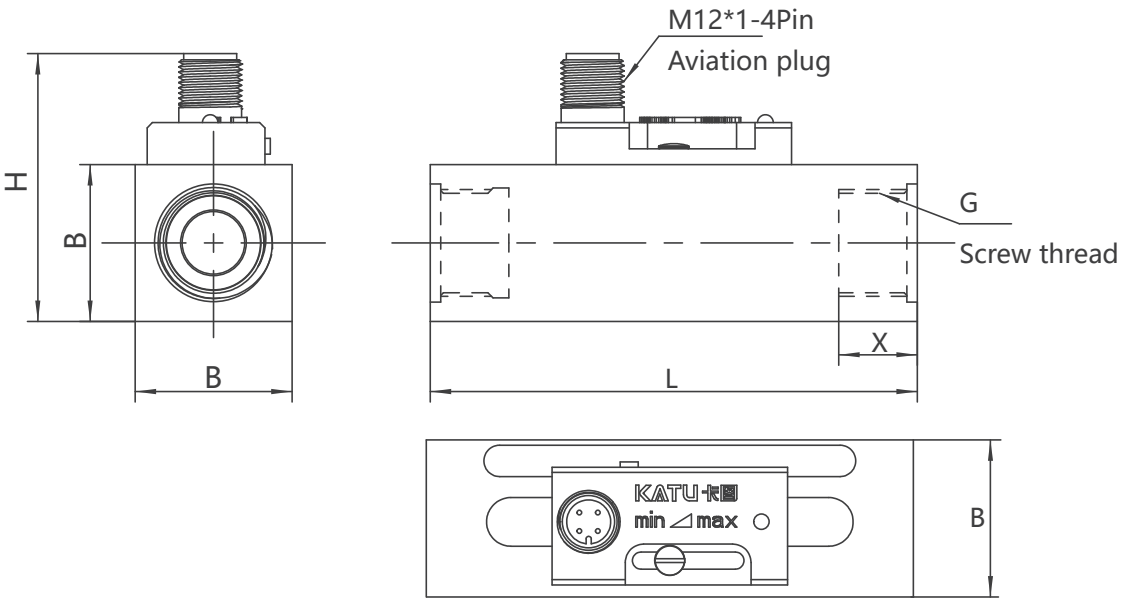
◇FC210... Material: Shell: anodized aluminum piston: POM plastic

Spring: stainless steel seal: NBR

◇FC210... Material: Shell: stainless steel piston: POM plastic

Spring: stainless steel seal: NBR

FC210 Dimensions (mm)



Model number	pressure (bar)	max flow L/min(wate	Adjustable range L/min(water)	G (mm)	L (mm)	H (mm)	B (mm)	X (mm)
FC210-G3/4K ...L(S)008	50	40	0.6(0.3)...8(7)	G3/4	109	54	34	15
FC210-G1K ...L(S)008	50	40	0.6 (0.3)...8(7)	G1	109	56	40	15
FC210-G1/4K ...L(S)015	50	40	1(0.5)...15(13)	G1/4	93	52	30	12
FC210-G3/8K ...L(S)015	50	40	1(0.5)...15(13)	G3/8	93	52	30	12
FC210-G1/2K ...L(S)015	50	40	1(0.5)...15(13)	G1/2	93	52	30	12
FC210-G3/4K ...L(S)015	50	40	1(0.5)...15(13)	G3/4	109	54	34	15
FC210-G1K ...L(S)015	50	40	1(0.5)...15(13)	G1	109	56	40	15
FC210-G1/2K ...L(S)025	50	40	2(0.8)...25(25)	G1/2	93	52	30	12
FC210-G3/4K ...L(S)025	50	40	2(0.8)...25(25)	G3/4	109	54	35	15
FC210-G1K ...L(S)025	50	40	2(0.8)...25(25)	G1	109	56	40	15
FC210-G3/4K ...L(S)070	50	100	27(21)...70(66)	G3/4	115	62	40	15
FC210-G1K ...L(S)070	50	100	27(21)...70(66)	G1	115	62	40	15

FC220 Technical specifications

◇ Setting range: See the parameter table

◇ Accuracy: ±5 total range

◇ Hysteresis: depending on the switch point, minimum 0.6L/min

◇ Switch setting scale: It is calibrated in the medium of water, temperature 20°C, horizontal installation state.

Installation position, media and temperature changes will have a slight impact on the switch value

◇LED display: DC power supply LED display switch status, AC no LED display

◇ Connection mode: M12 connector

◇ Output: reed switch, capacity 24VDC/250VAC,100mA

◇ Pressure resistance: 10bar(plastic), 50bar (aluminum), 100bar (stainless steel)

◇ Average pressure loss: 0.3bar (at 25L/min)

◇ Medium temperature: maximum 90°C

◇ Protection grade: IP67

◇FC220... P Material: Shell: P0M plastic piston: POM plastic

Spring: stainless steel seal: NBR

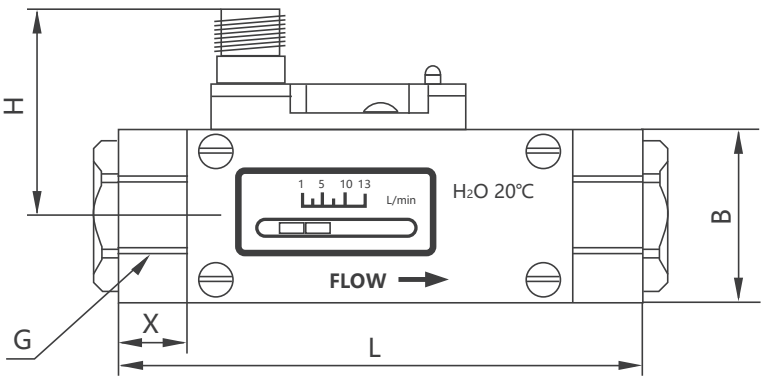
◇FC220... Material: Shell: anodized aluminum piston: POM plastic

Spring: stainless steel seal: NBR

◇FC220... Material: Shell: stainless steel piston: POM plastic

Spring: stainless steel seal: NBR

FC220 尺寸图（mm)



Model	pressure	max flow	Adjustable range	G	L	H	B	X
	Bar	L/min	L/min (water)	mm	mm	mm	mm	mm
FC220-G1/4K ...L(S)008...	50	40	0.6(0.1)...8(7)	G1/4	93	36	30	12
FC220-G3/8K ...L(S)008...	50	40	0.6(0.1)...8(7)	G3/8	93	36	30	15
FC220-G1/2K ...L(S)008...	50	40	0.6(0.1)...8(7)	G1/2	93	36	30	15
FC220-G3/4K ...L(S)008...	50	40	0.6(0.1)...8(7)	G3/4	105	38.5	35	15
FC220-G1K ...L(S)008...	50	40	0.6(0.1)...8(7)	G1	105	41	40	15
FC220-G1/4K ...L(S)015...	50	40	1(0.5)...15(13)	G1/4	93	36	30	12
FC220-G3/8K ...L(S)015...	50	40	1(0.5)...15(13)	G3/8	93	36	30	15
FC220-G1/2K ...L(S)015...	50	40	1(0.5)...15(13)	G1/2	93	36	30	15
FC220-G3/4K ...L(S)015...	50	40	1(0.5)...15(13)	G3/4	105	38.5	35	15
FC220-G1K ...L(S)015...	50	40	1(0.5)...15(13)	G1	105	41	40	15
FC220-G1/2K ...L(S)025...	50	40	2(0.8)...25(25)	G1/2	93	36	30	15
FC220-G3/4K ...L(S)025...	50	40	2(0.8)...25(25)	G3/4	105	36	35	15
FC220-G1K ...L(S)025...	50	40	2(0.8)...25(25)	G1	105	36	40	15
FC220-G3/4K ...L(S)070...	50	40	27(21)...70(66)	G3/4	105	38.5	35	15
FC220-G1K ...L(S)070...	50	40	27(21)...70(66)	G1	106	41	40	15

FC230 Technical specifications

◇ Setting range: 0.03-1.2L/min

◇ Accuracy: ±5% total range

◇ Hysteresis: depending on the switch point

◇ Switch setting scale: it is calibrated in the medium 46# lubricating oil, temperature 20°C, horizontal installation state.Installation position, media and temperature changes will have a slight impact on the switch value

◇LED display: DC power supply LED display switch status, AC no LED display

◇ Connection mode: M12 connector

◇ Output: reed switch, capacity 24VDC/250VAC,100mA

◇ Pressure resistance: 50bar (aluminum type), 100bar (stainless steel)

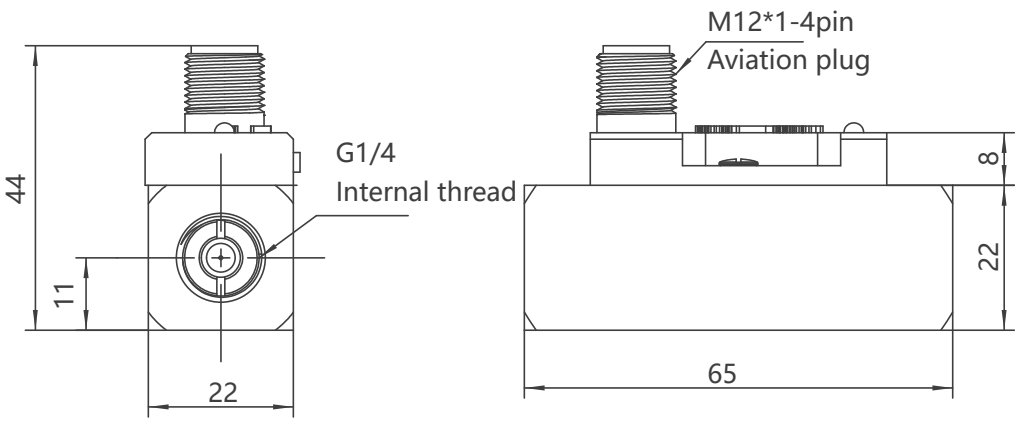
◇ Medium temperature: maximum 90°C

◇ Protection grade: IP67

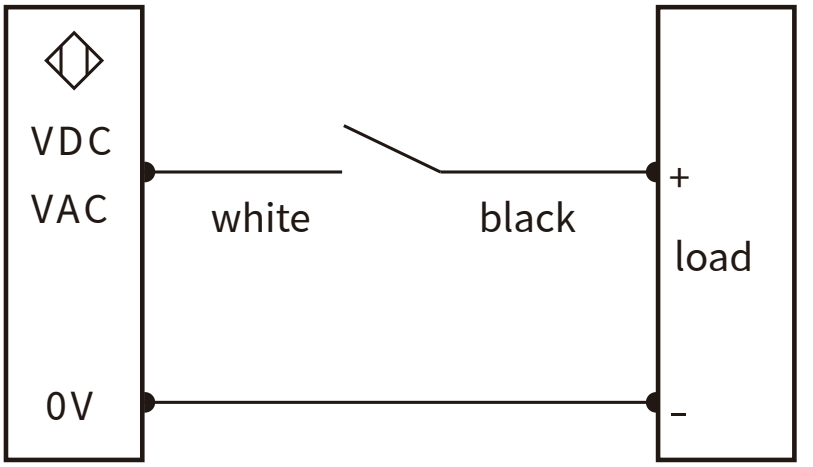
◇ Material:

Housing: copper plated nickel piston: brass spring: stainless steel

FC230 Dimensions (mm)



Wiring diagram



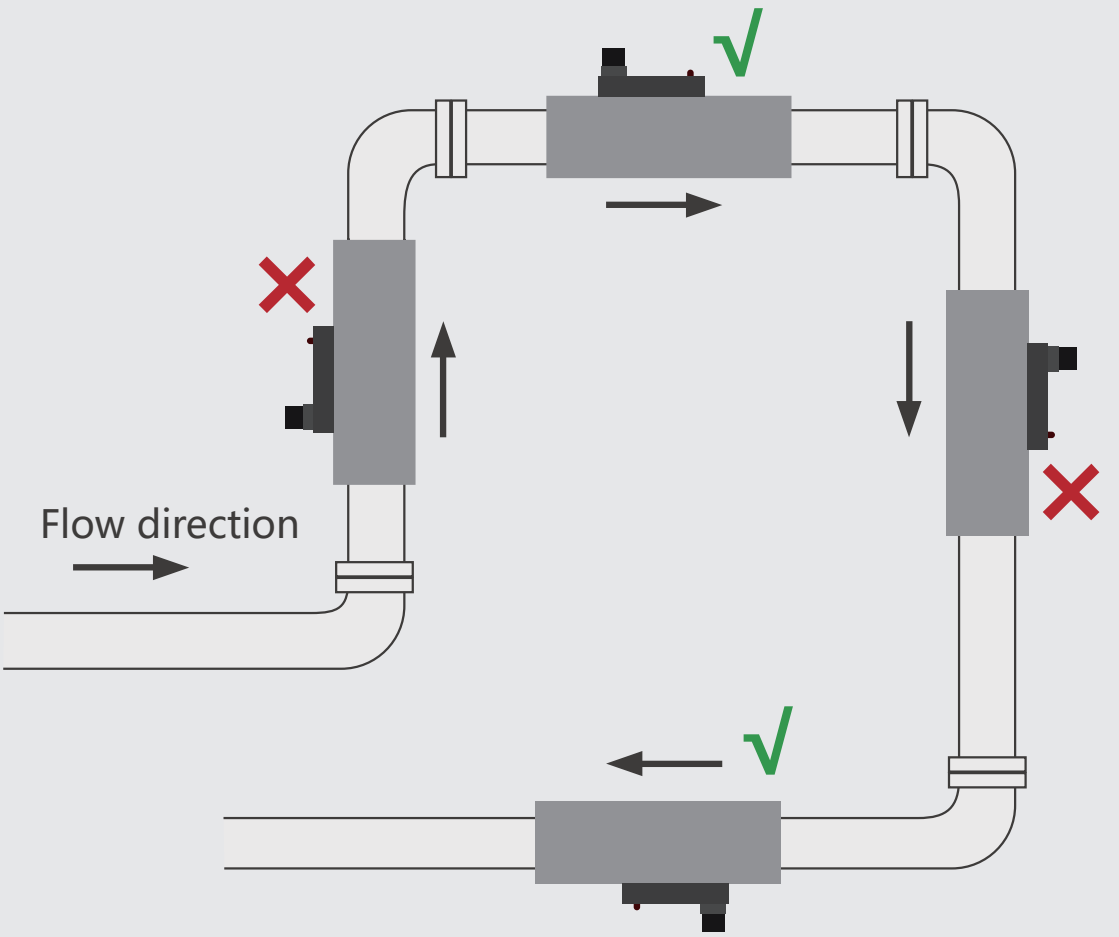
- The switch is normally open contact;
- Do not connect the white and black wires directly to the positive and negative terminals of the power supply. Otherwise, the switch will be short-circuited.

Install

1. Installation precautions

① Please check the flow switch carefully before installation, the package should be complete, and the appearance should be free from damage and deformation. If you have any questions, please contact the customer service department of the head office in time;
② When installing cables, pay attention to the following:
- In order to avoid electric shock and damage to the equipment, the power supply should be cut off when wiring or debugging;
- When connecting cables, do not adjust screws other than the wiring terminals and ground screws of the microswitch.

2. Installation diagram



① The flow switch can be installed in a horizontal pipeline or a vertical pipeline with the liquid flow direction up, but it cannot be installed in a pipeline with the liquid flow direction down. When installed in a pipeline in the liquid flow direction, the effect of gravity should be considered.

② The flow switch must be installed on a straight line pipe, at least 5 times the linear stroke of the pipe diameter on both sides, and it should be noted that the direction of the flow in the pipe must be consistent with the direction of the arrow on the switch housing, and the terminal should be in a position that is easy to connect;
! If vertical installation is required, the switch point will be offset.

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