

—— Sensor and controller ——

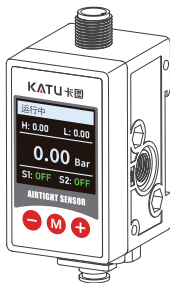
■ Flow ■ pressure ■ temperature ■ level ■ position

KATU 卡图

Operation Instructions

Digital position sensor

PS710 series



Purpose of product application



danger

The sensor (switch) can only be used in the specified application range.

The temperature range must be within the permissible range. Do not exceed the rated pressure and power load value.

Assembly, commissioning and operation must be carried out in accordance with applicable national and local safety instructions.

The switch is designed to be used as a safety device for pressurizing the system in accordance with "Pressure Equipment Directive 97/23 / EC(PED)".

Standard

The standards applied during development, manufacturing and configuration are listed in the CE Compliance and manufacturer declarations.

Quality assurance

Our scope of delivery and service is subject to legal warranties and warranty periods.

Warranty clause

We guarantee that the functions and materials of the dual pressure switch meet the statutory requirements under normal operation and maintenance conditions.

Security of loss

Such as:

- Incorrect use,
 - Incorrect installation
 - Incorrect operation or operation in violation of the provisions of this operation manual.
- No liability shall be assumed for any damage resulting therefrom or consequential.

Safety instruction

Safety instructions are intended to protect users from dangerous situations and /or prevent material damage.

In the operating instructions, the severity of the potential risk can be indicated by the following signal words:



danger

An imminent danger to the user. Failure to comply may result in fatal injury.



warning

An identifiable hazard.

Failure to comply may result in fatal injury and damage to equipment or plant parts.



caution

It means a danger.

Non-compliance may result in minor injury and material damage to the sensor (switch) and/or plant.



important

Information that is important to the user.



Deal with

Sensors (switches) must be handled correctly in accordance with national or local regulations for electrical/electronic equipment.

Sensors (switches) cannot be disposed of with household waste!

Install



caution

Vibration and violent vibration must be avoided during transportation. Even if the sensor (switch) housing is not damaged, internal components can also break down and cause failure.



danger

Sensors (switches) should only be installed in systems that do not exceed the maximum pressure Pmax (see type label).
Install sensors (switches) only when power is off (electric, hydraulic/pneumatic).

Piping method

I SUP Supply Port (Supply Port)

- Please strictly follow the tightening torque when installing. The applicable torque should be referred to the table below.
- Please install the sealed plug included in the product onto the unused port.

Product	Thread	Applicable tightening torque(N·m)
PS710	Rc1/8 · G1/8	3 ~ 5

I OUT Port (Detection Port)

- Please strictly follow the tightening torque for installation. The applicable torque should be referred to the table below.

Thread	Applicable tightening torque(N·m)
G1/8	3 ~ 5

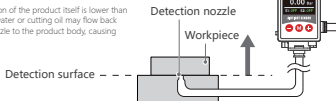
- $\phi 6$ quick-change connector requires the use of a flexible hose with an outer diameter of 6 mm and an inner diameter of 4 mm.



Warning

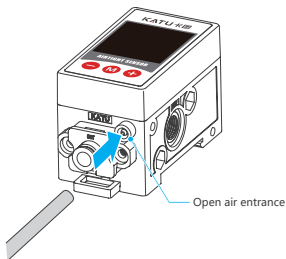
- In the piping between the product body and the detection nozzle, do not use any equipment or joints that have leakage or resistance.
- Please place the product body at a position higher than the detection nozzle.

If the installation position of the product itself is lower than the detection nozzle, water or cutting oil may flow back from the detection nozzle to the product body, causing malfunction or failure.



Open air vent

- If the air outlet is blocked by water, dust, etc., please connect an additional hose at the air outlet.
- Please position the top of the hose in a safe area free of water and dust.
- Please be careful to avoid bending the hose.



The shape of the nozzle

The shape of the nozzle is shown in Figure 1.

As it may affect the product characteristics, please do not use the chamfer shown in Figure 2.

Figure 1:
Recommended nozzle shape

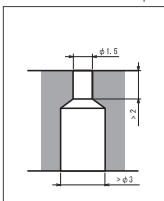
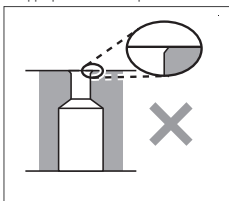


Figure 2:
Inappropriate nozzle shape



■ Installation method

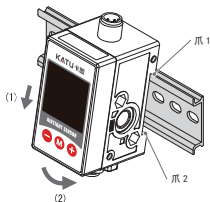
※: Before installing the DIN rails and brackets, please complete the piping work.

- ① If the piping is carried out while the single bracket and DIN rail are already installed, the bracket and DIN rail may bend.
- ② If the display unit is fixed with a pair of pliers or the like for piping, the display unit may retain scratches.
- ③ If the tool touches the stop block, the stop block may break. Please be careful during piping.

I DIN guide rail

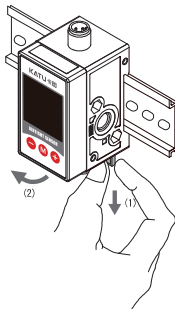
Installation

- (1) Hang claw 1 onto the DIN rail.
- (2) Then insert claw 2 until a "clicking" sound is heard.



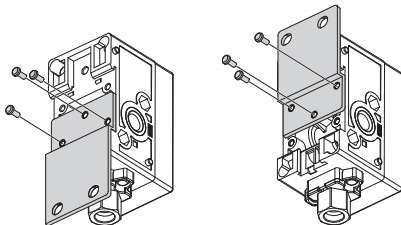
Disassembly

- (1) Pull down the installation part of the DIN rail to release the lock.
- (2) Pull out the side of the OUT port (inspection port), then remove the rail.

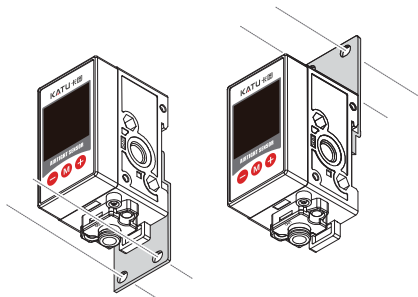


Bracket (in cases without control unit)

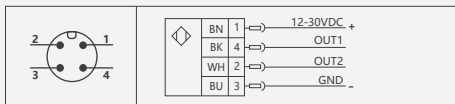
- Please install it using the included installation screws.
- The tightening torque of the bracket installation screws is $0.45 \text{ N}\cdot\text{m} \pm 10\%$.



- Please use M5 (approximately) screws (2 pieces) to install the bracket.
- The thickness of the bracket is approximately 1.6 mm.
- The processing dimensions of the installation holes should refer to the shape dimension diagram of the bracket.



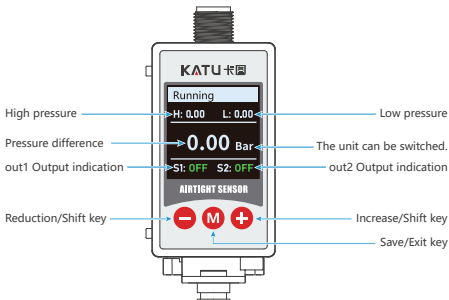
Circuit diagram



S2: Two-way switch/IO-Link

Color	Stitch	Explanation
BN	1	Power supply (+)
BU	3	Power supply (-)
BK	4 (OUT1)	SP1 switch PNP (factory default) SP1 switch NPN IO-Link
WH	2 (OUT2)	SP2 switch PNP (factory default) SP2 switch NPN

Panel schematic diagram



Main interface

Running	
H: 0.00	L: 0.00
0.00 Bar	
S1: OFF	S2: OFF



Level 1 Menu

Setting	
OUT1	Hno
OUT2	Fnc
EF	>>
▲	↺ ▼



OUT1	
Item	P-H
Type	Hno
Fsp	0.0
Frp	0.0
▲	↺ ▼



Press the "+" or "-" to switch

P-H: High Pressure
P-L: Low Pressure
P-S: Differential Pressure



OUT1	
Item	P-H
Type	Hno
Fsp	0.0
Frp	0.0
▲	↺ ▼



Press the "+" or "-" to switch

Hno: Hysteresis Normally Open
Hnc: Hysteresis Normally Closed
Fno: Window Normally Open
Fnc: Window Normally Closed



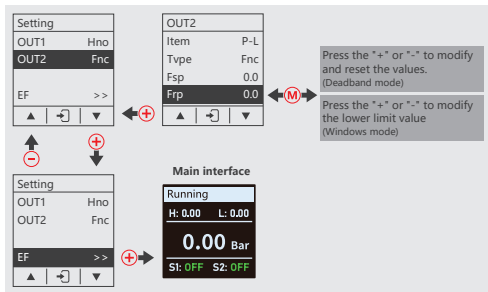
OUT1	
Item	P-H
Type	Hno
Fsp	0.0
Frp	0.0
▲	↺ ▼



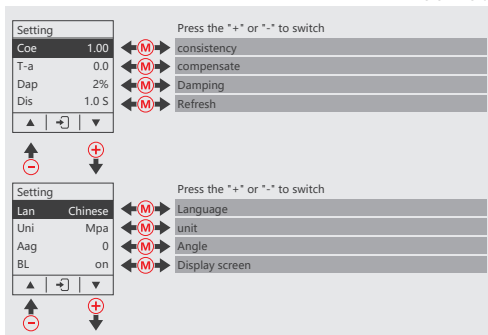
Press the "+" or "-" to modify the action value(Deadband mode)

Press the "+" or "-" to modify the upper limit value(Windows mode)





Level 2 Menu



Setting	
Zero	0.0
RESET	3

Press the "+" or "-" to switch

Zero position cut-off

Restore to factory settings

▲ | ↺ | ▼



Running

H: 0.00 L: 0.00

0.00 Bar

S1: OFF S2: OFF

Main interface

Maintenance

■ Cleaning of the nozzle

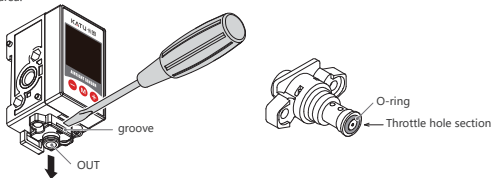
Remove the screws at the OUT port, and clear the foreign substances accumulated in the internal throttle hole.

(When cleaning the internal throttle hole, please gently blow or wipe it with a soft cloth. If you damage the throttle hole, the detection will not be normal.)

(1) Remove the two horizontal screws on the OUT port side.

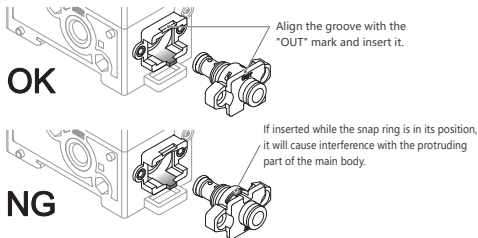
(2) As shown in the figure below, use a Phillips screwdriver or the like to pull the OUT port straight out.

(3) Remove the O-ring from the throttle hole before cleaning. Clean the throttle hole area.



(4) Insert the O-ring into the throttle hole.

(5) Pay attention to the orientation of the OUT port and insert it straight into the body.



(6) Tighten the horizontal screws at the OUT port. (Torque: 0.3 N·m)

※: If the throttle hole part is removed, please reset it.

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