FXH Integrated flow and temperature sensor

- Temperature and flow rate Integrated sensor
- Chinese + graphical interface Foolproof menu
- Self-luminescence Display clearly and sharply
- Digital communication Integrated analog quantity

FXH Integrated flow and temperature sensor

Intelligent temperature display
Alarm contact output

Intelligent display of traffic
Alarm contact output

High-precision probe
Good stability and long service life

Anti-scaling probe
It is resistant to scaling and has good corrosion resistance

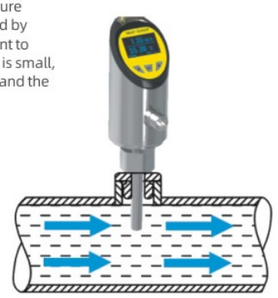
Full potting design
Fully waterproof housing

High pressure resistance
The high-pressure type can withstand a pressure of 60MPA

The mobile phone scanning code installation guidance function
No manual required. Professional services from online engineers

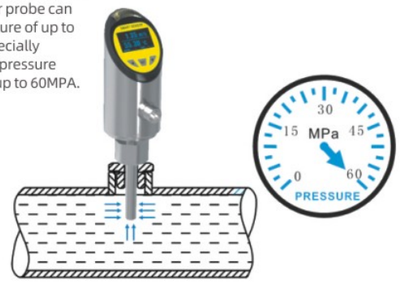
The FXW flow and temperature integrated sensor can monitor the liquid flow and temperature in the pipeline in real time. It provides 4-20mA flow signal and alarm switch output, as well as 4-20mA temperature signal and alarm switch output. It uses 0LED to display the fluid flow velocity and temperature in real time, and the alarm connection output can be set through the meter head. Realize the integrated monitoring function of temperature and flow in the pipeline. It is widely applied in industries such as petrochemicals, power, metallurgy, steel mills, papermaking, food processing, water treatment, and battery factories.

The FXW flow and temperature integrated sensor is installed by insertion, which is convenient to operate. The sensing probe is small, the water resistance is low, and the flow loss is small.

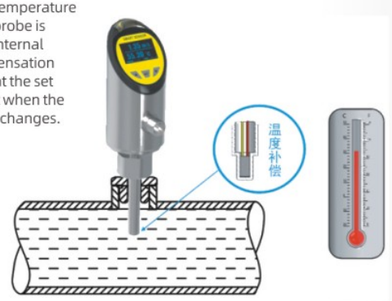


The FXW flow and temperature integrated sensor adopts a fully potting design, which is resistant to condensation at low temperatures, water and dust, and has a 1P67 protection level for short-term liquid immersion.

The FXW flow and temperature integrated sensor probe can withstand a pressure of up to 4MPA, and the specially customized high-pressure probe can reach up to 60MPA.



The FXW flow and temperature integrated sensor probe is equipped with an internal temperature compensation circuit to ensure that the set value does not drift when the liquid temperature changes.



▶
Scan code installation
Simple operation
with good stability and no drift

OLED display | Traditional LCD display

OLED display, using organic light-emitting materials Self-luminous, it can display Chinese graphics, with sharp, clear and high resolution

The traditional LCD liquid crystal black-and-white display is very blurry and unclear when viewed from a distance

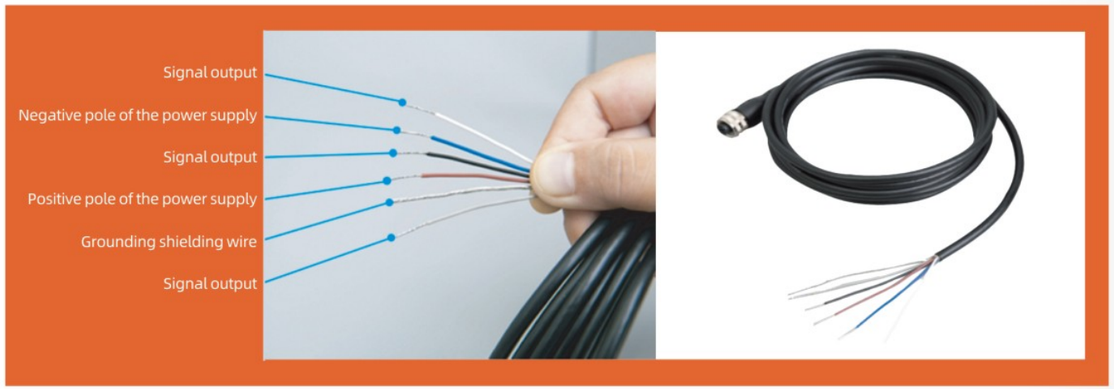
Traditional digital tube leds cannot display Chinese and graphic information

◀
Compared with traditional LED display screens

FXH Integrated flow and temperature sensor

// Five-core waterproof aviation plug shielding wire

Reduce signal interference

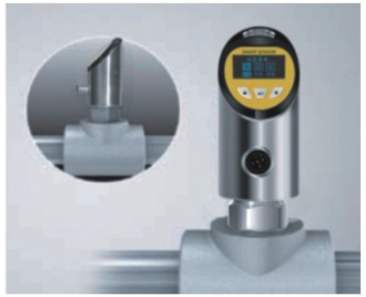


// Easy to install

The display can be rotated after locking

// Installation steps

1. Install the sensor to the detection port



2. Adjust the direction of the monitor

3. Connect the cables

The 360° freely rotating modular design enables it to be freely installed on the flow pipeline, with flexible connection and easy installation. Threaded connection adapters come in various thread sizes, providing users with flexible connection options. Therefore, threaded adapters can be freely adjusted to facilitate application in various scenarios.

FXH Integrated flow and temperature sensor

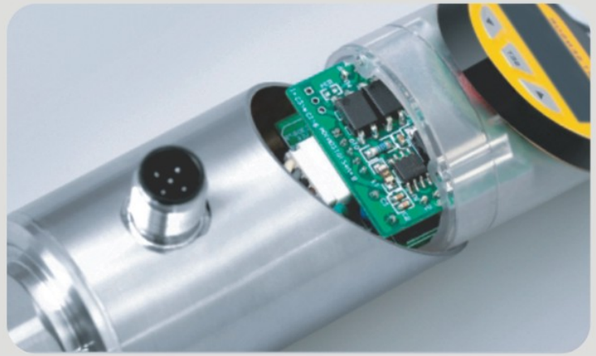
Detail display Show quality

◀
316L material probe

Withstand pressure
Corrosion-resistant
Resistant to scaling

▶
Intelligent chip

Good stability
Strong anti-interference ability



◀
Integrated stainless steel structure

Fully waterproof

// Easy to install

The display can be rotated after locking

Real photos of the product

Front

Side

Back

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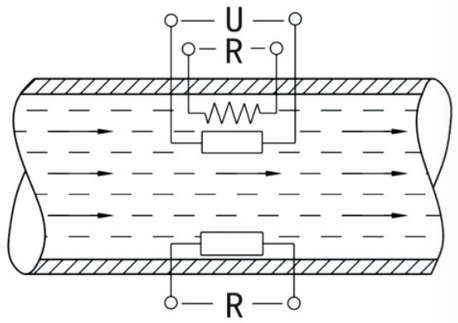
// Working principle

The FXW flow and temperature integrated sensor is designed based on the principle of heat exchange. The probe is equipped with a built-in heating module and a heat-sensing module. The heat conduction of the flow sensor is closely related to the flow rate of the medium. During measurement, heat is generated by the heating module. If there is no medium flowing in the pipeline, the heat received by the heat-sensing module is a fixed value. When there is medium flow, the heat received by the thermal sensing module will change with the flow rate of the medium. The thermal sensing module converts this temperature difference signal into an electrical signal, and then the processor converts it into the corresponding standard analog signal or contact signal for output. The flow sensor displays and controls the flow rate of the medium through this signal.



// Technical parameters

• Flow rate:

Measurement range: Water: 0.03-2m/s Oil: 0.03-3m/s

Measurement accuracy: Water: (0-1m/s)10%±5 Oil: (0-2m/s)10%±5

Display: OLED 128X64

Working voltage: 24VDC

Switching time: ON: ≥5 seconds (1-13 seconds) : OFF: ≥5 seconds (1-15 seconds)

Output: One alarm contact, 4-20mA(configurable), 485 communication (optional)

Alarm contact types: NPN, PNP

Contact capacity: 24V/50mA

Insulation resistance: 50MΩ at 100VDC

Power consumption: 3W(24VDC)

Interface type: M18X1.5 internal thread

Shell material: 304 stainless steel

Probe material: 316L stainless steel

Environmental conditions: -20-85℃, ≤85%RH

Protection grade: IP67

• Temperature:

Measurement range: 0-100℃

Measurement accuracy: ≤1℃

// Connect the coil

• Wiring instructions

Aviation socket

Users can define the output types of OUT1, OUT2, and OUT3.

There are four options:
1. Flow alarm; 2. Temperature alarm
3. Flow rate: 4-20mA output; 4. Temperature output: 4-20mA

4-20mA, NPN, PNP output		
Terminal number	Terminal color wire	Terminal description
①	brown	Positive pole of the power supply
③	blue	Negative pole of the power supply
④	black	Switch signal: Flow alarm Switch signal: Temperature alarm Flow rate: 4-20mA output Temperature: 4-20mA output
⑤	Grey	Switch signal: Flow alarm Switch signal: Temperature alarm
②	white	Switch signal: Flow alarm Switch signal: Temperature alarm Flow rate: 4-20mA output Temperature: 4-20mA output

4-20mA, NPN, PNP output wiring diagrams

• PNP type output

The first channel current is 4-20mA, the first channel alarm PNP output, and the second channel alarm PNP output

The first channel current is 4-20mA, the second channel current is 4-20mA, and the first channel alarm PNP output

The first alarm PNP output, the second alarm PNP output, and the third alarm PNP output

• NPN type output

The first channel current is 4-20mA, the first channel alarm PNP output, and the second channel alarm PNP output

The first alarm NPN output, the second alarm NPN output, and the third alarm NPN output

The first channel current is 4-20mA, the second channel current is 4-20mA, and the second channel alarm PNP output

• 485 communication output

RS485 communication, one signal output

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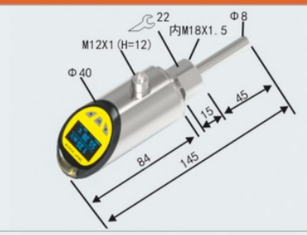
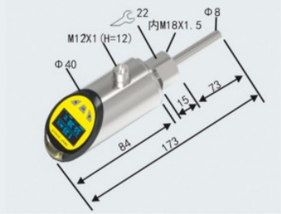
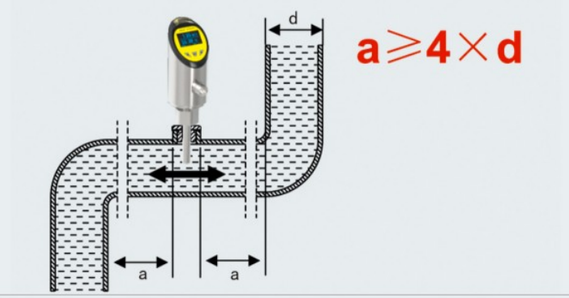
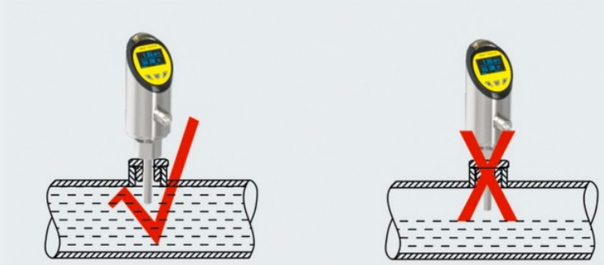
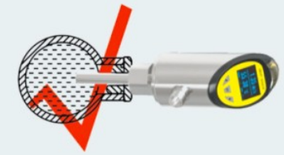
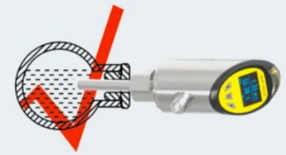
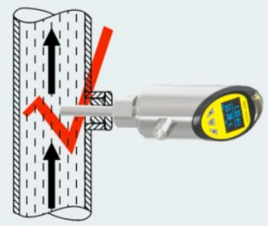
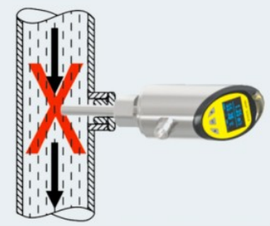
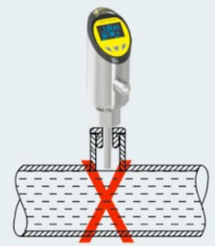
// Structure diagram

NO.	Name	Structural dimensions (mm)	Applicable pipe diameter	Output mode
1	Standard type		DN8-DN80	Relay output NPN three-wire DC output PNP three-wire DC output 4-20mA output
2	Long exploration type		DN100-DN450	Relay output NPN three-wire DC output PNP three-wire DC output 4-20mA output

// Structure diagram

1. Elbow pipe installation: When there is A bend at the front end of the pipe, the installation position of the flow switch should not be less than 4 times the pipe diameter from the straight pipe at the bend or intersection (A≥4XD).	
2. Horizontal installation: This installation method can be adopted when the medium in the pipeline is full.	

3. Side installation: This installation method can be adopted when the medium in the pipeline is full or not full.		
4. Vertical installation: When installing vertical pipes, they should be installed in the flow section where the medium flows from bottom to top.		
5. Upside down Installation upside down is prohibited. This installation method will cause the sediment at the bottom of the pipe to cover the probe, and the flow switch will not work properly. It is also not conducive to setting the parameters of the flow switch.		
6. The installation joint is too long This installation method is prohibited. If the installation joint is too long, the probe of the flow switch will not be able to contact the flowing medium, resulting in the flow switch not working properly.		
7. Ambient temperature: The ambient temperature for the sensor installation should be between -20℃ and 80℃.