

FSP SERIES

AIoT Insertion Type Flow meter/switch

Applicable Fluid

Water

Oil

Gas



FSP1000



FSP900



FSP800/700



FSP200



FSP100



FSP600/500

Flow/Temperature Multi Sensing

Optionl APP software function

Remote maintenance of pipeline conditions

Easy Installation/Without Cut Pipe










Using Pip:DN8~DN350



Taiwantrade
Supplier
Business
Information
Verification

www.tuv.com
ID 000058180



ITEM	Series	Photp	Specification	Display	Flow Output					Temperature Output	Power		Accuracy	Fluid			Protection level
					RELAY	NPN, PNP	4-20mA	RS485	Pulse		DC24V	220VAC/DC		Water	Oil	Gas	
1	FSP1000		DC24V, AC/DC220V power supply 6LED indicator light NPN, PNP, relay output standard probe long probe	0.96 inch light-emitting OLED, Chinese and English display	With	--	With	With	With	--	Optional	Optional	0.25-0.5%	Available	Available	--	IP65
2	FSP900		DC24V power supply Flow+Temperature 4-20mA output digital display temperature and flow output at one alarm point	0.96 inch light-emitting OLED, Chinese and English display	--	With	With	With	--	4-20mA and Relay/NPN/PNP	With	--	2.5%	Available	Available	--	IP67
3	FSP800		DC24V power supply Flow+temperature 4-20mA output digital display temperature and flow output at one alarm point	Three-digit LED digital display	With	With	With	--	--	4-20mA and Relay/NPN/PNP	With	--	2.5%	Available	Available	--	IP67
4	FSP700		DC24V power supply 4-20mA output, digital display two alarm point output, standard probe	Three-digit LED digital display	With	With	With	--	--	--	With	--	2.5%	Available	Available	--	IP67
5	FSP600		DC24V, 6LED light indication, NPN, PNP, relay output, standard probe, small probe, long probe	6 LED lights	Optional	Optional	--	--	--	--	With	--	2.5%	Available	Available	--	IP67
6	FSP500		DC24V, AC/DC220V power supply, 6LED indicator light, NPN, PNP, relay output, standard probe, small probe, long probe	6 LED lights	Optional	Optional	--	--	--	--	Optional	Optional	2.5%	Available	Available	Available	IP67
7	FSP300		DC24V power supply, 6LED light indication, relay output, standard probe, small probe	6 LED lights	With	Optional	--	--	--	--	With	--	2.5%	Available	Available	Available	IP67
8	FSP200		DC24V power supply, 6LED light indication, 4-20mA output, standard probe, small probe	6 LED lights	--	--	With	--	--	--	With	--	2.5%	Available	Available	Available	IP67
9	FSP100		DC24V, AC/DC220V power supply, 6LED indicator light, NPN, PNP, relay output, standard probe, small probe	6 LED lights	Optional	Optional	--	--	--	--	Optional	Optional	2.5%	Available	Available	Available	IP67

FSP900 SEREIS

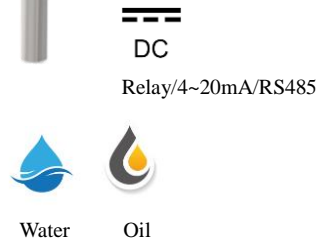
Insertion type flow/temperature Multi Sensor

Features

- Fully waterproof shell design, unique waterproof adjustment button
- Effectively prevent the entanglement of the entanglement in the medium
- Applicable pipe diameter range is large, set point can be adjusted arbitrarily
- Max.Pressure up to 600Bar
- OLED lights show flow changes
- Solve the problem of traditional gear and turbo switch

Application

- Hydropower, fire piping, air conditioning cooling system, steelmaking, petrochemical, shipbuilding, food processing, pharmaceuticals, optics, semiconductors, and any pipeline and cooling water pipe flow control.
- Piping demand installation flow temperature application
- Existing pipeline: simply open the hole and insert it to immediately understand the fluid condition of the pipeline
- On-site conditions, mobile phone monitoring settings





Support SMM remote monitoring


Model	FSP900
Measuring Range	Water:0.03~3 m/S
	Oil:0.03~3 m/S
Sensor Length(mm)	45~72
Sensor Dimension	Φ8
Sensor Material	SUS304
Output Type	4~20mA,Relay.NPN/PNP
Communication type	RS485
Operating Pressure	4 Mpa(Max.60Mpa)
Ambient Temperature	-20~80 °C, ≤ 85 % R H
Operating Temperature	-20~100 °C
OLED Display	Flow rate display / Temperature display Multi display interface
Housing Material	SUS304
Protection Level	IP 67
Connection Type	Female M18-1.5
Operating Voltage	24 Vdc
Power consumption	3W(24Vdc)
Wiring	2 Sets of 4-20mA (flow+temperature) + 1 Sets of NPN/PNP contacts 1 Sets of 4-20mA (flow/temperature) + 2 Sets of NPN/PNP contacts RS485 (flow/temperature)
Option Parts	F01: Welded joint F02: Three-way threaded joint F03: Three-way flange joint
Remote monitoring Optional function	IoT_D: Rail installation MI/O+RS485 IoT_R: Rail installation RS485 IoT_N: Economical installation of RS485


Featured design:





- 


Flow temperature Multi sensor
- 


Auto backlit OLED
Clear and sharp display
- 


Temperature smart display
Alarm contact output
- 


Flow smart display
Alarm contact output
- 


English + visual interface
Graphical menu
- 


Communication, analog,
contact, multiple output
- 

High-precision probe
Stable and long life
- 

Antifreeze probe
Scaling resistance, good corrosion
resistance
- 

Fully sealed design
IP67 full waterproof housing
- 

High pressure
High pressure type up to 60Mpa
- 

Mobile phone scan QR CODER
Directly monitor historical data
- 

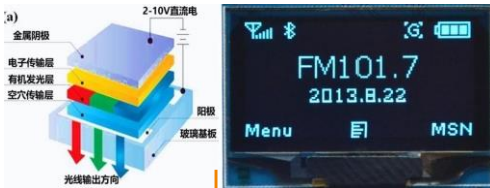
With SMM software APP
Data monitoring is simpler



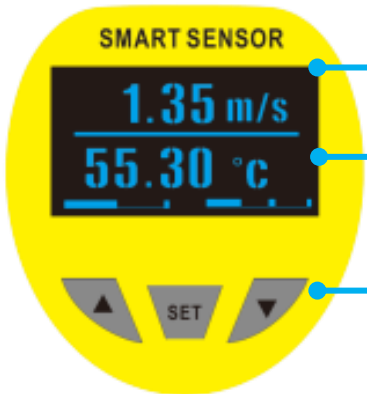
Traditional LCD I Ching black and white display
The distance is not clear and very fuzzy



Traditional LED display is too simple
Can't display more information

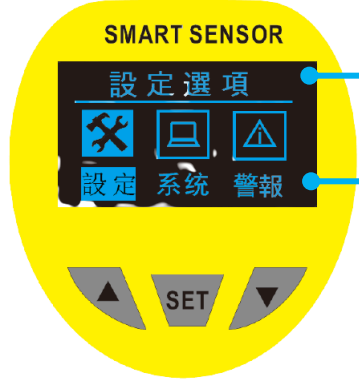


OLED display, using light-emitting organic material, active light emission
Can display visual graphics, display sharp, clear and high resolution



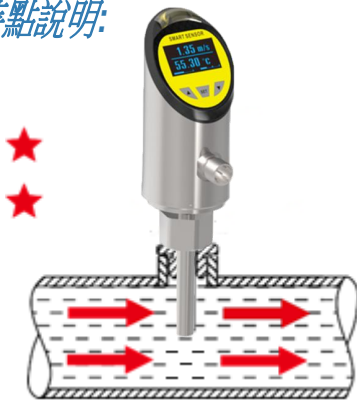
- Light-emitting OLED display
- Flow/temperature Multi display
- Waterproof button

Warning light

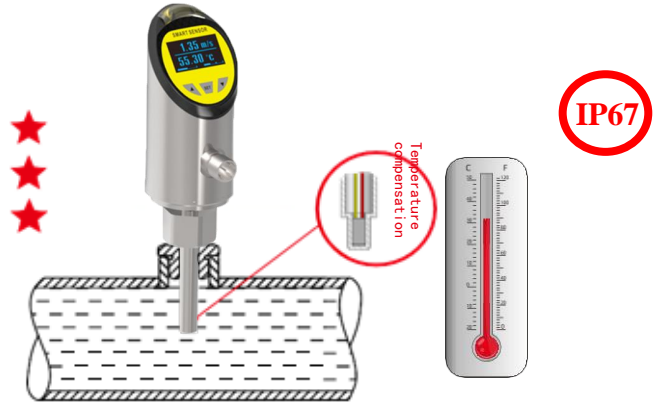


- menu
- Graphical menu

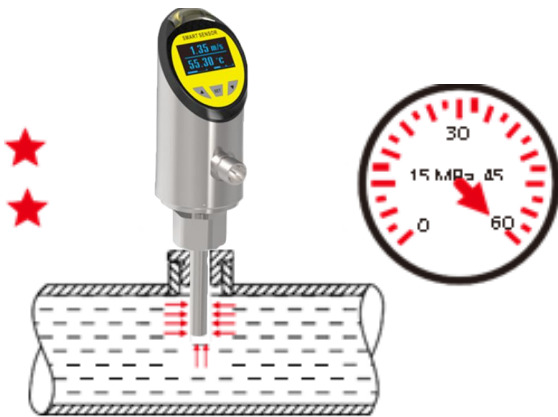
特點說明:



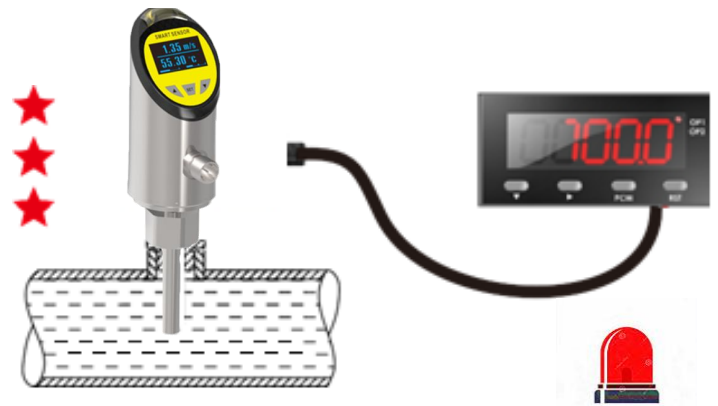
Easy installation, plug-in installation for large pipe diameter, small sensing probe, low water resistance and low flow loss



Fully sealed design, anti-condensation at low temperature, waterproof and dustproof IP 67 protection level, built-in temperature compensation circuit, to ensure that when the fluid temperature T_h changes, the set value does not cause T_h drift

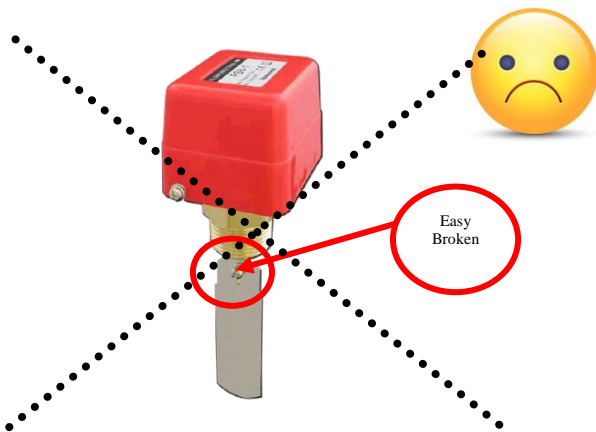


The pressure resistance of the sensor can reach 4 MPa, and the special customized high pressure probe can reach 60 MPa.



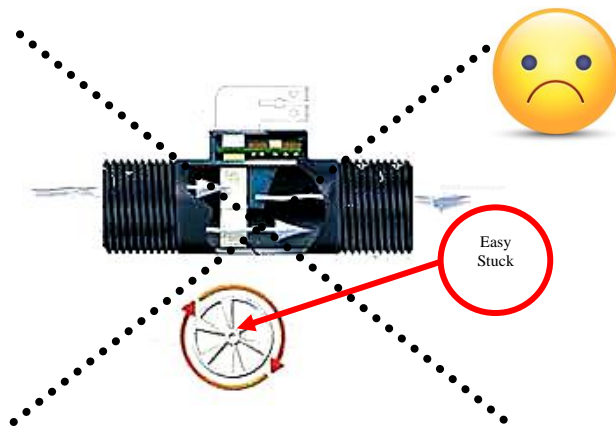
Variety of output types

- Communication, :RS485
- Analog:4~20mA
- DO Contact:Relay/NPN/PNP multiple output



Traditional pick

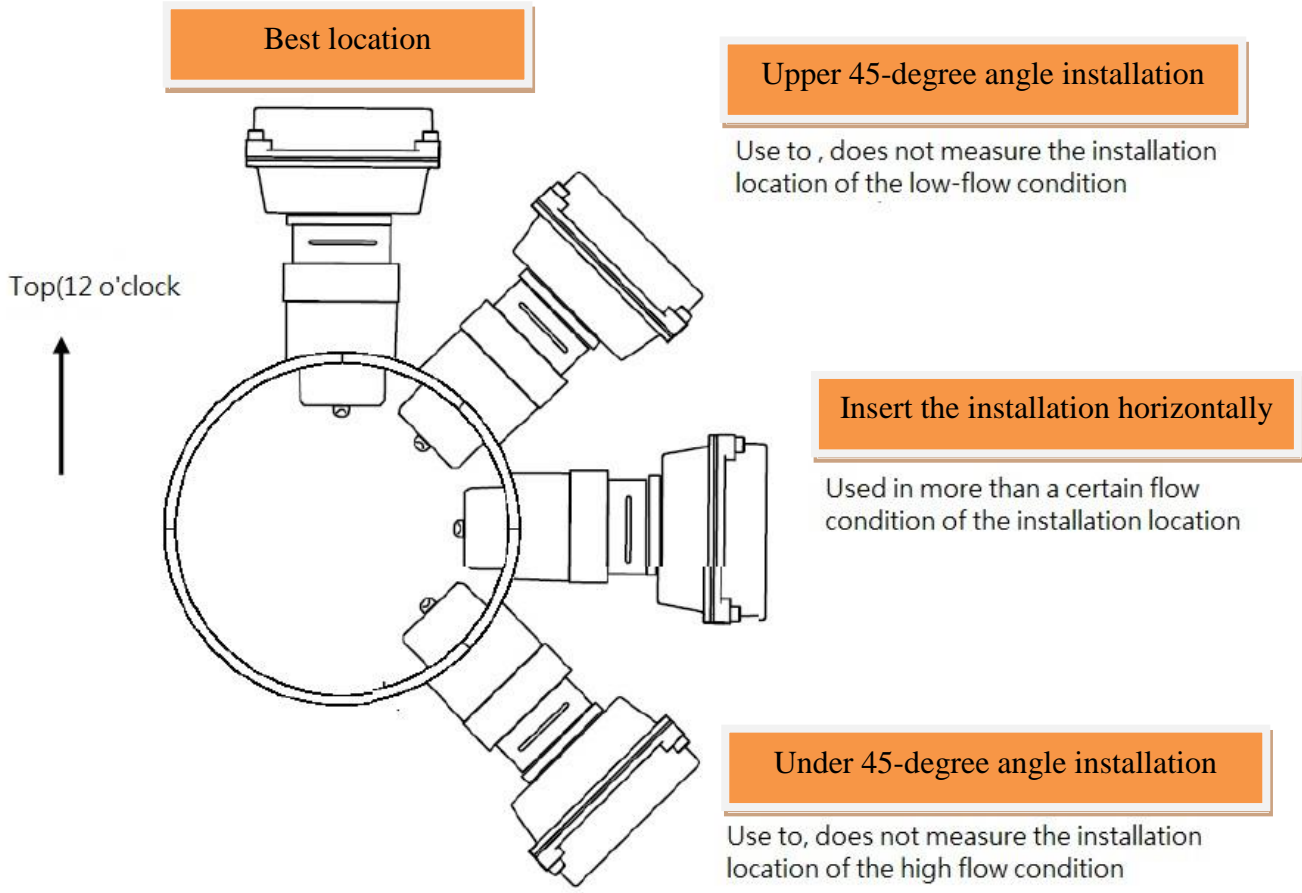
Insufficient pressure resistance, easy to damage
No temperature compensation



Traditional turbine

Easy to be stuck by mechanical rotor

Installation angle description:



Continuous water situation installation method:



①The saddle points hydrant fixed on a pipe

②:Perforation drill set

③:The continuous water in the drilling pipe

④:Installation insert the flow meter



⑤:Loosen the screw flow meter



⑥:The flow meter is inserted into the pipe

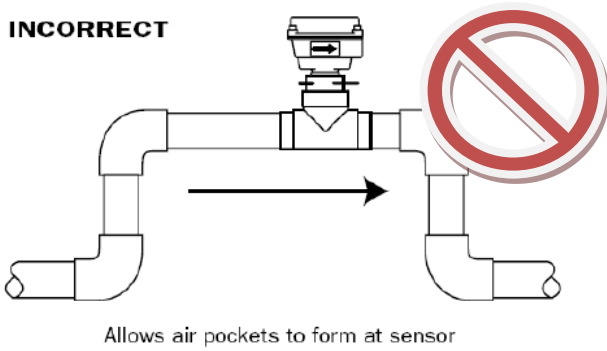


⑦:Wiring,and confirm the action

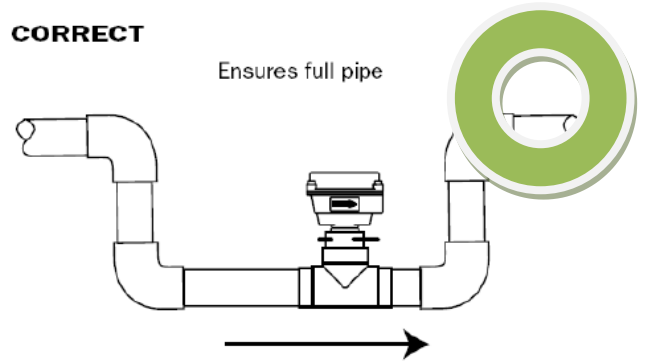
Pictured above described best installation Purely on the installation method for the additional guidance adopted under drawings

Full pipe installation (Be sure to follow):

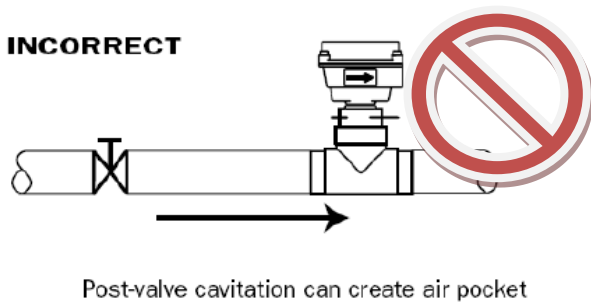
- Incorrect (stack to allow fluid sensor)



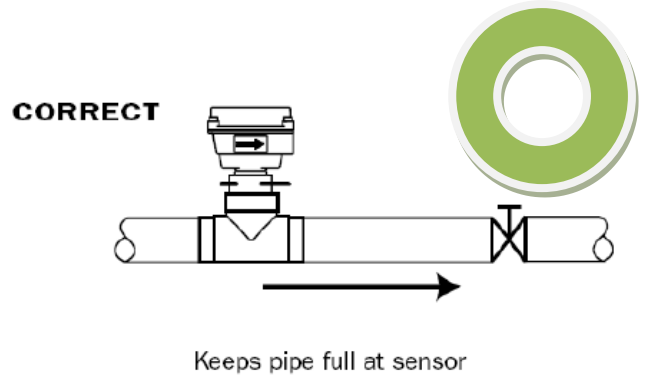
- Correct (to ensure full pipe)



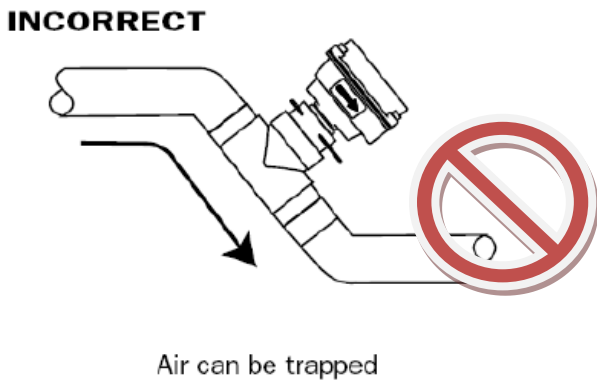
- Incorrect (no front valve of the fluid will cause the fluid Diego heap)



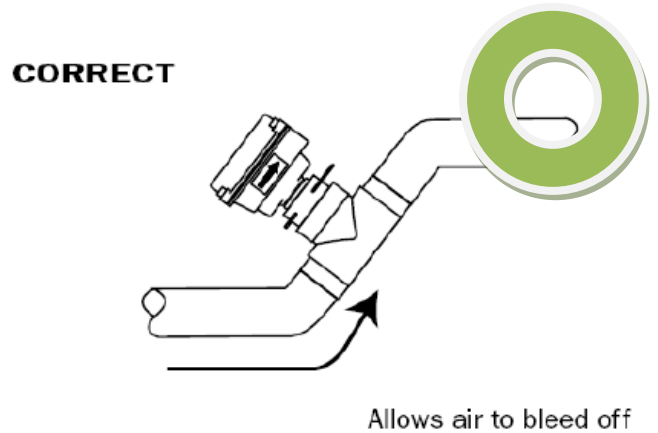
- correct (to maintain full pipe at the flow meter)



- Incorrect (fluid discharge will be limited)

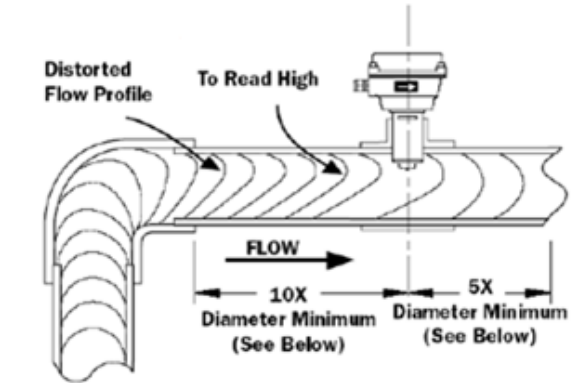


- Correct (fluid smoothly discharged)



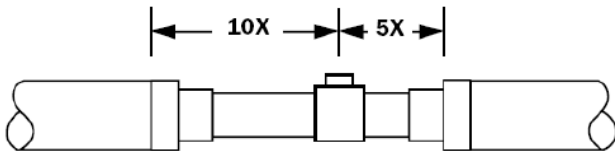
Installation location:

- Fluid to flow through the tube portion that is not directly cause instability spoiler
- So to test the meter installation location downstream straight pipe section shall retain a considerable multiple of the diameter, as eliminate the phenomenon of the role of spoiler; shown in Fig.

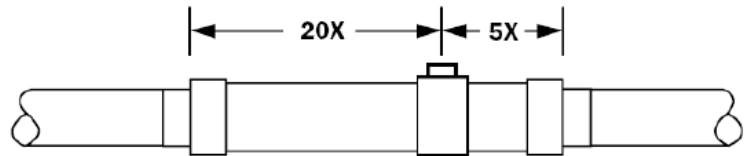


Multiple of the diameter of the straight pipe section (recommended):

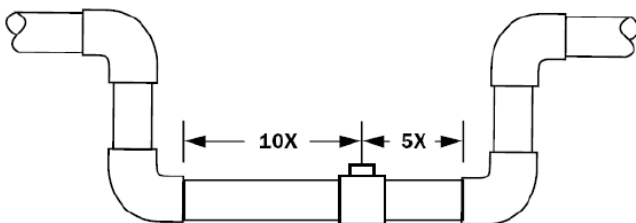
- The narrow diameter



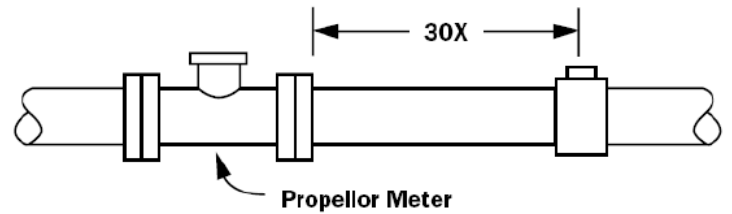
- The expanded diameter



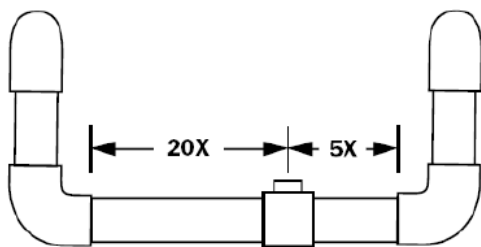
- On the same plane when two elbow



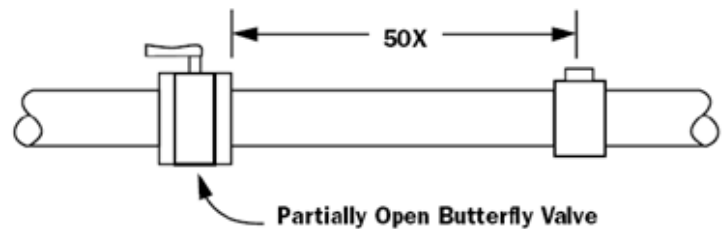
- Spiral flow is generated



- When two elbows in different planes



- The vortex / spoiler





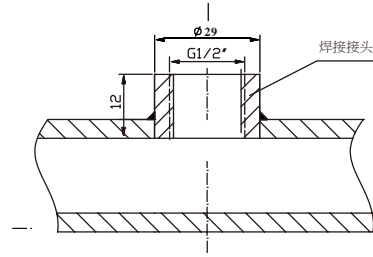
Dimensional drawing and Sensor length::

Series Model	Dimensions Unit: mm	Applicable Piping Size	Thread interface	Flow Output signal			Temperature Output signal			communication	Power	
				Relay	NPN PNP	4-20mA	Relay	NPN PNP	4-20mA		RS485	24V DC
FSP900-S1		DN8~DN100	M 18x1.5	With	Optional	With	With	Optional	With	With	With	--
FSP900-S2		DN80~DN450	M 18x1.5	With	Optional	With	With	Optional	With	With	With	--

Optional accessories description:

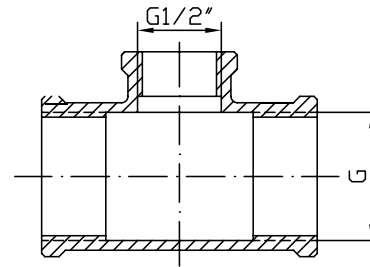
Welding joint (model: F 01-pipe diameter)

Welded joint, suitable for DN 25 ~ DN 350 pipe diameter. When installing, drill a hole with a diameter of 30 in the original pipe and insert the welded joint into the hole for welding. The size is as shown in the figure on the right.



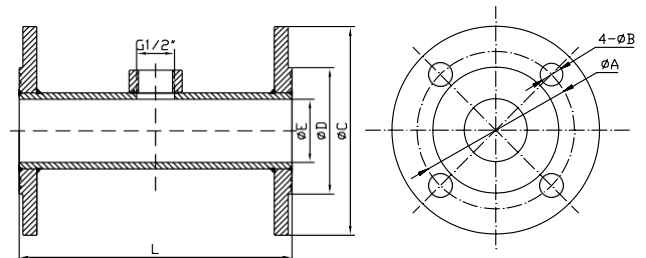
Three-way threaded joint (model: F 02-pipe diameter)

Three-way threaded joint, suitable for DN 8-DN 50 pipe diameter, the size is shown in the right picture



Three-way flange (model: F 03-pipe diameter)

Three-way flange, suitable for DN 25- DN 150 pipe diameter, the size is shown in the right picture



Rail installation (optional model: IOT –D)

Can be integrated with the control panel for integrated installation, requires power supply DC
Use plug-and-play physical RJ45 wiring
Stable and reliable signal quality

- Maximum support: 16 sets of RS485 sensors
- Expansion input module: AIO DIO
- Wireless module:



Economical installation (optional model: IOT –N)

Can be integrated with the control panel for integrated installation, requires power supply DC
Use plug-and-play physical RJ45 wiring

- Maximum support: 16 sets of RS485 sensors



SMM Software Your AIoT and goals, connected.

The SMM app is your personal sensor assistant, dedicated to making the most of every drop of data with personalized schedules, premium sensor monitoring and unbeatable control.

FUNCTION

- ✓ Self-diagnostics and Calibration interval Monitoring
- ✓ Preconfigured Events Detection
- ✓ Secured protocol MQTT to connect to Cloud FGT
- ✓ Data recorder in any time
- ✓ Remote function: alarm reminder, usage demand management, historical curve, time scheduling



Sensor AIoT Systems

COMMUNICATION

- ✓ Transmission method: Wireless Zigbee
- ✓ Transmission distance: indoor 100 meters or outdoor 500m

OPTION FUNCTION



Alarm



Trend



Location



Time schedule

APPLICATION

W Water sensor

G Gas sensor

P Power sensor

D Door sensor



Order Information

FSP	Code	Sub-Code	Sensor Size
	900	S1	Water: 0.03~3 m/s; Oil: 0.03~3 m/S; Air: 2~30 m/S For sensor rod length (mm): 45.5 (standard type)
		S2	Water: 0.03~3 m/s; Oil: 0.03~3 m/S; Air: 2~30 m/S For sensor rod length(mm): 72.5 (long shaft type)
		Code	Fluid Type
		W	Water (Standard type)
		O	Oil
		Code	Output Type
		F2N	Flow*1:4~20mA+Flow *1@NPN+Temperature *1@NPN
		F2P	Flow*1:4~20mA+Flow*1@PNP+Temperature*1@PNP
		FTN	Flow*1:4~20mA+Temperature*1:4~20mA+Free Set*1@NPN
		FTP	Flow*1:4~20mA+Temperature*1:4~20mA+Free Set*1@PNP
		Code	Specify the length of the sensing rod (unit: mm)
		XXX	The total product length tolerance is ± 5 mm Features, specifications and dimensions are subject to change without notice Maximum length. 200mm Please contact our service center
		Code	Sensor Material
		SS	Stainless steel 304
		Code	Power supply
		D	DC 24V
		Code	Optional accessories: connector
		0	No(Standard type)
		F01	Welding joint (applicable: DN25~DN350)
		F02	Three-way screw joint (applicable: DN8~DN50)
		F03	Three-way flange (applicable: DN25~DN150)
		Code	Optional function: remote monitoring transmitter
		0	No(Standard type)
		IOT-D	Rail-mounted type (applicable: MIO: AI/DI input)
		IOT-R	Rail-mounted type RS485
		IOT-N	Economical Type RS485
		Code	Optional function: SMM software
		0	No(Standard type)
		1	Standard
		2	Advanced
		3	Customized
		3	ODM type
		Code	Logo Print
		F	FGT Logo
		X	Customer Logo
FSP			Complete Ordering Code

* Note: Using customer Logo launch to more than 100 united for one year

FGT

FGT

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