



Features

- Clamp-on design, no need for pipe cutting, fitting conversions, or moving parts. Ensures no pressure loss and prevents contamination.
- High-brightness true-color LCD interface with rotatable orientation for flexible installation.
- Supports pipe outer diameters from 16 to 52 mm; compatible with stainless steel, PVC, PPR, and similar materials.
- MODBUS RTU communication interface, with analog temperature measurement included.
- Certified by CE/REACH.

Applications

- General automation machine cooling systems
- Industrial chiller flow monitoring
- Liquid-cooled servers, CDU
- Semiconductor process equipment
- Microwave/RF power supply cooling water monitoring

Simple Installation, Maintenance-Free

The XFT uses an external clamp-on installation method, eliminating the need for additional pipe cutting or reducer unions. This enables rapid installation and simplifies the mechanical design and installation process of fluid systems. Once installed, the device requires no additional maintenance for long-term operation, and measurement accuracy remains stable over extended use.

Product Specifications

Measurement

Maximum Flow Rate	OD 16~18mm	30 LPM
	OD 18~23mm	60 LPM
	OD 23~28mm	100 LPM
	OD 28~37mm	200 LPM
	OD 37~44mm	300 LPM
	OD 44~52mm	400 LPM
Support Fluid Media	Compatible with various cooling liquids, DI water, oil substances, etc.	
Support Pipe	Stainless steel, PVC, PPR (for other hard pipe materials, please consult the factory)	
Flow accuracy ²	Typical $\pm 2\%$ FS, Max $\pm 3\%$ FS	
Fluid temperature Range	0 ~ 60°C	
Temperature accuracy	± 2 °C (pipe wall)	

Electrical

Supply Voltage	12~30 VDC with reverse polarity protection
Output	4~20 mA, RS485, with short-circuit protection
Connection	M12 A-Code 8pin Male
Damping time	0.5、1、5 (default) 、10 s

Environment

Ambient Temperature	-10~60 °C
IP Rating	IP66

Function

Analog	flow rate, temperature
Display	flow rate, temperature, cumulative flow, signal strength, output per-centage
Modbus RTU	flow rate, temperature, cumulative flow, reset cumulative flow, signal strength, accessing to all parameters
Parameter Adjustment	Automatic optimization Advance calibration Flow/temperature output ratio Adjustment pipe outer diameter Pipe wall thickness Pipe material Sound velocity Damping Coefficient Flow compensation Coefficient password Protection Modbus baud rate and address

Approval

Approval	CE, REACH
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Notes:

- The factory-set low-flow cutoff has an adjustable threshold; disabling it allows detection of flow rates below 1% Qmax.
- Calibration uses clean water at room temperature with specified pipe materials. Minimum calibrated flow rates are:

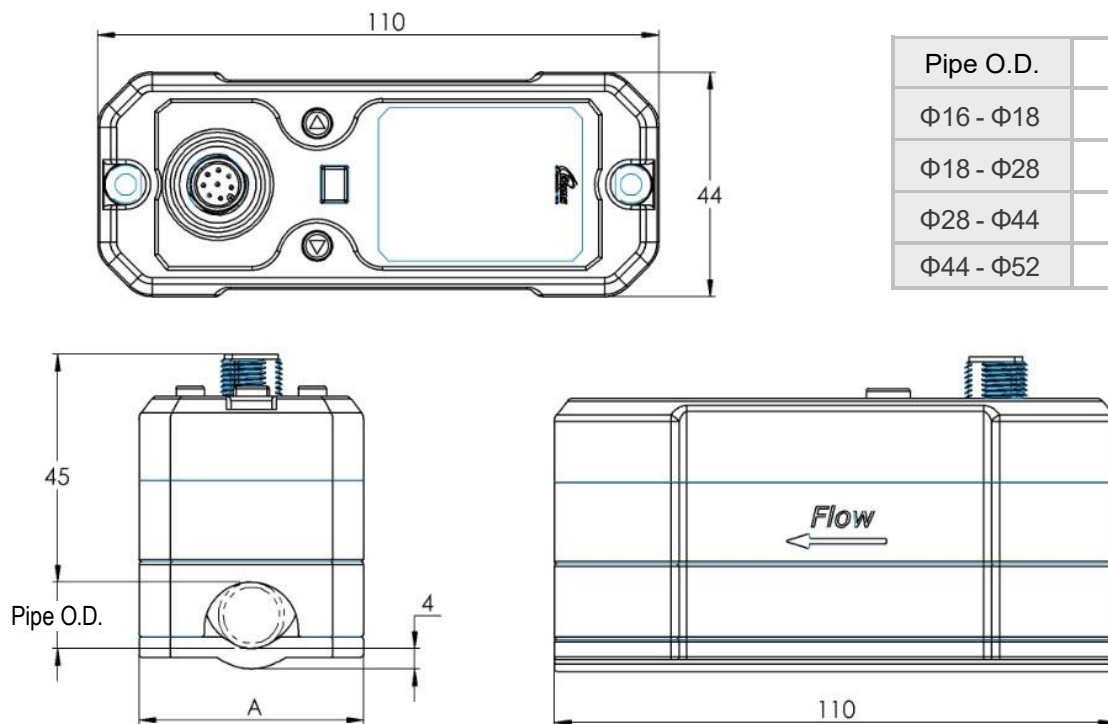
16–28 mm	Min. calibrated point at 10% Qmax
28–44 mm	Min. calibrated point at 7.5% Qmax
44–52 mm	Min. calibrated point at 10% Qmax

- The verified wall thickness during the development phase meets or exceeds the following values. In practice, wall thicknesses at or below this threshold are suitable for standard measurements. For applications requiring greater wall thickness, it is advisable to confirm suitability by evaluating actual samples through testing.

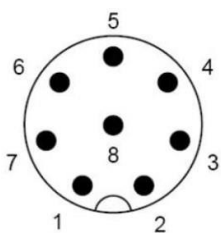
Nominal Diameter	Materials		
	Stainless Steel	PPR	PVC
DN10	3.0mm	3.0mm	2.0mm
DN15 / DN20	3.0mm	3.0mm	2.0mm
DN25 / DN32	4.0mm	4.0mm	2.0mm
DN40	5.0mm	5.0mm	2.5mm

Outline Dimension

In mm



Wiring



Pin/Color	Definition	Pin/Color	Definition
1/White	T-Out	5/Gray	VCC +
2/Brown	Modbus A+	6/Pink	N/A
3/Green	Modbus B-	7/Blue	F-Out (Flow Rate)
4/Yellow	GND	8/Red	N/A

Ordering Code – Flow Meter

XFT D H A L O 00
 (1) (2) (3) (4) (5)

(1)		(2)				(3)		(4)		(5)	
Output		OD ¹	mm	DN	Inches	Pipe ²		Fluid Temp		Temp Output	
A	4-20mA	D	Φ16 - Φ18	DN10	3/8"	A	SS	L	60°C	0	No
D	4-20mA + Modbus	E	Φ18 - Φ23	DN15	1/2"	B	PPR			1	Yes
		F	Φ23 - Φ28	DN20	3/4"	C	PVC				
		G	Φ28 - Φ37	DN25	1"						
		H	Φ37 - Φ44	DN32	1 1/4"						
		J	Φ44 - Φ52	DN40	1 1/2"						

Notes:

- Actual model selection must strictly follow the outer diameter in millimeters. In case of a borderline measurement, For example, 18mm should correspond to Model E.
- To ensure measurement accuracy, the product is calibrated based on the selected pipe material before leaving the factory. After receiving the product, the pipe material can be modified, but this may affect measurement accuracy.

Ordering Code – Mating Connection

Code	Description
M12-8A-002	90° M12, A-Code, Female, 2m
M12-8A-004	90° M12, A-Code, Female, 4m
M12-8A-006	90° M12, A-Code, Female, 6m
M12-8A-008	90° M12, A-Code, Female, 8m

