Clamp-on Ultrasonic Flow Meter

- Clamp-on design, no need for pipe cutting or fitting conversion, no moving parts, no pressure loss, no contaminations.
- Elegant true-color LCD interface with rotatable orientation.
- Supports 16~52mm pipe out diameters, compatible with stainless steel, PVC, PPR, and other similar materials.
- Additional MODBUS RTU communication interface and analog temperature measurement
- CE/REACH Certified

Application

- General automation machine cooling system
- Industrial chiller flow monitoring
- Liquid-cooled servers , CDU
- Semi-conductor process equipment
- Microwave/RF power supply cooling water monitor

Simple Installation, Maintenance-Free

The XFT uses an external clamp-on installation method, which eliminates the need for additional pipe cutting or fitting reducer unions. This allows for quick installation and significantly reduces the mechanical design and installation complexity of the fluid system.

Once installed, it requires no additional maintenance for long-term use. The measurement accuracy remains unaffected over extended periods.

Product Specification

Measurement

Maximum Flow Rate[1]	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 ±2% FS, Max ±3% FS	
Fluid temperature Range	0 ~ 60℃	
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

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Product Specification

Environment

Ambient Temperature	-10~60 °C
IP Rating	IP66

Certificate

Certificates	CE/REACH

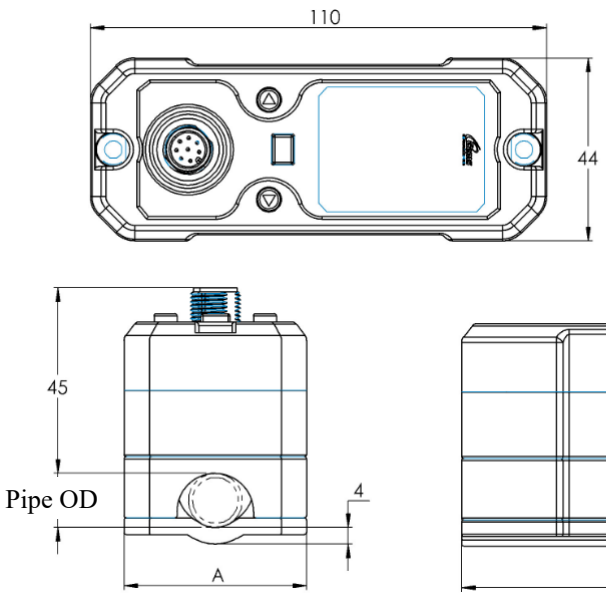
Function

Analog	flow rate, temperature
Display	flow rate, temperature, cumulative flow, signal strength, output percentage
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

Note1: device features factory-configured low-flow cutoff with adjustable threshold. When deactivated, detectable flow rates extend down to <1% Qmax.

Note2: Calibration is performed at room temperature using internal equipment with clean water at ambient temperature, in accordance with the selected tubing material specifications. , lowest calibrated flow rate listed as below:
16–28mm: Minimum calibration point at 10% Qmax
28–44mm: Minimum calibration point at 7.5% Qmax
44–52mm: Minimum calibration point at 10% Qmax

Outline Dimension



	A
Φ16 - Φ18	44
Φ18 - Φ28	50
Φ28 - Φ44	69
Φ44 - Φ52	89

Units : mm

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Ordering Code

XFT A xxx A S 0 00

(1) (2) (3) (4) (5)

[1]

Output	
A	4-20mA
D	4-20mA + Modbus

[2]

OD[1]	mm	DN	Inches
D	Φ16 - Φ18	DN10	3/8"
E	Φ18 - Φ23	DN15	1/2"
F	Φ23 - Φ28	DN20	3/4"
G	Φ28 - Φ37	DN25	1"
H	Φ37 - Φ44	DN32	1 1/4"
J	Φ44 - Φ52	DN40	1 1/2"

[3]

Pipe[2]	
A	SS
B	PPR
C	PVC

[4]

Fluid Temp	
L	60℃

[5]

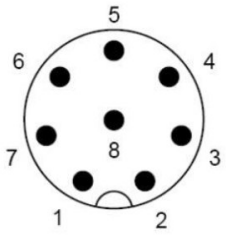
Temp Output	
0	No
1	Yes

Please contact GEMS Engineers prior to measuring other pipe materials.

Note 1: 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.

Note 2: 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.

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

Cable

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