FM800H

External Measurment

No Pipe Cutting & Downtime
Zero Pressure Loss
Leak - and Contamination - Free

Multi-Pipe Compatible

Metal Compatible
Plastic Compatible
Hose Compatible

Easy Installation

Manual Quick Installation
Training Non-required

High Accuracy

±2%	Reading Accuracy
25:1	Turndown Ratio
±0.4%	Repeatibility

Revolutionary Temperature Measurement

±0.5℃	Max Accuracy
ms	Response level
Real-time Measurement	

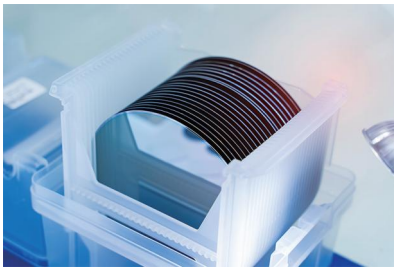
FM800H-Significant Cost Reduction

TRADITION	Maintenance: Shutdown Disassembly Cleaning Calibration Installation Fastening Sealing Startup	Perform Maintenance Clean the Sensors Replace the Seals Carry out Calilbration
	Power On	Start operation and resume production
	Sealing	Implement sealing measures to prevent leakage
	Fastening	Flanges, threads or others to fasten
	Installation	Install the flowmeter in the designated position
	Pipe Cutting	On-site cutting of the pipeline
	Shutdown	Stop the pipeline fluid supply and halt production
	Flowmeter	Product and material costs

FM800H Cost	FM800H Saving Cost 	
	Maintenance: Callibration	Installation, Perform maintenance, clean the sensors, replace the seals, and carry out calibration
	Installation	Easy Installation
	Flowmeter	Save Product and Material Cost

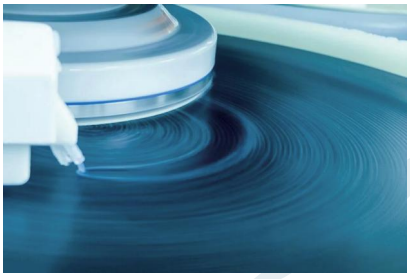
6 Application Scenarios

Cleaning	CMP	Cooling



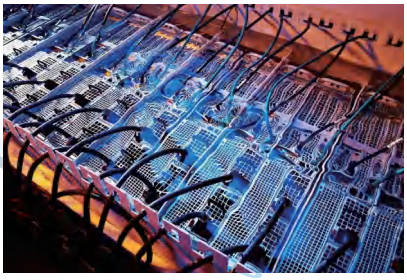
Non-Contact
Measure Multiple Fluid

- UHP Water
- HF
- HCl
- NaOH
- H2O2
- NH4OH
- Fluorinated Cleaner
- HFE Series



Ultrasonic measurement
of non-conductive fluids

- UHP Water
- Polishing Liquid



No pipe cutting required
No fluid leakage risk

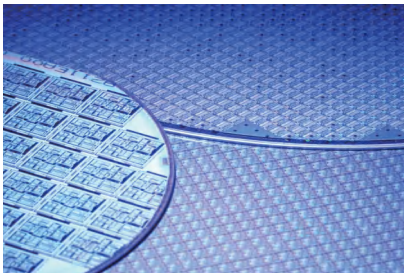
- Cooling Water
- UPW
- Heavy Water
- Glycerol
- Ethylene Glycol
- Mineral Oil
- Silicone Oil
- Ester Compounds

Lubrication

Clamp-on installation saves equipment space

- Hydraulic Oil
- Machine Oil
- Refrigeration Oil
- Sealing Oil
- Cutting Oil
- Compressor Oil
- Cylinder Oil
- Marine Oil
- Gear Oil
- Vacuum Pump Oil

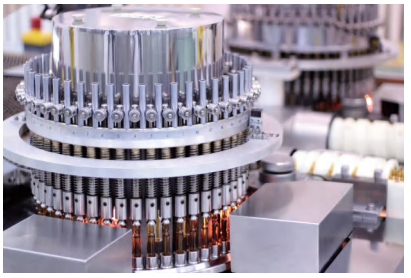
Semiconductor



Non-Contact With Fluid Calibration And Maintenance Without Downtime

- UPW
- Etching Solution
- Stripping Solution
- High-Purity Reagents
- Highly Corrosive Liquid

Food & Pharmaceutical



Non-intrusive installation no risk of contamination

- UPW
- Milk
- Juice
- Syrup
- Ethanol
- Propylene Glycol
- Buffer Solution
- Growth Medium
- Cleaning Solution
- Disinfectant Solution

Technical Features:

V-Method Measurement

A single-sided sensor emits and receives ultrasound, with reflections off the pipe wall extending the acoustic path, thereby enhancing temporal resolution.

AGC+VGA Technology

The dual-gain AGC and VGA system enables reliable operation under more demanding conditions.

Screen Rotation

The screen can be rotated, allowing operators to obtain the optimal viewing angle whether the equipment is positioned horizontally or vertically.

Filtering Algorithm

BICCNS employs a unique filter-fusion algorithm that effectively suppresses pulse interference, enhances signal stability, and improves measurement accuracy.

Ultrasonic Direct Thermometry

Utilizes the known relationship between ultrasound velocity in a liquid and temperature. By emitting ultrasonic pulses and recording downstream/upstream time differences, temperature is determined from a calibration curve with a resolution of ±0.1°C.

ACS Technology

Utilizing the BICCNS automatic sound speed adaptation scheme, the on-site sound speed is calculated and corrected in real time, compensating for variations in sound speed and improving flow measurement accuracy.

Ultra-low Discharge Output

Achieves a minimum instantaneous flow rate of 0.1 mL/min, with a minimum discharge volume of 0.001 mL.

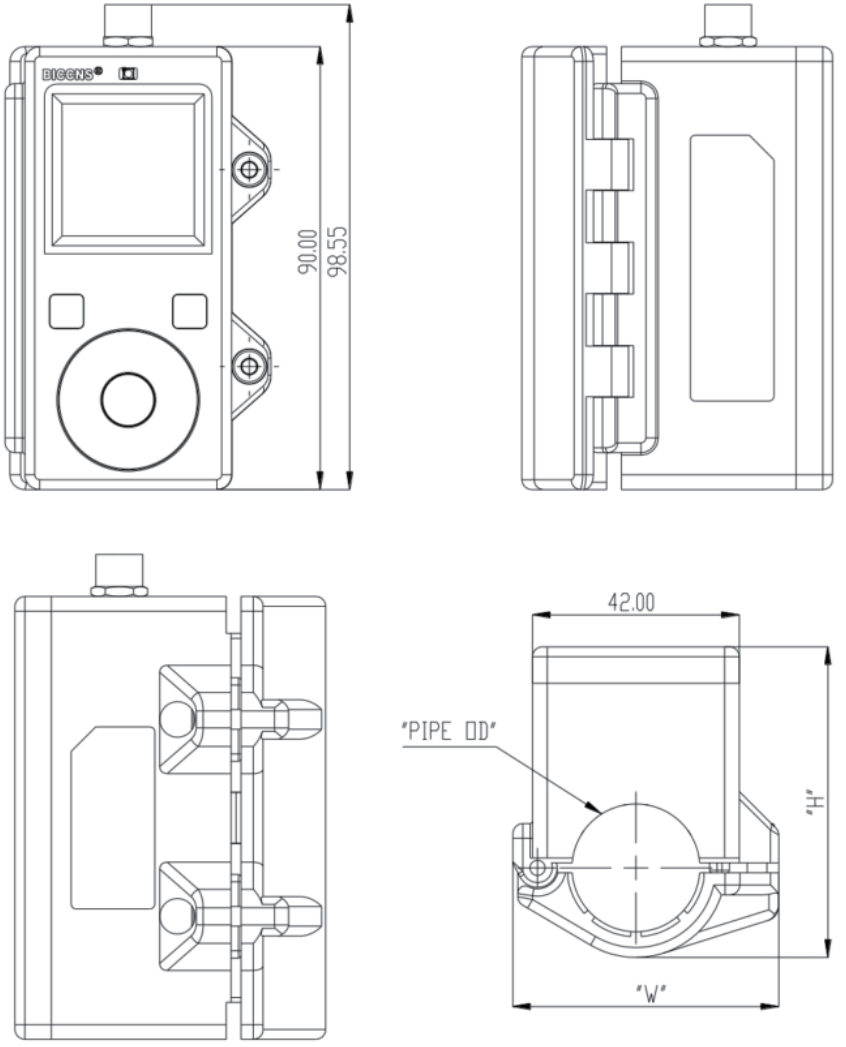
IO-Link Communication:

Supports IO-Link, providing process data, diagnostic data,

and device information, which can be read or written via the IO-Link protocol.

In some cases, parameters can be modified during operation via a stacked PLC.

Dimension Unit: mm

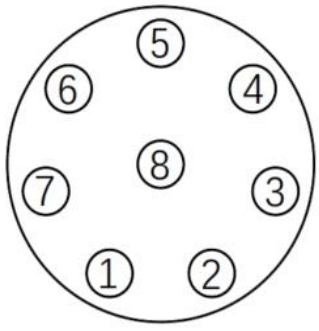


Model No.	"C"	"W"	"H"	"OD"
FM800H-08	Max.54	42	68	12.7
FM800H-15	Max.58	42	68	19.1
FM800H-20	Max.65	50	70	25.4

Technical Feature

Model	FM800H - 8		FM800H - 10		FM800H - 15		FM800H - 20		FM800H - 25
OD (mm)	12.7	13.8	15.88	17.3	19.05	21.7	25.4	27.1	32~34
Pipe Spec	1/2"	8A	5/8"	10A	3/4"	15A	1"	20A	25A
Flow Range	20L/min		30L/min		60L/min		100L/min		200L/min
Accuracy	qt≤q≤qmax ±2% R.D.								
	qmin≤q≤qt ±4% R.D.								
Range Ratio	25:1								
Repeatability	qt≤q≤qmax 0.4%								
	qmin≤q≤qt 0.8%								
Temp. Accuracy	Max ±0.5℃ (0~85℃)								
Pipes Material	Plastic, PFA, Steel, Hose., etc								
Fluids Type	UPW, Water, Chemical, Oil., etc								
Response Time	0.5S/1.0S/2.5S/5S/10S/30S								
Supply Voltage	20 to 30VDC, Fluctuation (P-P) Max.10%, Class 2/LPS								
Output	4-20mA+Switch PNP/NPN, RS485, IO-Link(Optional)								
Medium Temp.	0~85℃ (Non-freezing)								
IP Grade	IP65 / IP67								
Ambient Temp.	(-10~65)℃ (Non-condensing)								
Humidity	10~90% RH (Non-condensing)								
Material	PPS/PEEK/PET/PC/Special Rubber/SUS304								

Pin Assignment



Pin	Color	Definition
1	White	CGND
2	Brown	485_B
3	Green	485_A
4	Yellow	IOUT
5	Grey	DI_DO_CH2
6	Pink	DO_CH1
7	Blue	0V
8	Red	DC24V

FM700A

External Measurement

No Pipe Cutting and Downtime
Zero Pressure Loss
Leak- and Contamination-Free

Multi-Pipe Compatible

Steel Compatible
Plastic Compatible
Hose Compatible

Easy Installation

Manual Quick Installation
No Training Required

High-Precision Flow Measurement

±3%R.D. 10%~100% of F.S.

±0.3%F.S. 0~10% of F.S.

Revolutionary Temperature Measurement

±0.5℃ Max Accuracy

ms Response Level

Real-time Measurement

FM700A-Significant Cost Reduction

TRADITION	Maintenance: Shutdown Disassembly Cleaning Calibration Installation Fastening Sealing Startup	Perform Maintenance Clean the Sensors Replace the Seals Carry out Calilbration
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FM700A COST	FM700 A Saving Cost	
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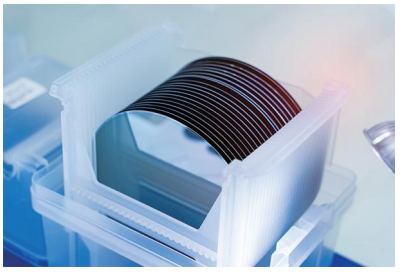
Application Scenarios

Cleaning



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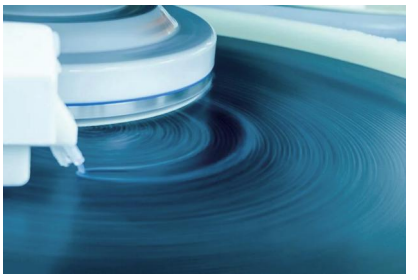
HF

HCl

NaOH

CMP



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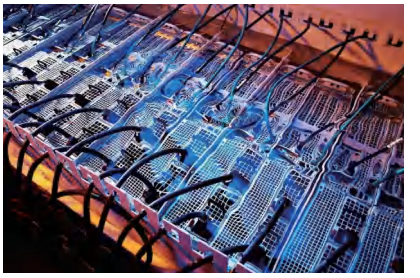
Cooling



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UPW

Ethylene Glycol

Fluorinated liquid

Lubrication

Clamp-on installation
saves equipment space

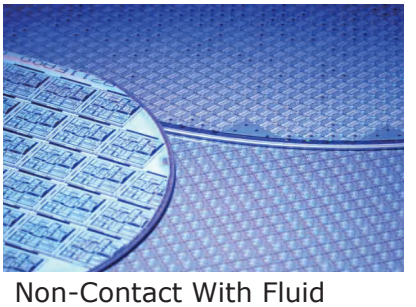
Hydraulic Oil

Machine Oil

Refrigeration Oil

Sealing Oil

Semiconductor



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Without Downtime

UPW

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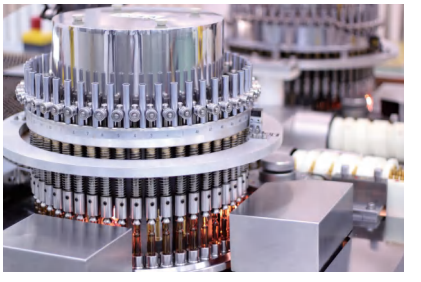
Stripping Solution

High-Purity Reagents

Food & Pharmaceutical



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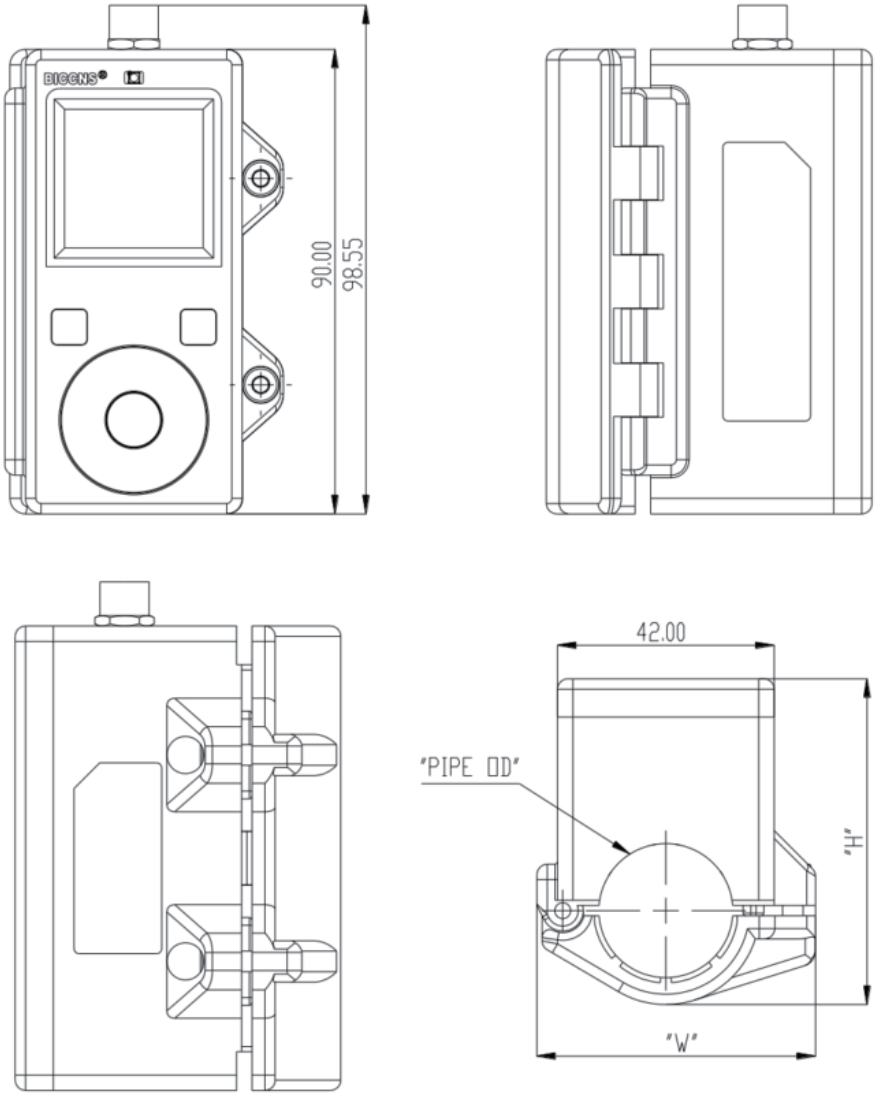

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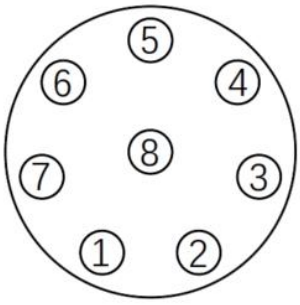
Technical Feature

Model	FM700A - 08	FM700A - 15	FM700A - 20
Pipe Spec	1/2″	3/4″	1″
OD (mm)	12.7	19.05	25.4
Flow Range	20L/min	60L/min	100L/min
Accuracy 10%~100%F.S.	±3% R.D.		
Accuracy 0%~10%F.S.	±0.3% F.S.		
Pipes Material	Plastic, PFA, Steel, Hose., etc		
Fluids Type	UPW, Water, Chemical, Oil., etc		
Output	4-20mA+Switch PNP/NPN, RS485, IO-Link(Optional)		
IP Grade	IP65		
Medium Temp.	0~85℃		
Ambient Temp.	(-10~65)℃ (Non-condensing)		
Humidity	35~85% RH (Non-condensing)		

Pin Assignment



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