

Thermal Mass Flowmeter

CTMD



GAS



OVERVIEW

Operation

CTMD provides high quality In-Line and Insertion Thermal Mass Flow Meters for a wide variety of industrial, commercial, and environmental monitoring needs. Our experienced application engineers, many of whom have worked in the Thermal Mass Flow marketplace since its inception, will assist you with your flow meter application.

Application

- Air injection
- Air purging
- Blow molding air
- Blower air
- Drying air flow
- Combustion gas flow
- Vent air flow

Features

- Simple Installation
- High performance
- Bi-directional
- Sensing unit
- Easy installation
- Easy configuration and maintenance
- TFT graphic multicolor display
- Long term stability
- Compact design
- Built-in Datalogger
- No moving parts
- Simple calibration
- Easy adaptation various applications and processes
- Innovating sensor technology
- Optional, pressure measurement

OPERATING DATA

Working Pressure	Max. 16 Bar for insertion type Max. 40 Bar for in-line type
Temperature Limit	-40°C...+85°C -40°C...+150°C on request
Turn Down Ratio	150:1
Accuracy	±1,5 % of reading + ±0.3 % of full scale ±1,0 % of span for pressure ±2°C of temperature
Enclosure	IP65 / IP67,IP68 on request
Display	TFT LCD Temperature, pressure, rate and total flow in one screen
Units	
Flow	m ³ /h, m ³ /min, l/min, l/s, ft/min, cfm, m/s,kg/h, kg/min, g/s, lb/min, lb/h
Pressure	mbar, psi, bar
Temperature	°C, °K
Sliding Fittings	G 1/2", G 3/4"

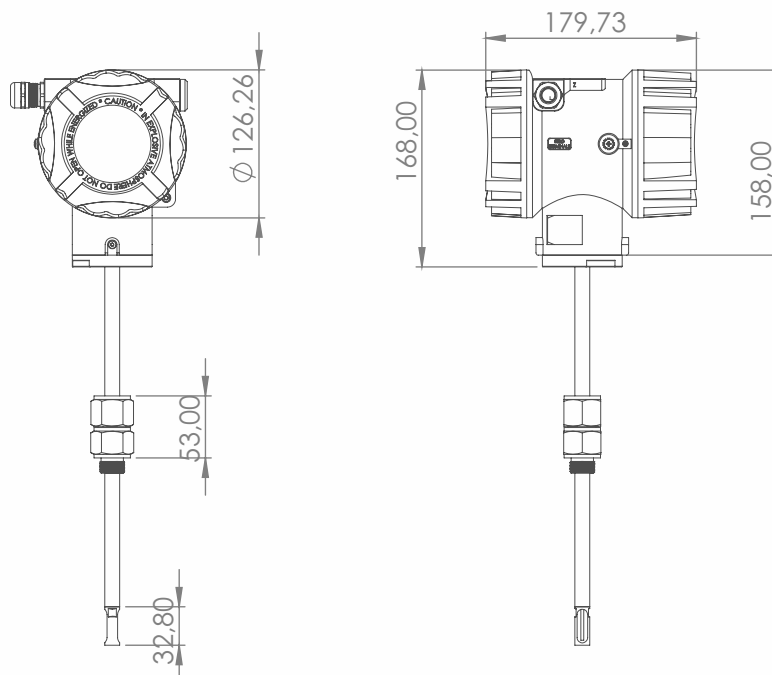
MEASURING RANGES

Pipe Diameter	DN25-900 mm for insertion type (bigger pipe on request) DN15-300 mm for in-line type
Flow Velocity Range	0,6-60 Nm/s 1,0-100 Nm/s 1,2-120 Nm/s 1,5-150 Nm/s

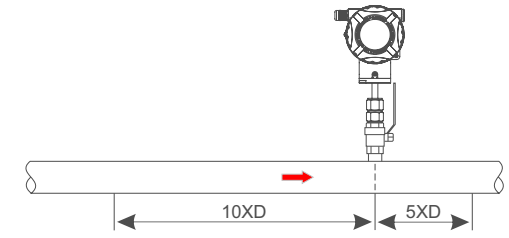
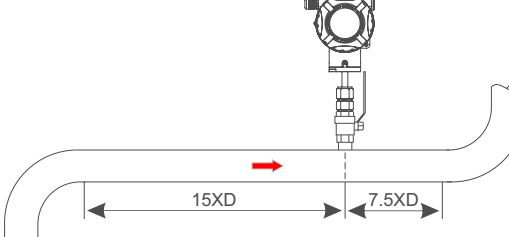
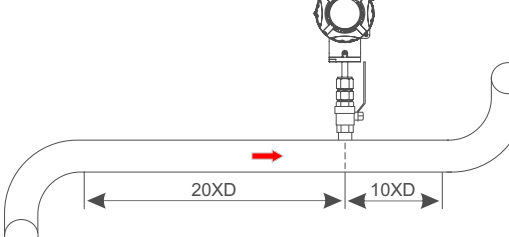
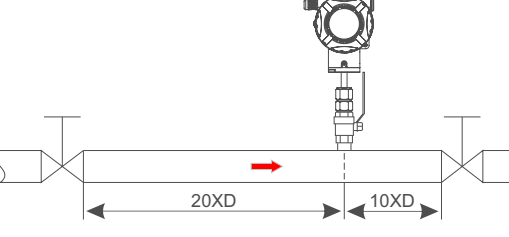
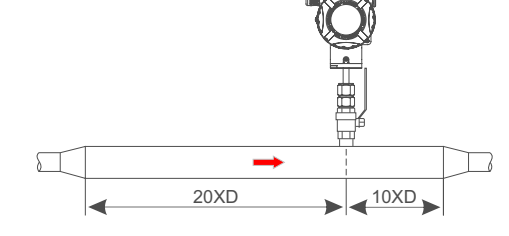
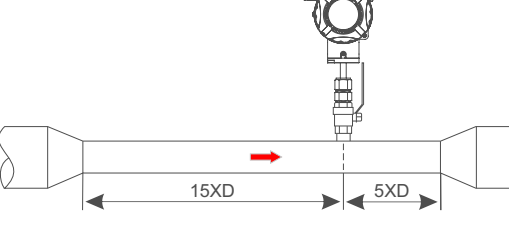
MATERIALS

Wetted Parts	Stainless steel, plastic, aluminum
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TECHNICAL DRAWINGS AND DIMENSIONS

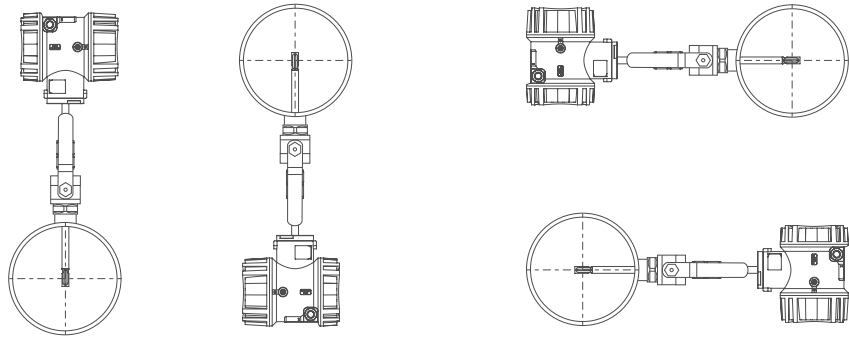


■ INSTALLATION

<p>Standard</p>	
<p>Curved pipe line in the upstream or downstream</p>	
<p>Curved pipe line that may create turbulence in the upstream or downstream</p>	
<p>There are valves or pressure controller or any other device may cause turbulence in upstream or downstream of the flowmeter</p>	
<p>If the pipeline of the flowmeter is upsized</p>	
<p>If the pipeline of the flowmeter is downsized</p>	

Requirement on straight pipe line

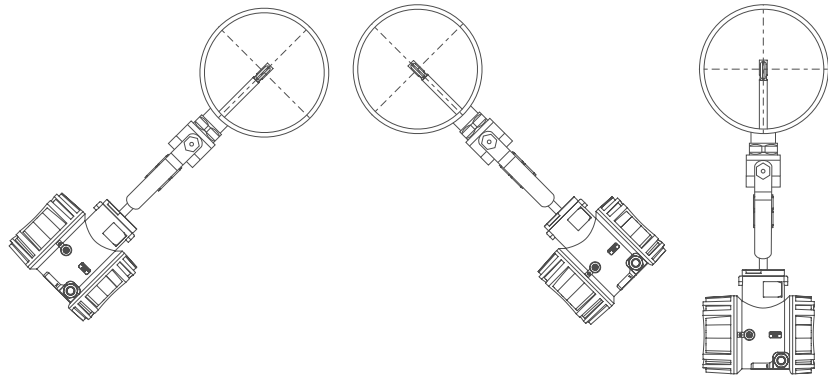
On a horizontal pipeline, normal air or gas



Above or under the pipeline

Side of the pipeline

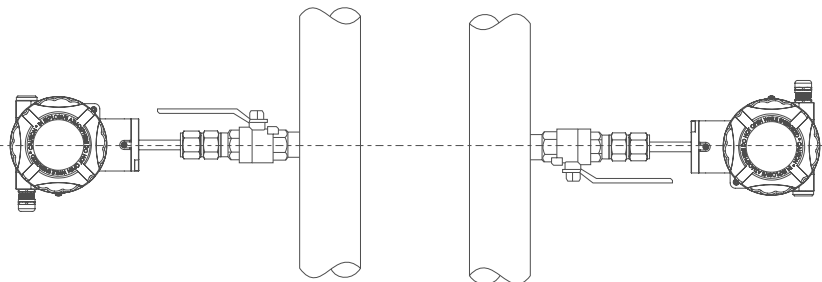
On a horizontal pipeline, high humidity air or wet natural gas



45° under the pipeline or just under the pipeline

On the side of the pipe. Do not recommend to install the meter above the pipeline

On a vertical pipeline, when the density of the gas is higher than air



Requirement on Insertion Direction

WIRING

Power Supply	24 VDC
Output	Pulse and 4-20 mA, 0-10 VDC
Communication	RS485 Modbus, ethernet, HART on request
Display	Rate and total flow, pressure and temperature
Response Time	1 sec.
Datalogger	24 hour storage (On request)

ORDERING

CTMD											
Design	IT										
	IF										
	IN										
Pipe Size	XXXX										
Output		A									
		B									
Communication		R									
		E									
		H									
		X									
Media		A									
		N									
		O									
		C									
		D									
		X									
Range Type		L									
		S									
		H									
		U									
Enclosure						65					
						67					
						68					
Pressure Measurement							N				
							Y				
Datalogger								N			
								Y			
Bi-directional measurement									N		
									Y		
Connection										1	G 1/2"
										2	G 3/4"

Thermal Mass Flowmeter
Insertion Threaded
Insertion Flanged
Inline
Please specify as unit is mm
4-20 mA, pulse
0-10 VDC, pulse
RS-485 MODBUS
Ethernet
HART
Others
Air
Nitrogen
Oxygen
Carbondioxide
Natural gas
On request
Low flow range (0,6-60 Nm/s)
Standard flow range (1,0-100 Nm/s)
High flow range (1,2-120 Nm/s)
Ultra high flow range (1,5-150 Nm/s)
IP65
IP67
IP68
None
Yes
None
24 hours storage
N None
Y Yes
1 G 1/2"
2 G 3/4"