

Ultrasonic Gas Flowmeter Xonic[®] 10G

Characteristic

- 0.01 m/s Measuring low flow rates
- Wide measuring range 200:1
- No moving parts
- pressure loss control
- Easy installation and maintenance
- 2 Cross paths measurement
- Temperature sensor, and the volume compensation

Applications

- Natural Gas
- Flare Gas
- COG Gas
- Bio Gas
- Vapor Gas
- Fuel Gas
- Vent Gas



Outstanding Performance

Xonic-10G demonstrates higher and more accurate velocity measurement range compared to the existing mechanical. Direct/Command Flow maintains 0.5% of accuracy, minimum versus maximum flow rates is 500 times over.

Digital Signal Processing

To have accurate analysis of the ultrasonic signal, DSP advanced technique is used to calculate the time lag according to the flow velocity. In worst noise, it consecutively maintains high accuracy by detecting clear signal.

Self-Diagnose/Test Function

In the field, flowmeter operational status could be checked through Xonic-10G graphic LCD panel. In particular, with a simple manipulation, the oscilloscope ultrasonic signal function makes it possible to determine the operational status gauge in the field.

Advantage of Ultrasonic Flowmeter

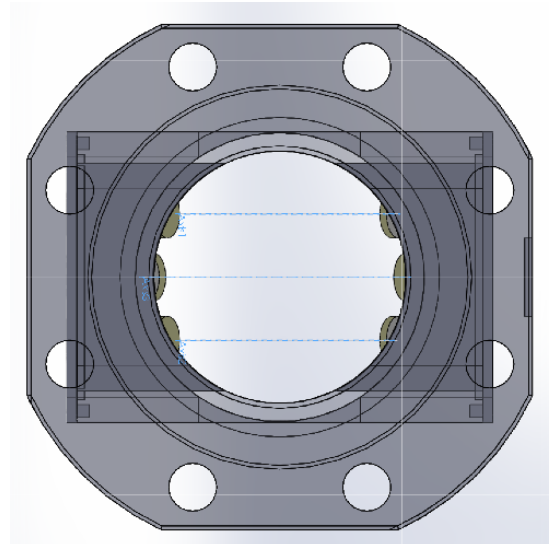
- Accuracy still maintains in very low velocity of 0.05m/s.
- No moving parts, therefore no degradation of performance
- The built-in temperature sensor rewards volume automatically
- An easy installation (compared with turbines and rotary type)
- 100% domestic product (Shandan R&BD For Enhancing Capabilities)

Measurement Principle

Ultrasonic carries connatural propagation velocity, and depends on a medium flow rate, time difference occurs within propagation velocity. So, when the ultrasonic signal launches upstream and downstream, the time lag occurs depending on the flow. By calculating transit time difference, a fluid average velocity could be found. Ultrasonic gas meter is the most accurate way to measure the speed of fluid.

Three line measurement method

Xonic-10G uses three line measurement method to maintain top performance in the field. In this case, it can still maintain the advantage of accuracy although straight pipe run is short.





As Xonic-10G Ultrasonic Flowmeter uses Ultrasonic Transit-Time Technology, it shows superior performance than the existing pressure gas flow meter. Depends on pipe diameter size, it uses one path or three path ultrasonic sensor(s), and the temperature sensor is embedded to give compensation volume.

Xonic-10G is developed as the first ultrasonic type gas flow meters in Korea and to substitute expensive foreign products by keeping the ultrasonic flow meters performance with reasonable price. It is 100% made by Korea.

Flange Size	Paths	Minimum Flow	Maximum Flow
50mm	2 Cross	0.35	200
80mm	2 Cross	0.90	400
100mm	2 Cross	1.41	600
150mm	2 Cross	3.18	1200
200mm	2 Cross	5.65	2200
250mm	2 Cross	8.83	3500
300mm	2 Cross	12.72	5000

Field of Application

- Natural Gas Flowmeter
- AIR Supply Lines
- Combustion Gas
- Tunnel Air Flow Control

General Specification

Measurement method	ultrasonic transit-time difference
Velocity Measurement	-30 m/s ~ 30 m/sec
Minimum Velocity	0.01 m/s
Display	Flow (Instant Flow, standard, mass), Total Flow, Velocity
Accuracy (Reading)	0.5%
Reproducibility	0.25%
Diagnostic Function	the shape of ultrasonic signal, value gain, ΔT , FFT
Measuring Gas	Type
	natural gas, gas, AIR, combustion gas

Converter

Temperature	-20 ~ +60°C
Explosion Proof	IECEX
	Ex d II C
In / Output	Relays
	Analog Cut
	Analog In
	Normally open
	4-20mA
	4-20mA
Communication	RS-232C, RS-485 MobBus
Power	12~24VDC

Flange / Transducer

Flange Range	50 ~ 300mm flange type
Material	Stainless 304
Temperature	-20 ~ +80°C
Working Pressure	20 bar below
Temperature Sensor	500 Ω 4 wire, -40 ~ +120°C