

PanaFlow™ Z1G

Gas Ultrasonic Volumetric Flowmeter



The PanaFlow Z1G gas ultrasonic flowmeter is designed to measure the flow rate of virtually any gas, offering a unique combination of accuracy, range-ability, and reliability in a robust meter design. Employing Ultrasonic time differential technology, the PanaFlow Z1G flowmeter has no moving parts and generates no flow obstruction or energy-robbing pressure drops. Virtually maintenance free, the Z1G will provide years of trouble-free operation with no adjustments, tuning or corrections.

Designed for High Impurity Gas measurements

The PanaFlow Z1G is a complete ultrasonic flow metering system specifically designed for the measurement of gases with high levels of impurities. Designed as a well-head meter for coal-seam methane extraction and bio-gas measurement, the Z1G is engineered to the highest levels of reliability and dependability. Designed with an all-cast body and high accuracy machined surfaces, the Z1G has no welds that can adversely impact flow dynamics, making possible high accuracy flow measurements, even at low flow conditions.

Proven Technology with improved sound isolation

The Z1G employs similar transducer technology used in thousands of Flare Applications around the world. Ultra-high power transducers with enhanced sound isolation were designed for conditions of extreme condensate and impurities, assuring continuous operation even under the harshest of process conditions. The PanaFlow Z1G meter body eliminates exposed wires that can catch, or fail due to extreme environmental conditions. This unique design assures the highest field reliability for continuous flow measurements over a wide range of conditions

Applications

- Coal-seam Methane wellhead
- Natural Gas Production
- Vent gases, Biogases and waste gases
- Vapor Recovery



Operation and Performance

Fluid Types

Acoustically conductive gases

Pipe Sizes

3", 4", or 6"

ANSI Flange Ratings

150 lb. or 300 lb.

Meter Body Material Options

Epoxy Painted Carbon Steel, SA216 Gr. WCB
Optional Stainless Steel, SA351 Gr. CF8M

Flow measurement range (bi-directional)

.5 ft/s to 120 ft/s (.15 m/s to 37 m/s)

Flow Measurement Accuracy

Standard Calibration:

±1.5% of Reading at Flow range: 5 - 120 ft/sec

±0.625% of Full Scale at Flow range: .5 - 5 ft/sec

Extended Calibration:

±1.5% of Reading at Flow range: 2.5 - 120 ft/sec

±0.625% of Full Scale at Flow range: .5 - 2.5 ft/sec

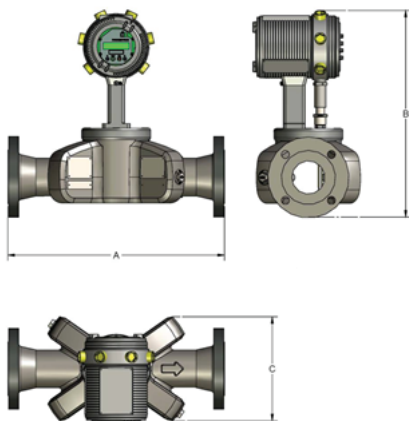
Repeatability

±0.2% to 0.5% of reading

Turndown Ratio

240 : 1

Specifications assume a fully developed flow profile,



Measurement Parameters

Mass flow, standard and actual flow, totalized flow, and flow velocity

Enclosure

NEMA Type 4X explosion-proof and weatherproof (IP66)

Standard: Epoxy-coated aluminum

Optional: Stainless steel

Certifications

US/CAN: Class 1, Div. 1 Group B,C,D

ATEX: II 2 G Ex d IIB+H2 T6 IP66

IEC: Ex d IIB+H2 T6 Gb IP66

Display

Standard: 2 line x 16 character backlit LCD display

Keypad

Built-in Magnetic, six-button keypad operation

Input Power

Standard: 90-250 VAC

Optional: 12 to 28 VDC, ±5%

Power Consumption

20 W max.

Operating Temperature

-4°F to 176°F (-20°C to 80°C)

Standard Analog Inputs/Outputs

Two 4 to 20 mA isolated outputs, 600 Ω maximum load

Two 4 to 20 mA input (pressure)

Two RTD input (temperature)

Optional Digital Interfaces

Standard: RS232 or RS485

Optional: HART®

Optional: Modbus®

Optional: Foundation Fieldbus

Line Size	Flange Rating	Dim A	Dim B	Dim C
3"	150 lb	20 (508)	19.1 (496)	9.6 (245)
4"		20 (508)	20.2 (514)	11.7 (297)
6"		22 (559)	22.4 (568)	14 (354)
3"	300 lb	20 (508)	19.5 (495)	9.6 (245)
4"		20 (508)	20.7 (526)	11.7 (297)
6"		24 (610)	23.1 (587)	14 (354)



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