FF1225-A / FF2225-A

Ultrasonic Gas Flow Meters

Unprecedented rangeability, and tolerance to gas impurities

Description

Engineered for precision and reliability, the Lauris FF1225 Series ultrasonic gas flow meters are purpose-built to measure unclean and variable gas streams such as flare gas, flue gas, vent gas, and associated gas. With fiscal-grade accuracy, they are ideally suited for meeting modern emissions regulations and delivering accurate flow data essential for environmental compliance and process optimization.

The FF1225-A single-path model offers dependable performance for standard applications. For larger pipelines or installations with limited upstream space, the FF2225-A dual-path version achieves flow measurement accuracy within ±0.5%. Even greater precision can be attained with the FF4225-A and higher multi-path configurations, making the series highly adaptable to a wide range of operational needs.

A standout feature of the FF1225 Series is its unmatched turndown ratio exceeding 8,000:1, enabling precise measurement across a vast flow range. Additionally, its proven tolerance to liquids makes it an excellent choice for retrofitting existing systems, even in the most demanding field conditions.

Features

- Turn-down ratio over 8,000:1
- Gas density from 0.05kg/m3, suitable for hydrogen
- Gas pressure from 0.1bar-a to 400bar-a
- Molecular weight and mass flow data
- Wide range of metallurgy
- Simple installation - no manufacturer attendance required

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Specifications

General

Transducer Type	Ultrasonic, wetted, non-intrusive, in-line
Operating Principle	Transit Time Measurement, no cross-correlation
Transducer Material	SS316, SS316L, Titanium, Hastelloy, Monel
Cable Length	Up to 30m

Performance Characteristics

Velocity Range	0.01m/s to 150m/s (0.03ft/s to 500ft/s)
Accuracy	+/-1.0% to 2.5%, up to 0.25% in Multi-path design
Repeatability	0.1%
Measurement Parameters	Standard & Actual Flow, Flow Rate, Totalized Flow, Molar Mass, Pressure, Temperature
Turndown Ratio	8000:1

Operating Conditions

Pipe Diameter	0.04m to 5m (1.5" to 200")
Recommended Pipe Length	10 Diameters Upstream & 5 Diameters Downstream
Process Temperature	-190°C to +250°C (-310°F to 480°F)
Process Pressure	0.1bar to 400bar (1.2psi to 5000psi) Absolute
Presence of Liquids	No affect on flow measurement

Mechanical Characteristics

Design	Pipe mount, NPT or Flanged Connections (standard 1.5”)
Transducer Mount	Online retractable under pressure
Spool / Flow Cell Length	Dependent upon pipe size

Electrical Characteristics

Supply Voltage	24VDC Nominal (20V to 32V), 120/220VAC optional
Power Consumption	2.5W max
Inputs	2 @ 4-20mA for pressure and temperature
Outputs	ModBus, Frequency/Pulse, 1 @ 4-20mA, HART Up to twelve 4-20mA optional outputs
Enclosure	Die-cast aluminum or SS
IP Rating	NEMA 4X, IP67
Hazardous Area Approval	CSA/ULClass 1, Div.1., Group BCD T4 ATEX (Zone 1), IECEx (Zone 1)

Sunshade Available in GRP or SS