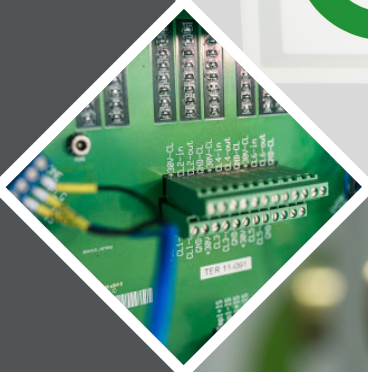
FLUENTA

Fluenta FGM 160
Flare Gas Meter



Accurate information
for better decisions

Presenting the latest in ultrasonic flow management

WHY MEASURE?

Often subject to taxation and strict regulations, the accurate measurement of flare gas has a variety of benefits that go beyond avoiding overtaxation on emissions or liability to penalties.

Knowing how much gas is flared or vented allows you to reduce emissions. This data can also generate revenue by selling the gas or create savings through onsite re-use. In addition, the wealth of data received lets you check for mass-balance calculation irregularities, thus identifying potential leaks before they pose a risk to health and safety.

With zero flaring being the focus of international regulations and NGO initiatives, managing your flare gas emissions is not only industry best practice, but puts you at the forefront of a more sustainable way to use natural resources.

WHY ULTRASONIC?

Unlike other technologies, ultrasonic measurement is not impacted by the composition or cleanliness of the gas flow. It delivers good repeatability regardless of turndown ratio or temperature ranges.

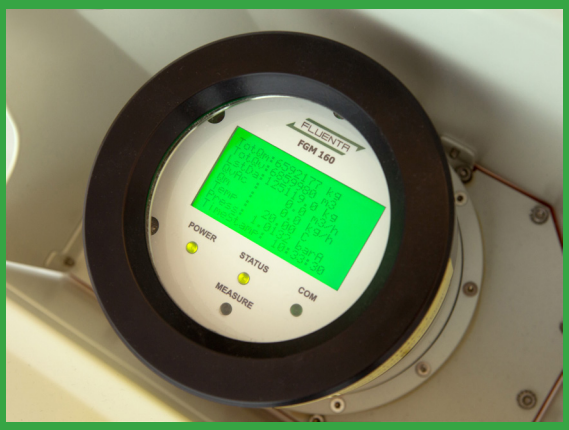
As Fluenta transducers are non-intrusive and do not have any moving parts, the requirements for maintenance and support are minimal. In fact, ultrasonic meters do not need shutdowns for installation or maintenance. This keeps the lifetime costs low and boosts return on investment.

Ultrasonic meters are the only devices which can deliver highly accurate results in flaring applications. While typical regulations today ask for 5% accuracy, only ultrasonic technology has the potential to keep up with stricter requirements.

WHY THE FLUENTA FGM 160?

The combination of two signal types (a variable “chirp” signal and a continuous sine wave signal) enhances the accuracy and stability of the meter readings, preventing signal loss at high and low velocities.

The accuracy and reliability of this unique signal processing technology has been verified by CEESI and VSL. Achieving excellent performance in a broad spectrum of flare gas applications, the Fluenta FGM 160 Flare Gas Meter is the measurement solution of choice for many major companies in the Oil Gas and Chemicals industry.



Short of space?

Enhanced measurement stability prevents signal loss at low and high velocities and reduces the required pipe length to 15 diameters, saving installation costs for additional pipework and precious space.

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FGM 160 Tech Spec Highlights: Standard Version

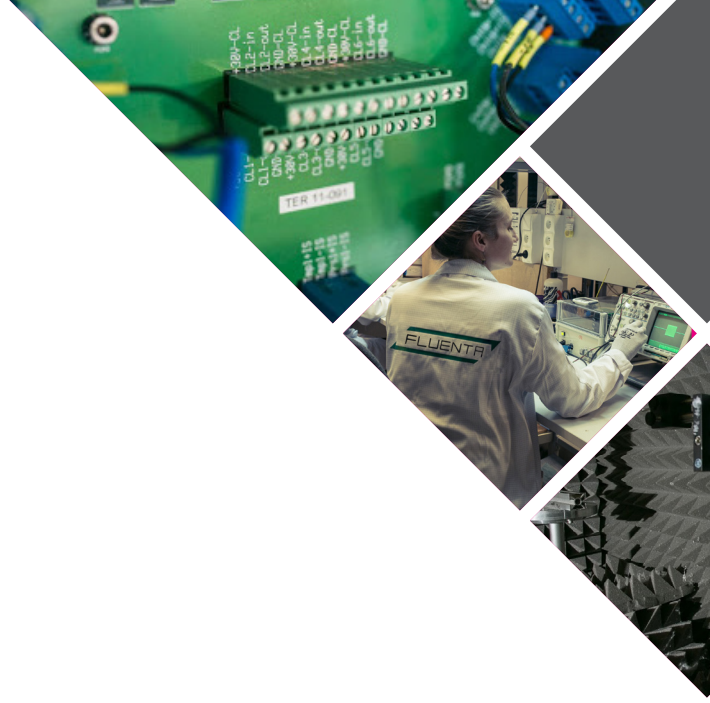
FIELD COMPUTER

Functional Characteristics	
Measurement Parameters	Standard and actual volume flow, mass flow, totalized standard volume flow, totalized mass flow, molecular weight, standard and actual density, pressure, temperature, speed of sound, gas velocity
Certification	
Certification	IECEx, ATEX, CSA, TR-CU, INMETRO
Field Computer	Ex de [ia] IIC T6, Tamb: -40 °C to +60 °C (Zone 1)
Input and Output	
Supply Voltage	24 VDC (20 - 32 VDC)
Input Signal	Ultrasonic transducers
	Temperature and pressure: analog 4-20mA or digital HART or MODBUS
Output Signal	6 x analog 4-20 mA outputs, HART output, Pulse / frequency signal, RS422 / RS485, 2- or 4- wire, Modbus Protocol RTU

TRANSDUCERS

Functional Characteristics	
Transducer Type	Ultrasonic / Time-of-flight / Wetted non-intrusive
Velocity Range	0.1 ft/s - 400 ft/s (0.03 m/s - 120 m/s)
Accuracy[1]	up to 1%[2,3]
Turn Down Ratio	4000:1
Repeatability	Better than 1%
Resolution	0.003 ft/s (0.0008 m/s)
Operating Conditions	
Pipe Sizes	6” to 72” as standard, others application dependent
Temperature Range	-70°C to +180°C operational / -150°C to +315°C design
Pressure	11.6 psiA to 145 psiA (0.8 barA to 10 barA)
Certification	
Certification	IECEx, ATEX, CSA, TR-CU, INMETRO
Transducers	Ex ia IIC T4-T6 (Zone 0)

1. To achieve the highest accuracy, the transducers must be installed and serviced by a certified service engineer.
2. For a fully developed flow profile.
3. For increased accuracy, we recommend a multi-point calibration at an accredited flow calibration facility.



ABOUT FLUENTA

Founded in 1985 Fluenta is the global leader in flow monitoring, measurement and sensing using ultrasonic technology. Primarily serving the Oil & Gas market where it is the leader in European offshore flare gas monitoring, the company also provides flow monitoring and measurement services to the chemical, liquid natural gas and other industries. Fluenta is headquartered in Haugesund, Norway, with offices around the world.

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81.120.003.F 10/2019