



FLUXUS® F736 and G736 4-Beam Liquid and Gas Flowmeter

Unrivalled precision, reliability and repeatability

Hydrocarbon Products Handling

Pipeline monitoring

Check metering

Leak detection/allocation metering

Fluid detection





FLUXUS® F736 and G736 – 4 Beams for Precision

Unrivalled accuracy, repeatability and reliability

The FLUXUS® F/G736 combines high precision with the advantages of non-invasive ultrasonic flow measurement. With its 4 beams, in reflect mode providing 8 paths through the fluid, the meter averages the result of up to 4 planes. This arrangement averages-out cross-flow and achieves the optimum compensation for disturbed flow profiles. On longer straight runs, the 4-beam meter achieves outstanding accuracy performance due to the real-time synchronized averaged path effects and can thus be used for control and redundancy measurements of custody transfer meters, or for usage in protective systems for leak detection.

Easy installation without process outages

When commissioning a new flow measuring point, a significant part of the costs is incurred by the installation work (line shut-down, pipe cutting, pipe flushing, etc.). These costs are significantly reduced using the F/G736 clamp-on technology that involves zero impact on pipe integrity while commissioning.

Highly economical: No line shut-down, welding, pipe cutting or heavy equipment necessary for installation.

100% plant availability: The non-invasive measurement technology does not require any process shut-downs – neither for installation, nor for any potential maintenance efforts.

Extremely low maintenance: Virtually zero maintenance due to use of solid coupling pads instead of high maintenance gels.

Safety: The F/G736 clamp-on meter does not add any leakage risk. It also does not require any flanges or gaskets. This eliminates the risk of undetected methane leaks in the installation.

Leading clamp-on ultrasonic flow measurement

Temperature compensated transducers, unique digital signal processing with superior noise suppression, combined with a highly rugged design, offer an unrivalled degree of reliability, durability and accuracy – ensuring perfect operation of the system under the harshest field conditions and making it even suitable for buried or flooded installations (IP68 tested submerged 20 m for 3 months).



The Solution for Challenging Midstream Applications

Flow measurement in leak detection/ allocation metering systems

Leak detection applications are not only dependent upon highest flow measurement accuracy but also on high resolution, wide turndown and especially good repeatability and reliability. This must also be achievable under changing ambient conditions and with varying flow conditions from lowest to highest rates.

On the basis of its 4-beam ultrasonic technology, the F/G736 is capable of providing such solutions for both liquid hydrocarbon products as well as natural gas applications. Being completely drift-free and detecting even the smallest flow rates, it is the ideal meter for leak detection purposes.

Check metering

Check metering points provide metering redundancy and thus an increase in reliability and ultimately plant availability. The F/G736 non-invasive flow meter can be placed next to a custody transfer meter for reading validation. Moreover, with the F/G736 in place, downtime can be avoided in case the custody transfer meter is temporarily taken out for recalibration.

Network monitoring and fluid detection

Pipelines have to be monitored closely – especially within tank terminal, pump and compressor stations. Placing custody transfer meters at such measuring points can be very costly. FLEXIM's F/G736 meter provides similar levels of metering capability but more cost-effectively. Furthermore, the F/G736 can be placed on any pipe, independent of its dimensions, material and inner pressure.

FLEXIM also provides a solution for non-invasive fluid detection. By measuring the sound speed of the flowing fluid, the meter clearly identifies the individual hydrocarbon product or the molecular weight of the natural gas and can be used to help trigger valves and vents to reduce costly transmixing of fluids.



Laboratory accuracy under field conditions

The new 736 platform combines FLEXIM's proven 4 channel accuracies with the state-of-the-art features of the latest generation of FLEXIM meters.

FLEXIM's Disturbance Correction enables the meter to measure with improved uncertainty with non-ideal inlet and outlet conditions.

FLEXIM's Synchronised Channel Averaging plays a vital role to achieve the highest benefits from the four different measurement planes and provides robust and reliable measurements under the most challenging conditions.

FLEXIM's Advanced Meter Verification allows you to evaluate and to report precisely the health status of your measurement system.

The FLUXUS® G736 supports FLEXIM's 'Dynamic Gas Master' for precise measurement of gas standard volumetric flow rates, density, molecular mass and mass flow. The integrated 'Wet Gas Correction' feature allows to compensate a liquid volume fraction (LVF) of to 5%.

Technical Data

FLUXUS® F/G736	Clamp-on ultrasonic measuring system with up to 4 channels and stainless steel housing
Measurement principle	Transit time; optional switch to NoiseTrek with high particle or gas load
Measurement functions Physical quantities	Volumetric flow rate, mass flow rate, flow velocity Additionally for H736: API gravity, operational density, standard density, standard volumetric flow rate Additionally for G736: molecular mass, operational density, standard volumetric flow rate, caloric value Volume, mass
Totalizers Diagnostic functions	Sound speed, signal amplitude, SNR, SCNR, standard deviation of amplitude and transit time
Measurement uncertainty Measuring system Liquid at the measuring point Gas at the measuring point	Volumetric flow rate (measurement) ± 0.3 % MV ±0.005 m/s ± 1.0 % MV ±0.005 m/s ± 1-2 % of MV ±0.005 m/s
Repeatability	± 0.15 % MV ±0.005m/s
Transmitter Number of measuring channels Explosion protection	up to 4 up to 4 ATEX/IECEX Zone 2 (certification in progress)
Power supply Outputs Digital outputs Process inputs Digital communication	FM Class I Div. 2 (certification in progress) 90...250 V/50...60 Hz or 11...32 V DC outputs 4...20 mA active/passive pulse/binary/frequency Pt100/Pt1000; 4-20 mA active/passive, current Modbus RTU/TCP, HART, Profibus PA, FF H1, M-Bus, BACnet MS/TP
Available transducers Explosion protection Temperature range (pipe wall)	ATEX/IECEX Zone 1, FM Class I Div. 1 -40 °C ... +240 °C / WI: -200 °C ... +630 °C

For more detailed Information please download the Technical Specifications here: www.flexim.com.

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