



Non-intrusive ultrasonic flow meter for highly dynamic flows

FLUXUS® F/G722

Synchronized Channel Averaging (SCA)
Ultrasonic Meter

Process Control

Check Metering

FLEXIM Sets Standards
when measuring matters



Cutting Edge Technology

Fast – Accurate – Reliable

The FLUXUS® F/G722 is a revolutionary and advanced non-intrusive ultrasonic flow meter specifically designed for the demanding, challenging, and dynamic process conditions of many industrial applications.

With its new hardware design, fast and sophisticated digital signal processing capabilities, and advanced diagnostics, the F/G722 can measure dynamic flows with high accuracy and repeatability without ever interrupting the process or causing pressure losses and other undesired effects. **Synchronized Channel Averaging (SCA)** measurement allows for instantaneous flow profile compensation despite disturbed flows and turbulence induced by difficult inlet conditions.

State of the Art Processing Capabilities

The FLUXUS® F/G722 is equipped with a state-of-the-art high-performance processor allowing for rapid channel switching between two independent channels for applications where fast response time is needed. Both reflect path and X path configurations are suitable with the F/G722 ultrasonic meter thus ensuring applicability in a wide range of flow rates and process conditions.

In high velocity flows and applications where flow profile disturbances and high turbulence is present, the new processing board enables the meter to collect and record data from multiple channels (A & B) at very high speeds, thus providing improved averaging performance in the averaging (Y) channel.

With this enhanced capability cross flow fluctuation effects are mitigated, and a better representation of the flow profile is made, making the F/G722 the preferred metering solution for demanding process control applications.

Unique Features of the FLUXUS® F/G722

Synchronized Multi Channel Processor for Instantaneous compensation for flow disturbances

Matched transducers, integrated temperature compensation {according to ASNI/ASME MFC-5.1-2011 regulations} and digital signal processing guarantee excellent zero-point flow measurement stability

Pressure & Temperature process inputs for standard volume flow reporting

Completely non-Intrusive, free of wear, tear, and abrasion

Not prone to clogging or corrosion

No pressure loss or source of potential leaks and fugitive emissions

Bidirectional communications and remote setup and diagnostic capabilities

Digital Outputs: Frequency, binary and pulse

Instantaneous Flow Compensation

Flow profile changes or disturbances inside the pipe are the result of multiple factors: high velocities, pressure and temperature fluctuations, inadequate inflow conditions (straight runs), and adjacent instrumentation such as valves, gauges, etc.

Minimizing the effects of such disturbances makes all the difference when it comes to accurate and reliable flow measurement. While optimal inflow conditions, flow conditioners and other design measures can solve these issues, in real world applications, the opposite is often the case, creating a tradeoff between response time and performance. With FLUXUS® F/G722 there is no compromise, the faster processor reduces fluctuations and lag time in the meter reading thus resulting in better and more stable outputs.

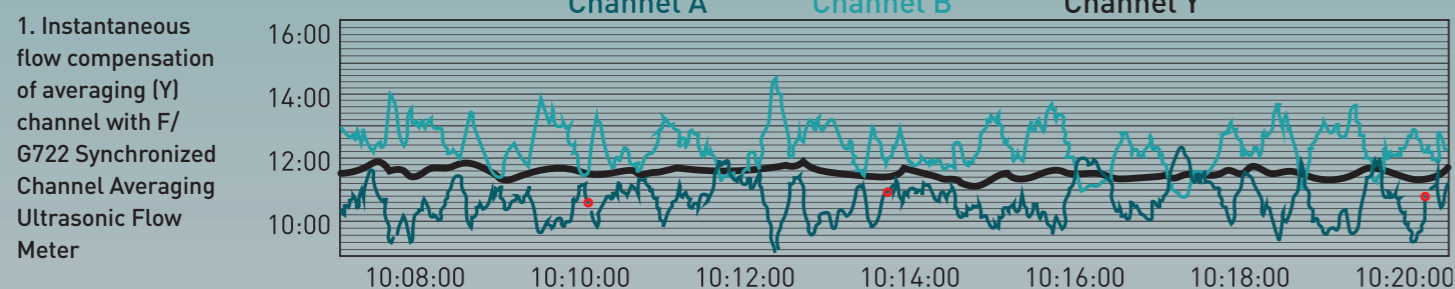
Designed for Dynamic flows

Flow measurement of dynamic flows require precision, repeatability, and most importantly fast response time. In control applications, rapid changes in flow can trigger alarms, open and close valves, etc., and need to be detected without delay. The F/G722 non-intrusive flow meter can respond quickly to flow fluctuations and provides a better representation of the flow behavior resulting in outstanding performance under dynamic flow conditions.

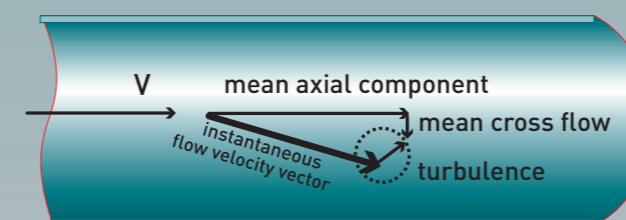
Superior Performance

The new FLUXUS F/G722 leverages the already superior capabilities and advanced signal processing techniques pioneered by FLEXIM's clamp on metering solutions while introducing an even faster DSP processing module that enables Synchronized Channel Averaging measurement.

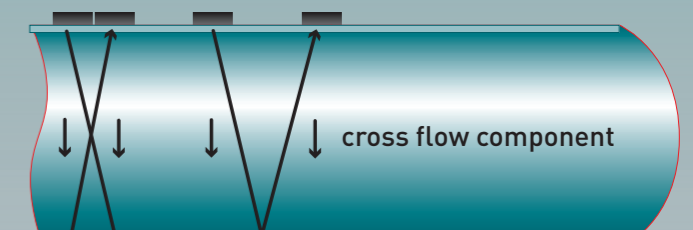
- **Synchronized Multi Channel Flow Averaging** – High performance processor for improved stability, performance, and reliability in highly dynamic flows.
- **Operational Safety** – The measurement system can't cause pipe leaks, be prone to clogging or any other related issues that can hinder process integrity.
- **Economical Solution** – An externally mounted system means no need for process interruptions or additional engineering costs.
- **Maintenance-free** – No contact with flowing media results in a completely maintenance-free and durable metering solution suitable for the harshest environments.
- **Standard Flow and Mass Compensation** – Pressure and temperature inputs for built-in actual to standard volumetric and/or mass flow measurement.



2. Disturbed flow profile and flow velocity vector composition



3. Cross flow compensation with X arrangement or reflection arrangement



Unrivalled advantages of non-intrusive flow measurement with the FLUXUS® F/G 722

- Fast measuring dynamics
- Certified for operation within hazardous areas ATEX/IECEX Zone 2, FM Class 1. Div. 2.
- High operational safety with no risk of leaks
- Independent of pipe material, diameter, wall thickness and internal pressure and temperature
- Accurate and repeatable measurement readings – even at extremely low flow rates (high turndown ratio)
- Highly cost efficient in comparison to wetted instrumentation



FLUXUS® F/G722
Aluminium housing



FLUXUS® F/G722
Stainless Steel housing

FLEXIM GmbH
Berlin
info@flexim.de

FLEXIM Austria GmbH
Olbendorf
office@flexim.at

FLEXIM Instruments Benelux B.V.
Berkel en Rodenrijs
benelux@flexim.com

FLEXIM France SAS
Limonest
info@flexim.fr

FLEXIM Instruments UK Ltd.
Northwich
sales@flexim.co.uk

FLEXIM Middle East
Dubai South
salesme@flexim.com

FLEXIM Flow India Pvt. Ltd
Rohini New Delhi
salesindia@flexim.com

FLEXIM Japan
Chiba
salesjapan@flexim.com

FLEXIM Instruments Asia Pte Ltd.
Singapore
salessg@flexim.com

FLEXIM Instruments China
Shanghai
saleschina@flexim.com

FLEXIM S.A., Chile
Las Condes
info@flexim.cl

FLEXIM AMERICAS Corporation, USA
Edgewood, NY
salesus@flexim.com

Technical facts	
FLUXUS® F/G722	Synchronized Channel Averaging (SCA)
Measurement uncertainty (volumetric flow rate)	
FLUXUS® F722 (liquids)	± 1% of reading ± 0.005 m/s
FLUXUS® G722 (gases)	± 1 ... 2% of reading ± 0.005 m/s
Transmitter	
Response Time	1s (2 channels)
Repeatability	0.15 % MV ±0.005 m/s
Number of measuring channels	2
Explosion protection transmitter	ATEX/IECEX Zone 2
Power supply	100-230VAC, 24DC, 12DC
Outputs	
	4-20 mA active/passive
	4-20 mA HART active/passive
	pulse/frequency/binary
Digital Outputs	pulse/frequency/binary
Inputs	
	Pt100/Pt1000
	4-20 mA active/passive
	Binary input
Digital communication	
	Modbus RTU/TCP
	BACnet MSTP/IP
	Profibus PA
	Foundation Fieldbus
Available Transducers	
ATEX/IECEX Zone 1 & 2	
Pipe size range (inner diameter)	
FLUXUS® F722	6 mm ... 6500 mm
FLUXUS® G722	7 mm ... 1600 mm
Temperature range (pipe wall)	
FLUXUS® F/G722	-40 °C ... + 240 °C / WI: -200 °C ... +630 °C

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



www.flexim.com