

Flexim™ FLUXUS F/G 631

New generation of flexible portable flow measurement




EMERSON

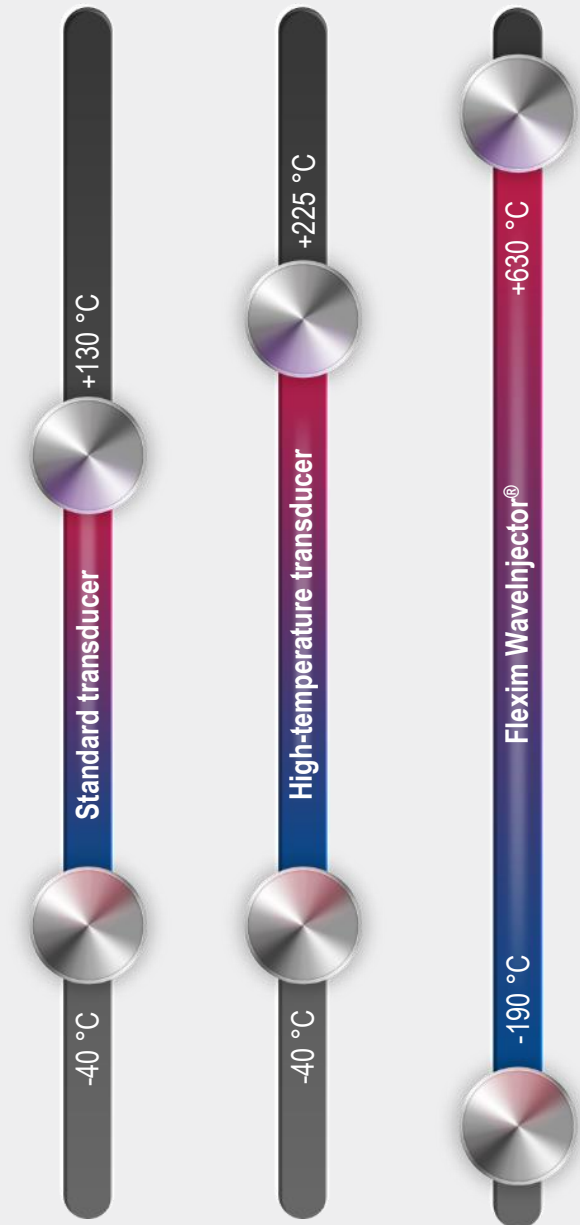
Full Flow Transparency For Your Process

The New Generation of Portable Flow Measurement



Application Range

Fluids	Liquids, gases and steam	
Pipe diameter	liquids: 6 mm to 6500 mm gases: 8 mm to 1600 mm	
Pipe material	almost all pipe materials are suitable: metal, alloys, plastics, glass, etc.	
Pressure	Minimum pressure of 3-5 bar (for gases) No limit on maximum pressure or on liquids	
	Liquids	Gases
Flow velocity	0.01 – 25 m/s	0.01 – 35 m/s
Repeatability	0.15 %	0.15 %
Uncertainty	±1 %	±1-2 %



Focus Applications

Focus Industries and Customers

- Chemical Industry
- Oil & Gas Industry
- Power Industry
- Metals & Mining
- Water and Wastewater Industry
- Building Automation Industry
- Life Sciences
- Semiconductor Industry

Focus Applications

- Heat exchanger monitoring
- Pumps curve verification
- Compressor efficiency
- Network allocation of different media
- Verification of intrusive flow meters
- Fire water lines & deluge testing & many more



FLUXUS F/G 63X: Key Facts

Liquids, gases and
steam measurement

Profile and
Disturbance
Correction support

Support for
saturated and
superheated steam

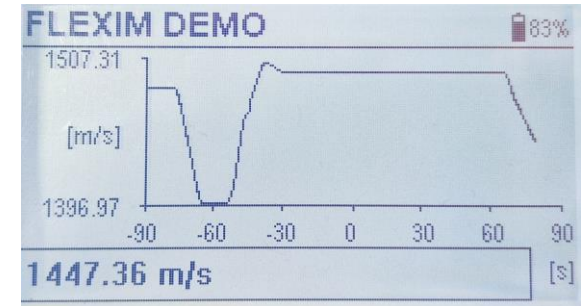
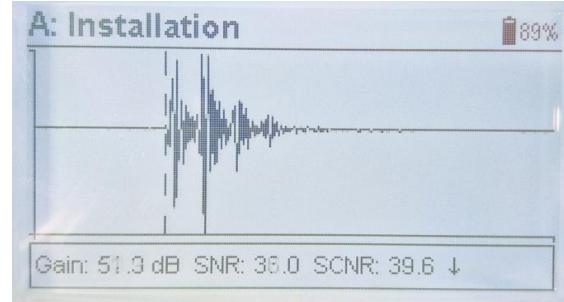
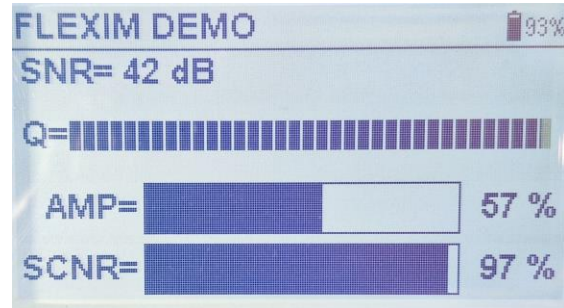
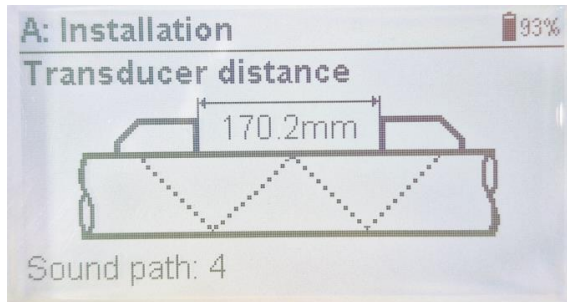
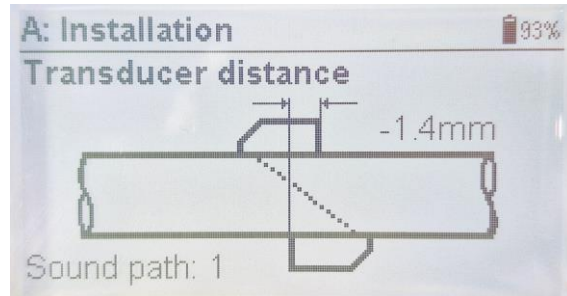
Fast Channel
Averaging for
demanding flow
conditions



FLUXUS F/G 63X: Key Facts



FLUXUS F/G 631: New Large Screen

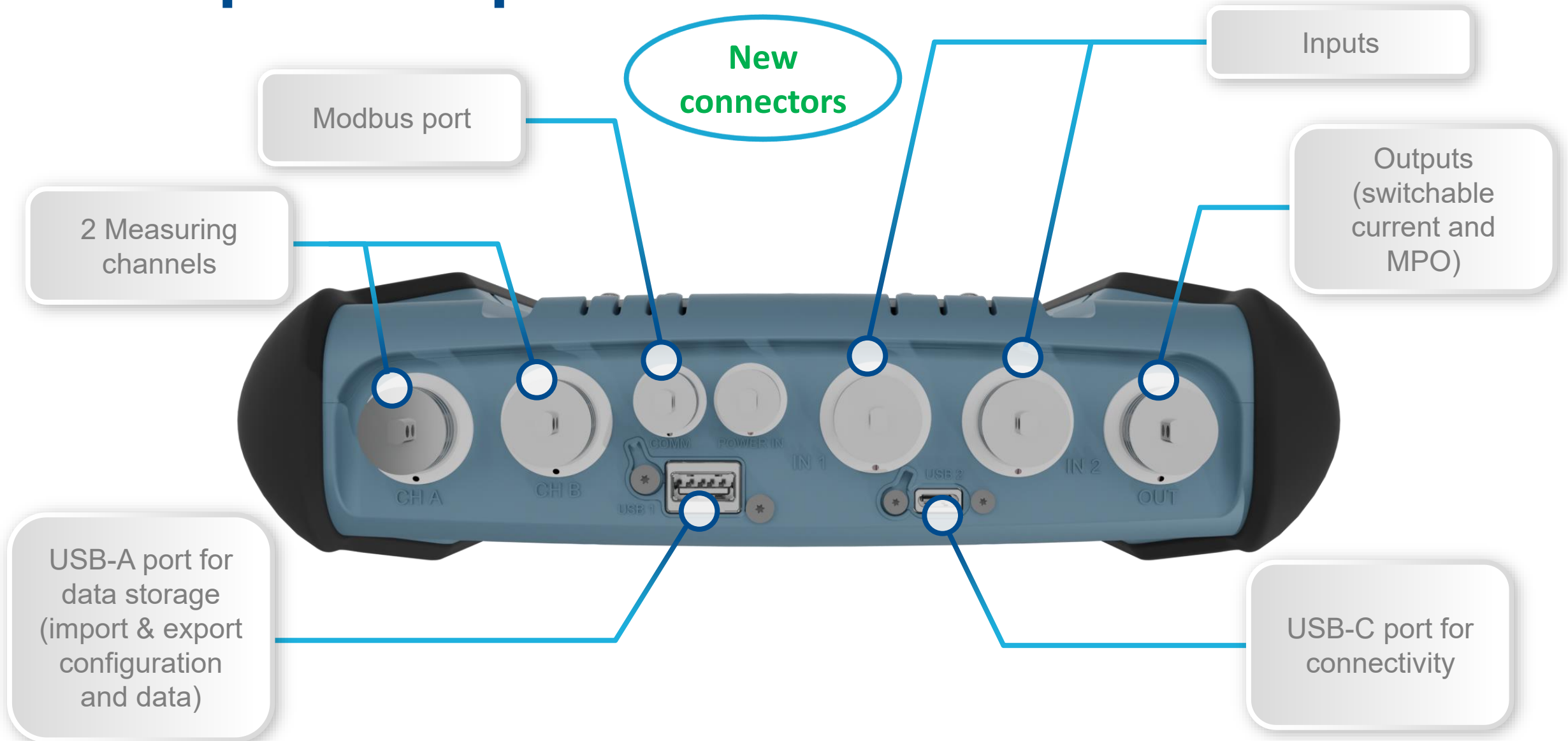


Easier installation with setup graphics

More diagnostic values, parameters (flow, totalizer, ...) and diagnostic graphics (snaps)

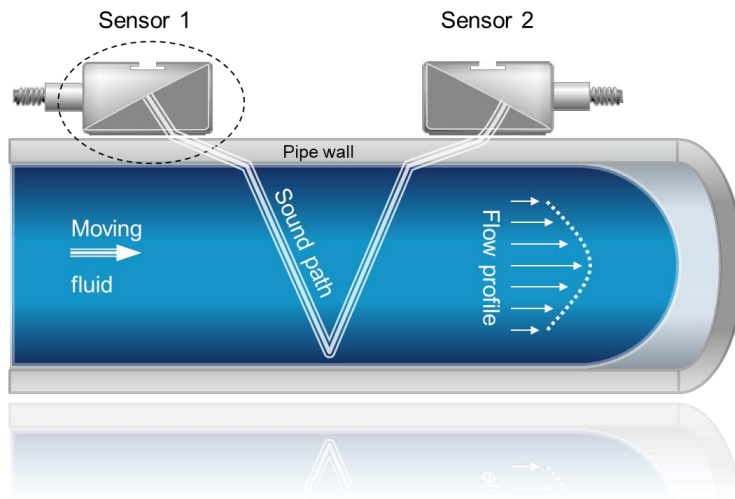
Live flow trend graph

631 inputs & outputs



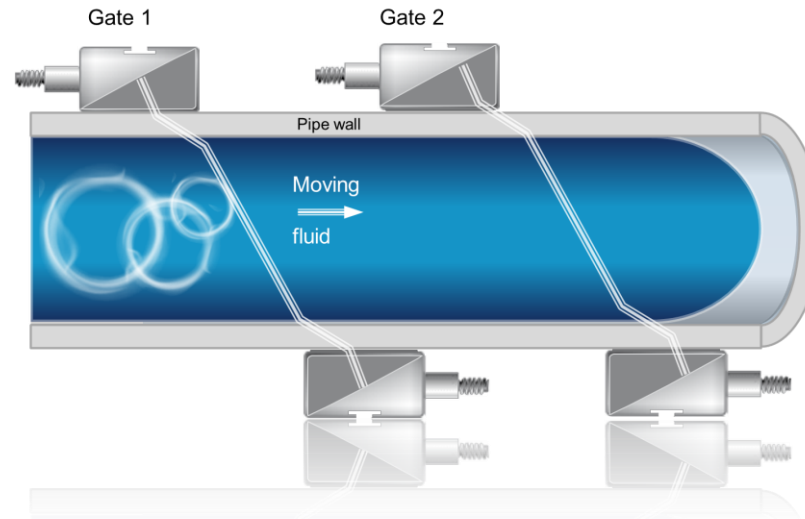
FLUXUS 631 Measuring Modes

Transit time



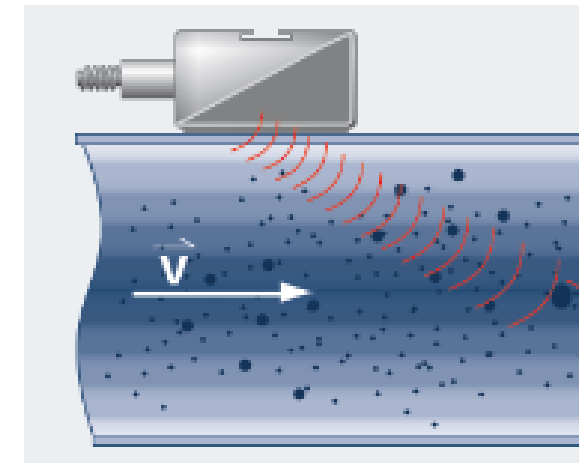
For gas, liquid and steam measurements up to 200°C

Cross-correlation CFM



For steam measurements above 200°C

NoiseTrek & NoiseTrek Parallel Beam



For measurements of slurries or fluids with a high gas content. Parallel beam is available for small pipes or high-attenuating fluids.

FLUXUS 631 Interfaces

Inputs

- 4 x PT100/PT1000 (optional)
or
- 2 x 4...20mA active / passive current input
2 x PT100/PT1000 (optional)

Outputs

- 2 x 4...20mA active / passive current output
2 x multipurpose outputs
- Modbus RTU (optional)

FLUXUS 631 Transmitters

	F631	G631
Flow Meter BA	F631 Basic • Flow meter • For liquids • No inputs	G631 Basic • Flow meter • For gases and liquids • No inputs
Energy Meter EE	F631 Energy • Energy and flow meter • For liquids • 4T inputs	G631 Energy • Energy and flow meter • For gases and liquids • 2T 2I inputs
Steam Meter ST		G631 Steam • Energy and flow meter • For high-temperature steam, low-temperature steam, gases and liquids • 2T 2I inputs

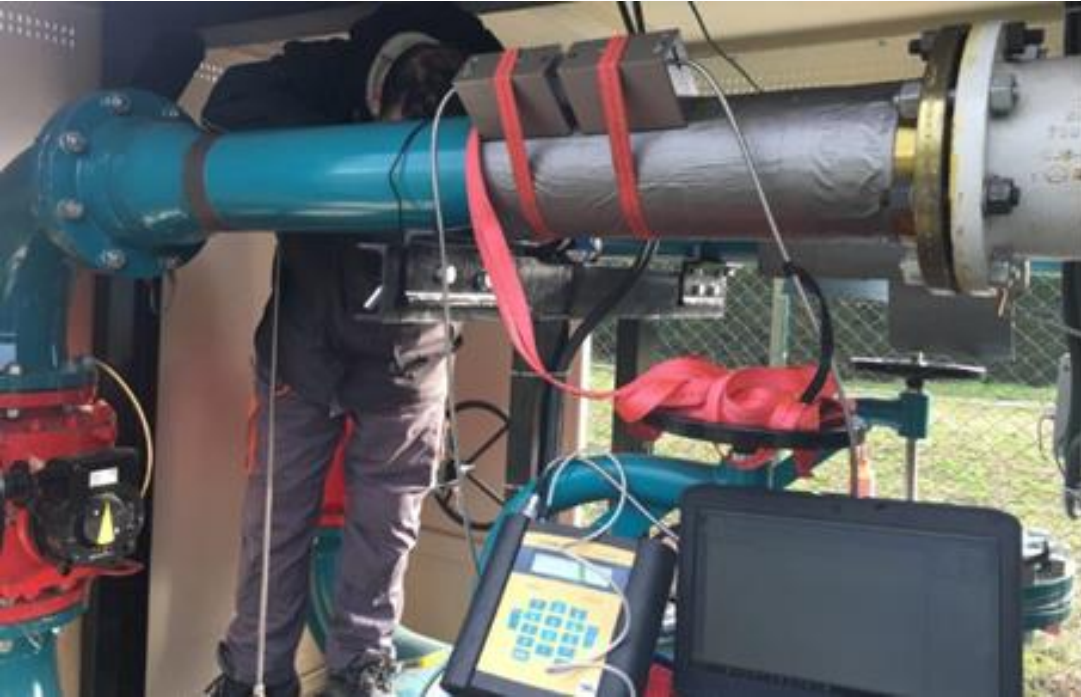


New Variofix Modular (Variofix M)

- New Variofix M mounting for easier installation and better signal strength to measure gases.
 - Simplifies the correct setup.
- Replaces the adjustability of Variofix P with modularity
- Customise the mounting to the application needs
 - 2 sizes of rail,
 - For G-P or M-Q transducers
 - Configurable mounting options:
 - Belts, high temperature belts, magnets and hooks for DN40 and DN100 pipes
- Rugged but portable
 - No more flimsy chains



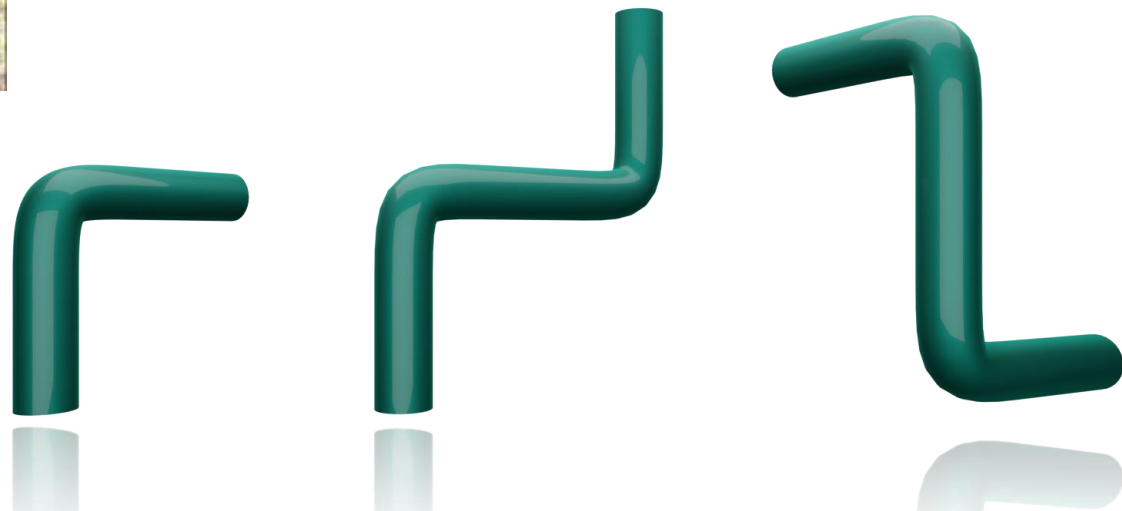
The 631 - if it gets tight



Short Hydraulic inlet conditions can be managed with improved profile correction.

The profile corrections are result of a joint research with Physikalisch Technische Bundesanstalt (PTB) and based on experimental measurements, CFD and Laser-Doppler-Profile Measurements.

The correction ensure limited uncertainty in tight, challenging installation spots down to 2D inlet run.



The 631 - if it gets hot



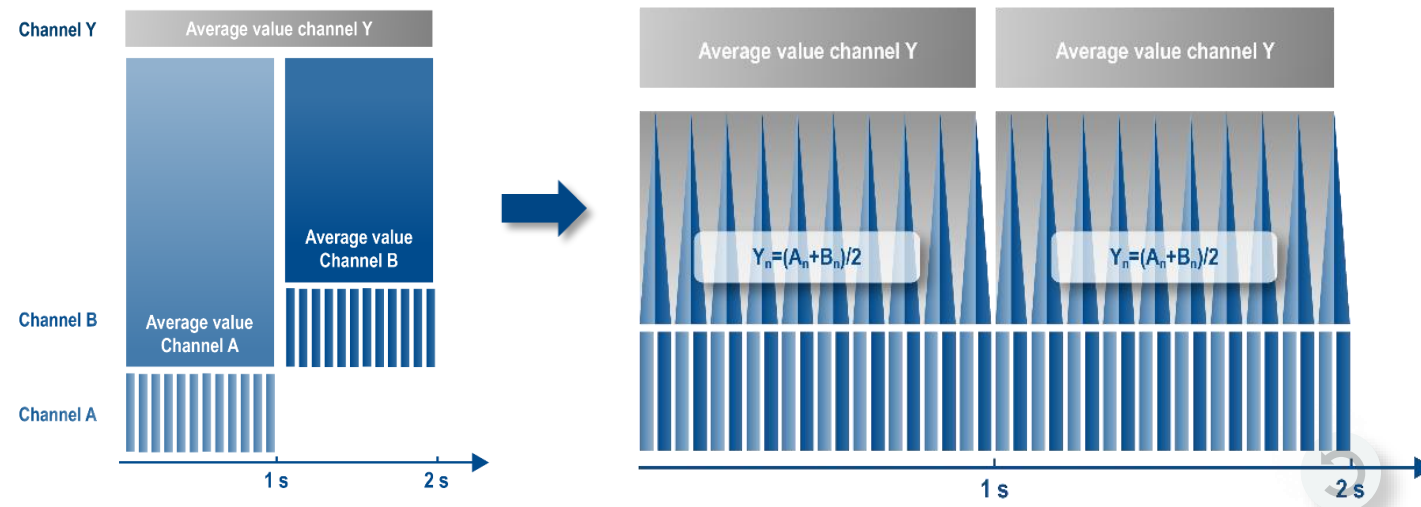
- High-temperature superheated steam measurement up to 630 °C (1,166 °F) becomes possible with portable devices
- Special correlation flow measurement mode in combination with the Emerson's Flexim WaveInjector systems for high temperatures



The 631 - if it gets wild...



- Measurement of large pipelines (i.e. NG) in direct mode become more stable with Synchronised Channel Averaging (SCA)
- Dynamic flow profiles at high velocities can lead to peaks in “direct” or “Z”-Mode installations.
- It removes peaks and increases the measurement reliability on challenging “direct” installations by fast data acquisition and processing from both measurement channels.



The 631 - if it gets remote and lonely...



Up to 80 days low-power mode enables data collection on remote or non-accessible locations

IP 65 / IP 67 allows to leave the meter in the field for a longer period without risking the electronics

IP (Ingress Protection) Ratings Guide

SOLIDS		WATER	
1	Protected against a solid object greater than 50 mm such as a hand.	1	Protected against vertically falling drops of water. Limited ingress permitted.
2	Protected against a solid object greater than 12.5 mm such as a finger.	2	Protected against vertically falling drops of water with enclosure tilted up to 15 degrees from the vertical. Limited ingress permitted.
3	Protected against a solid object greater than 2.5 mm such as a screwdriver.	3	Protected against sprays of water up to 60 degrees from the vertical. Limited ingress permitted for three minutes.
4	Protected against a solid object greater than 1 mm such as a wire.	4	Protected against water splashed from all directions. Limited ingress permitted.
5	Dust Protected. Limited ingress of dust permitted. Will not interfere with operation of the equipment. Two to eight hours.	5	Protected against jets of water. Limited ingress permitted.
6	Dust tight. No ingress of dust. Two to eight hours.	6	Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities.
Rating Example: IP65 INGRESS PROTECTION		7	Protection against the effects of immersion in water between 15 cm and 1 m for 30 minutes.
		8	Protection against the effects of immersion in water under pressure for long periods.

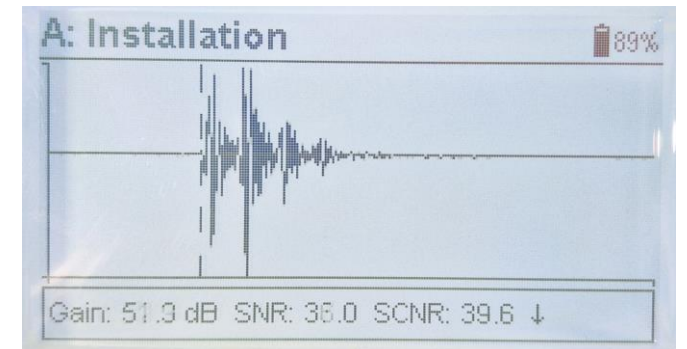
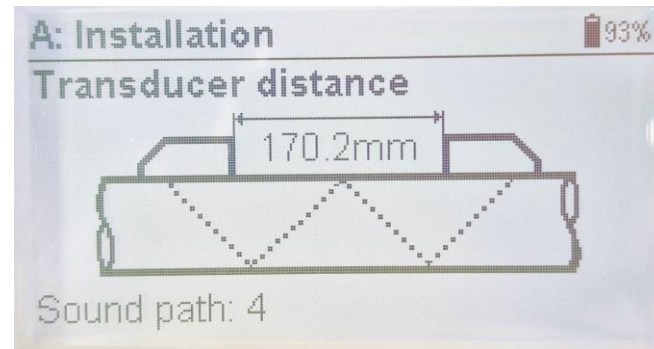


The 631 - if it gets visible



Graphic display helps:

- experience users with SNAP view and diagnostic trends
- new users with transducer set-up view



FLUXUS F/G 631 New Feature Summary

- New larger LCD display
 - Displays more diagnostic values, parameters (flow, totalizer, ...)
 - Easier installation with setup and diagnostic graphics
 - Live flow trend graph
- Low power mode with automated device wake sleep for long term measurements
 - Up to 25 hours in standard measurement mode*
 - Up to 80 days in low power mode*
- IP65 and IP67 ingress protection (during measurement)
- Better measurements in challenging conditions
 - Additional flow disturbance correction features
 - Synchronised channel averaging
- New Variofix M mounting for easier installation and better signal strength for gases
- CFM for high temperature steam - the only device capable of TT and CFM
- Option of transport case with wheels



* Under test, expected to increase