

Flexim™ FLUXUS F/G631

Portable Ultrasonic Flow Measurement of Liquids, Thermal Energy, Gases, Compressed Air and Steam

For data center operators who need fast, reliable insight into cooling system performance exactly when and where it's required, the Emerson's Flexim FLUXUS F/G631 portable ultrasonic clamp-on flow meter delivers precise, on-demand measurement of liquids and thermal energy - without shutdowns or permanent installation.

Maintaining full visibility into cooling performance and energy flows is an ongoing challenge - especially as infrastructure becomes more complex and the risk of undetected inefficiencies or failures directly impacts uptime and operational reliability.

The 631 is an ultimate advancement in flow measurement technology. Designed for temporary and investigative field use, it supports common tasks such as verifying existing installations, inspection, maintenance, and energy management. It also ensures immediate measurement capability when permanent systems are unavailable.

Non-intrusive measurement across virtually any pipe material and diameter, combined with advanced correction for disturbed flow profiles, enables reliable results even under challenging conditions - providing answers wherever and whenever they are needed.

High-performance Flow Measurement on the Go

✓ One for all

Leveraging multiple measurement principles, the 631 can measure liquids, gases, and thermal energy.

✓ Ease of use

The series delivers a consistent and intuitive user experience, with quick setup – a liquid measurement can be running in under five minutes.

✓ Dual-channel measurement

With two physical flow channels and up to four temperature inputs, the 631 enables dual-channel thermal energy measurement for direct efficiency checks of chillers and heat exchangers.

✓ Unrivalled Performance

Advanced signal processing and diagnostics ensure exceptional reliability and accuracy, even in the most demanding environments.

✓ Outstanding Agility

Synchronized Channel Averaging measurement allows for instantaneous flow profile compensation despite highly dynamic flows and turbulence induced by difficult inlet conditions.

✓ Space Efficiency

Disturbance correction technology allows accurate measurements in tight spaces with reduced inlet lengths.

Key Features

- Non-intrusive ultrasonic technology for installation without process interruption and pipe modifications
- No pressure loss, no risk of leaks
- Modbus RTU process interface (optional)
- Wide turndown ratio for varying flow conditions
- Graphical display visualizes flow trends and diagnostic signal SNAPS

Main Applications

- Verification of in-line flow and energy meters
- Efficiency check of chillers, heat exchangers, cooling towers and other critical cooling components
- Immediate coverage of failed permanent meters
- Check and service activities for OEMs and equipment suppliers
- Leak and bypass flow detection
- Flexible measurement of cooling capacities
- Hydraulic balancing of cooling systems
- Fuel gas network checks
- Pre-evaluation before installation of permanent flow meters



TECHNICAL FACTS

	Flexim FLUXUS F631	Flexim FLUXUS G631
Transmitter		
Process Media	all acoustically conductive liquids with < 10 % gaseous or solid content in volume	- all acoustically conductive gases, e.g. nitrogen, air, oxygen, hydrogen, argon, helium, ethylene, propane - all acoustically conductive liquids with < 10 % gaseous or solid content in volume - optional: saturated steam, superheated steam
Flow channels	2	
Measurement uncertainty (volumetric flow rate)	± 1 % MV ± 0.005 m/s (0.02 ft/s)	±1 to 2 % MV ±0.005 m/s (0.02 ft/s)
Response time	down to 0.02 s	
Repeatability	±0.15% of reading, ±0.005 m/s (±0.02 ft/s)	
Power supply	100...240 V/50...60 Hz (power supply unit: IP40, 0...40 °C (32...104 °F)) 10.5...13.5 V DC (socket at transmitter) integrated battery	
Outputs	2 switchable current and 2 multi-purpose outputs (MPO)	
Inputs	Temperature, current	
Service interface	USB-C	
Ingress protection (meter / during measurement)	IP65 & IP67	
Battery operating time	25 h (up to 80 days in low-power mode)	
Available transducers		
Pipe size range (inner diameter)	6mm ... 6.5m (0.24...256 in)	7mm ... 1.6m (0.28...63 in)
Temperature range (pipe wall)	-40...200 °C (-40...392 °F) (extension possible with WaveInjector)	
Flow velocity range	0.01...25 m/s (0.03...82 ft/s)	0.01...35 m/s (0.03...115 ft/s), depending on pipe diameter, transducer and application



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