



Flexim™ FLUXUS F/G631

Portable Ultrasonic Flow Measurement of Liquids and Thermal Energy

For operators of marine vessels who need fast, reliable flow insight exactly when and where it's required, Emerson's Flexim FLUXUS F/G631 portable ultrasonic clamp on flow meter delivers precise, on demand measurement of liquids and thermal energy - without shutdowns, process interruption or permanent installation.

Maintaining visibility into flow conditions and system performance is an ongoing challenge - especially where limited space, restricted accessibility, and operational constraints make additional instrumentation difficult to install or deploy.

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 troubleshooting of systems such as fuel, cooling water or ballast lines. 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.
- ✓ **Optimized for Harsh Marine Environments**
Reliable performance under vibration, high humidity, and salt air exposure. Suitable for outdoor deck use, with IP65/67 protection and low-power operation for remote use.
- ✓ **Dual-channel measurement**
With two physical flow channels, the 631 enables simultaneous flow and thermal energy measurement across fuel, cooling water, and ballast systems, supporting efficient onboard diagnostics and performance checks.
- ✓ **Unrivalled Performance**
Advanced signal processing and diagnostics ensure exceptional reliability and accuracy, even in the most demanding environments.
- ✓ **Space Efficiency for Marine Applications**
Disturbance correction technology ensures accurate measurements even in tight onboard spaces with limited straight pipe runs.

Key Features

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

Main Applications

- Verifying existing installations
- Immediate coverage of failed permanent meters
- Check and service activities
- Fire water pump 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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