Flexim™ FLUXUS F/G631

Portable Ultrasonic Clamp-on Flow Measurement of Liquids and Gases

For operators of mining and mineral processing facilities who need reliable flow insight exactly when and where it is required, the Emerson's Flexim FLUXUS F/G631 portable ultrasonic clamp on flow meter delivers precise, on demand measurement of liquids and gases - without shutdowns or permanent installation.

Maintaining visibility into flows and equipment performance is an ongoing challenge - especially in harsh environments with corrosive and abrasive media, remote locations, vibrations and constantly evolving process layouts, where conditions change and temporary verification is required.

The 631 is an ultimate advancement in flow measurement technology. Designed for temporary and investigative field use, it supports verifying existing installations, inspection, maintenance, and pre-evaluation before permanent meter installation. 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 and high-performance gas measurement, 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**
  The 631 portable clamp-on ultrasonic flow meter measures the flow of virtually any gas and liquid using the proven transit-time correlation technique.
- ✓ **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.
- ✓ **Unrivaled Performance**
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- ✓ **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**
  Flow disturbance correction technology allows accurate measurements in tight spaces with inlet lengths reduced down to 2 diameters with minimal uncertainty impacts.
- ✓ **Optimized for Harsh Conditions**
  Long-term, outdoor, remote measurement is now possible thanks to the low-power mode (up to 80 days operational time) and the IP65/67 ingress protection standard.

Key Features

- Non-intrusive installation without process interruptionor pipe modification
- 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
- Monitoring process and cooling water flows
- Surveys of pump and compressor curves
- Leak detection activities Check metering and troubleshooting
- Immediate coverage of failed permanent meters
- Check metering and troubleshooting
- 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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