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VADTEL-MT G6

Smart Gas Meter with Micro-thermal Measurement Technology

The VADTEL-MT G6 is an intelligent gas meter designed for accurate measurement of natural gas volume using advanced micro-thermal sensing technology. The device combines high metrological precision, compliance with European regulatory standards, and comprehensive remote monitoring and control capabilities. It is suitable for residential and commercial applications and offers up to 10 years of autonomous operation.

The micro-thermal measurement system enables direct gas volume determination without any moving parts. Integrated micro-thermal sensors automatically convert measured volume to standard billing conditions (15 °C, 1013.25 mbar) without requiring external temperature or pressure sensors. This technology ensures long-term accuracy and measurement stability throughout the meter's service life.

The VADTEL-MT G6 can operate as a standalone meter or as a component of a telemetry system.

Key Features

- Gas measurement at basic condition
- IP65 ingress protection rating
- Dual battery - Independent power supply for metrology and remote communication
- Expected metrological battery lifetime > 6 years
- LCD display
- Intuitive user interface, three function keys
- Remote FW update
- Built-in solenoid valve for deactivation/ activation of gas supply
- NB-IoT version with better reachability and better energy efficiency compared to GPRS

Remote Communication Capabilities

The meter is equipped with an integrated telemetry module supporting the following communication protocols:

- GPRS/NB-IoT (optional: LoRaWAN, RS-485)
  It enables secure transmission of consumption data, event logs, device status, and diagnostic information to centralized platforms. All data handling adheres to the requirements of the General Data Protection Regulation (GDPR).

Metrological Characteristics

- Flow range: 0.06 - 11 m³/h
- Accuracy:

  Class 1.5: ±1.5 % from Q_{min} to Q_t, ±3 % from Q_t to Q_{max}

  Class 1: ±1,0% from Q_{min} to Q_t, ±2 % from Q_t to Q_{max}
- Operating temperature range: -40 °C to +55 °C

Regulatory Compliance

- Certified in accordance with the European Measuring Instruments Directive (MID - 2014/32/EU)
- Complies with EN 1359 and EN 12405 standards.
- Bears the CE marking and is approved for use in hazardous areas in compliance with the ATEX Directive.

Security and Reliability

- Multi-layer anti-tamper protection
- Built-in self-diagnostic functionality
- Integrated remotely controlled shut-off valve
- Long-life communication battery

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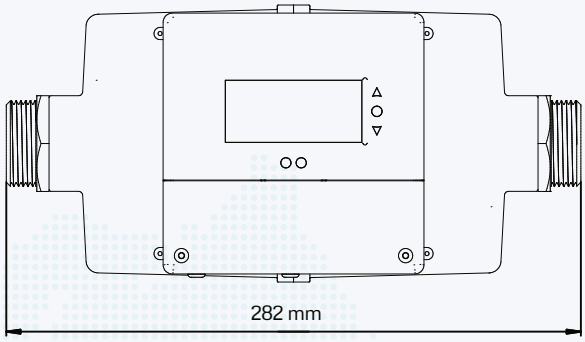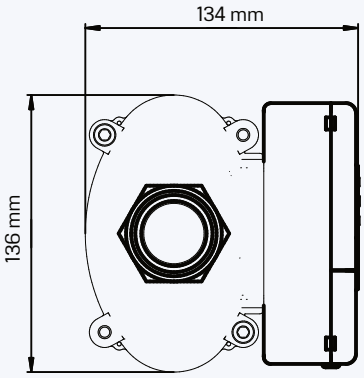
Technical data		VADTEL-MT G6 GPRS	VADTEL-MT G6 NB-IoT
Maximum flow rate Q_{max}	m^3/h	11	
Transitional flow rate Q_t	m^3/h	0,6	
Minimum flow rate Q_{min}	m^3/h	0,06	
Starting flow rate	m^3/h	≤ 0.012	
Maximum operating pressure	bar	0.5	
Accuracy class	-	1.5	
Maximum pressure loss	mbar	≤ 2	
Operating temperature	°C	-40 to +55 relative humidity ≤ 93 % without condensation	
Gas temperature	°C	-25 to +55	
Connection	-	Flanged DN 40 or threaded Rp 1¼"	
Protection class	-	IP65	
ATEX approval	-	1Ex ib IIB T4 Gb X	
High temperature resistance	-	"T" marking	
Mechanic environment class	-	M1	
Electromagnetic environment class	-	E2	
Communication module	-	Module GPRS - Removable SIM Integrated Quad band with internal antenna. Soldering Sim-on-Chip (on request)	Module NB-IoT - Removable SIM Integrated Multi band with internal antenna. Soldering Sim-on-Chip (on request)
Battery (Metrology)	-	Lithium battery module 3.6V/4Ah, non field replaceable Lifetime > 6 years in standard operation mode	
Battery (Communication)	-	Lithium-Ion Polymer low-temperature battery module 3.7V/2Ah, non field replaceable Lifetime depending on the level of the signal being received and frequency of communication	
Dimensions	mm	282x136x134