NEW GENERATION OF FLOW COMPUTERS

RFC 7

The state-of-the-art Flow Computer is designed for precise measurement and control of gas flow in various industrial applications. Featuring advanced algorithms and robust hardware, the RFC 7 ensures accurate data collection and reliable performance even in challenging environments.

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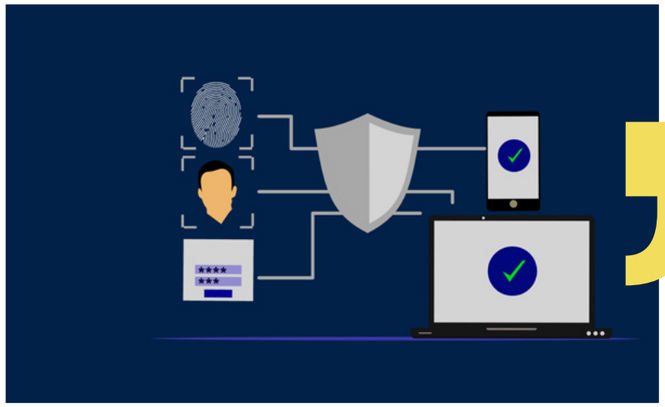
One Device for All Your Needs



Introduction

Flow computers are game-changing solutions designed to revolutionise how industries measure, monitor, and control gas flow. Used in critical sectors like the gas industry, these high-performance devices offer unparalleled accuracy and real-time data by integrating inputs from flow meters, gas quality systems, pressure- and temperature-sensors.

By transforming raw data into actionable insights, flow computers help optimise operations, reduce downtime, ensure regulatory compliance, and enhance overall efficiency. Integrated archiving allows billing-relevant data to be stored securely with timestamps.

Compatibility is the Key

The RFC 7 can be integrated as part of a complete measurement and control system and easily combined with gas analysis systems,process and automation solutions. It supports custody transfer and secondary metering applications with all common gas meters.

Key Benefits

Enhances overall efficiency – Ensuring compliance with standards and legal requirements – Optimising operational processes.

Key Features

- Calculation of all relevant billing data
- Real-time monitoring and control
- Compliance with industry standards
- High accuracy and precision
- Advanced data integration
- Remote accessibility and monitoring

Data Logging and Reporting

The RFC 7 provides comprehensive data logging and automated reporting for audits, compliance, and performance optimisation.

Enhanced Security Features

Robust cybersecurity mechanisms protect sensitive data and prevent unauthorised access. Four Ethernet interfaces per stream enable secure communication across separate networks.

Scalability and Computing Efficiency

Equipped with high-performance ARM CPUs, the RFC 7 delivers fast calculations with reduced energy consumption and scalable configurations for small to large installations.

System Configurations

- RFC 7 Volume Corrector
- RFC 7 Calorific Value Corrector

User Interface and Remote Maintenance

An intuitive touchscreen HMI with integrated Coordinate and text search simplifies commissioning, operation, and maintenance. Remote maintenance via web browser enables efficient system management.

Test Functions

Advanced test features include on-the-fly calibration, freeze functions, and functional testing.

Data Logging and Reporting

Comprehensive data acquisition and automated reporting are critical for gas operators. They enable accurate record-keeping, trend analysis, and the generation of audit and compliance reports. Modern flow computers store historical measurement data, which can be easily accessed and analysed at any time, helping to optimise plant performance and support informed decision making.

Advanced Security Features

In today's connected industrial environment, security is paramount. The RFC 7 sets new standards with state-of-the-art security mechanisms, protecting sensitive data and preventing unauthorised access – ensuring reliable measurements and seamless operations.

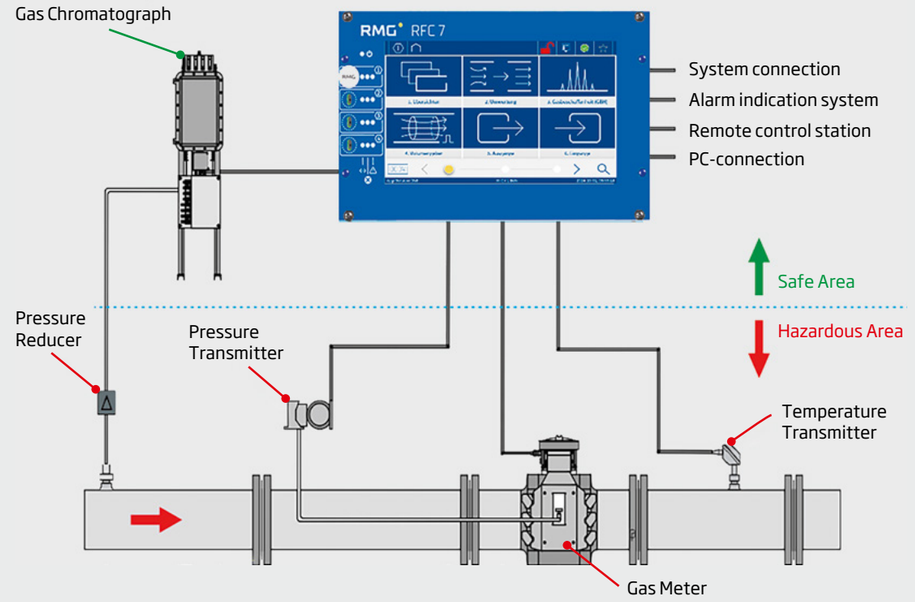
Supporting a wide range of communication protocols, it securely and efficiently transmits data to SCADA, ERP, or data acquisition systems. Multiple Ethernet connections enable network segmentation, enhance overall system security, and prevent unauthorised access. The RFC 7 delivers maximum data protection and process stability – anytime, anywhere.

Scalability and Flexibility

The RFC scales effortlessly with your needs: from individual measuring points to complex transport networks, it adapts seamlessly to every application. Thanks to flexible configuration options, companies can optimise their processes, improve efficiency, and future-proof their operations.

With the RFC 7, you don't just get a flow computer – you get a powerful, reliable, and future-ready solution that combines precision, security, and flexibility in a single device.

- ✓ Multilingual Menu Navigation
- ✓ Intelligent Search function
- ✓ Increased Processor Speed
- ✓ Higher Screen Resolution
- ✓ New 19-Inch Rack Design
- ✓ IP-Based Remote Reading
- ✓ Feather-Touch Display
- ✓ Intuitive GUI (Graphical User Interface)
- ✓ Advanced Cybersecurity Features
- ✓ Enhanced processor performance
- ✓ Optimised screen resolution
- ✓ Precise conversion to standard conditions
- ✓ Support for numerous calculation standards
- ✓ MID approved
- ✓ Real-time measurement, archiving, and logging
- ✓ ATEX and IECEx approved
- ✓ Extensive communication and integration
- ✓ Reliability and maximum measurement accuracy



Computing performance

The RFC 7 is equipped with faster ARM CPU microprocessor systems than ever before.

This enables even faster and more efficient calculation of measured values while significantly reducing energy consumption

Applications

- ✓ Transfer stations
- ✓ Compressor stations
- ✓ Gas pressure reduction stations
- ✓ Remote monitoring of stations
- ✓ Gas storage
- ✓ Transport and distribution networks
- ✓ Biogas applications

Optimising Your Gas Processes

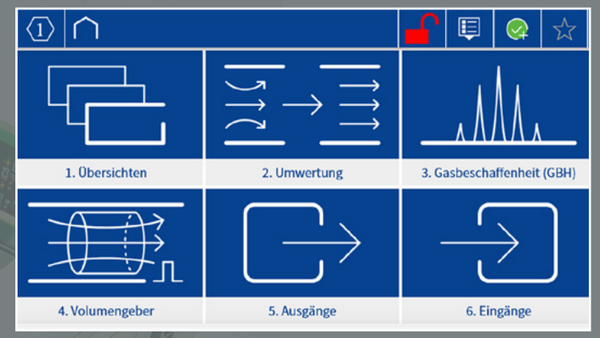
With our modern flow computers, you can efficiently manage gas processes, reduce downtime, and improve system performance–all while maintaining the highest safety and regulatory standards. Our flow computers are much more than simple measurement devices: they form the backbone of efficient, safe, and compliant gas installations. Unlock the full potential of your operations today!

Contact us to learn how our flow computers can transform your gas processes and enhance your operational efficiency.

System Configurations

The RFC 7 series is designed as a universal instrument suitable for all measurement tasks in a gas metering station. The flow computer is available in different system configurations, including:

- **RFC 7 Volume Corrector**
  Calculates gas volume under standard conditions based on pressure, temperature, and the compressibility factor (PTZ).
- **RFC 7 Calorific Value Corrector**
  Calculates gas volume under standard conditions based on pressure, temperature, and the compressibility factor, as well as the energy content according to gas quality.



User-Friendly Touchscreen Interface for Effortless Operation

The RFC 7 features an intuitive touchscreen interface designed to simplify commissioning, maintenance, and daily operation. Key information is presented clearly in well-structured tabs, allowing operators to access critical metrics at a glance. Measurement data are immediately visible in compliance with regulatory requirements, ensuring transparent and reliable monitoring.

The HMI (Human-Machine Interface) also provides a straightforward menu structure for commissioning, calibration, and maintenance. Users can access detailed measurement values, system parameters, archived data, as well as event and alarm notifications. Trend charts support long-term performance analysis, enabling efficient operation and maintenance while keeping all essential information organised and easily accessible.

Remote Maintenance

Integrated remote maintenance capabilities make system management convenient. By connecting a PC in the control room, operators can service the RFC 7 via a web browser. This allows for rapid troubleshooting and software updates without the need for on-site intervention.

Accurate Original Meter Readings

For gas meters with encoder technology, the RFC 7 can digitally transmit totaliser values. This ensures that original meter readings are captured precisely in the flow computer, maximising accuracy and eliminating errors associated with manual readings.

Test Functions

The RFC 7 simplifies testing and calibration processes with advanced test functions such as On-The-Fly calibration, Freeze, and Functional testing. These features allow operators to manually or automatically start and stop test totalisers and freeze measured values, ensuring precise analysis during operation for maximum accuracy at every step.

Error Curve Linearisation

To ensure maximum measurement accuracy, the RFC 7 features an error curve linearisation function. During high-pressure tests, the gas meter's error curve is modeled by applying interpolation points or a polynomial across the flow range. This reduces measurement deviations and ensures the system operates with greater overall precision.

Trust RMG

- Local support combined with global expertise
- Comprehensive portfolio from a single source
- Over 150 years of combined experience in the natural gas industry
- World leader in measurement and analysis technology
- Solutions and products for the transportation, storage, distribution, and utilisation of natural gas

Data recording and language selection

Data Recording

The RFC 7 features an integrated data logger. This allows all information generated and transmitted by the volume corrector to be stored reliably. The recorded operational and performance data can then be easily retrieved and analysed.

Language Selection

Designed for global use, the RFC 7 offers a multilingual software interface. Users can select from a wide range of languages, making operation and maintenance at different locations significantly easier.

- AGA 8
- GERG88S
- SGERG-Mod-H_2
- Van der Waals
- Beattie & Bridgeman

Digital inputs for measured values

Instead of relying on analog transmission, the RFC 7 enables the digital transmission of measured values (e. g., from pressure transmitters and resistance thermometers) via the HART protocol. This improves data accuracy and reliability while simplifying the integration of various measurement devices.

Bus interfaces

The RFC 7 supports multiple standardised interfaces for seamless integration into existing systems. It is compatible with Modbus (RTU/ASCII), and Modbus-IP, allowing flexible communication and easy cross-platform connectivity.

Compressibility factor (Z) calculation

The RFC 7 gas volume corrector calculates the compressibility factor (Z) for natural gas based on the most commonly used calculation methods. This ensures accurate gas volume measurements and compliance with industry standards, even under varying environmental conditions.

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RMG Messtechnik GmbH

Otto-Hahn-Straße 5
35510 Butzbach
Germany

Tel. +49 (0) 6033 897-0
Fax +49 (0) 6033 897-130
Mail info@rmg.com

www.rmg.com

More Information

To learn more about RMG's advanced gas solutions, please contact your RMG account manager or visit **www.rmg.com**