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MICRO-Z5

Single Stream
Electronic Volume Corrector

KEY FEATURES

- **Approved for legal metrology. EN 12405 and MID compliant**
- **Software compliant to Welmec 7.2**
- **Certified for use in hazardous locations**
- **AGA 8, NX19, GERG calculations**
- **Suitable for LF type meters**
- **Smart pressure transmitter support**
- **Built-in DC output for powering analog and smart sensors**
- **Scheduled periodic reporting via the GPRS interface**
- **Configurable cryout function via GPRS**
- **Remote monitoring, configuration, and diagnostics**
- **Remote firmware update**
- **Hourly, daily, monthly archive, min/max/average data**
- **Alarm and event logging**
- **Built-in optical interface**
- **RTU features with digital inputs and outputs**
- **Ultra low power consumption. 10 years typ. 5 years min. battery life**
- **Separate battery for GPRS/GSM interface**
- **Graphic LCD with LED backlight**
- **RTC with synchronization and daylight saving support**
- **Maintenance free, durable design**
- **IP65 rugged, stainless housing**
- **Push-in terminals for easy field wiring**
- **Easy to use configuration and programming software**

MICRO-Z5 is a cost effective, high accuracy, single stream volume corrector specially designed to meet the emerging requirements of gas distribution utilities.

It defines a new standard for ease of use while delivering unmatched performance and flexibility.

MICRO-Z5 incorporates wide range of features which not only meets the local metering requirements, but also provides a complete solution for gas distribution utilities to achieve fast, efficient and cost effective network operation and management.

Approved for Legal Metrology

MICRO-Z5 has been approved by NMI Netherlands for legal gas metering as per the EN 12405 standard. This involves a complete set of stringent test procedures to verify that the product performs its functions and maintains performance under severe environmental conditions.

Instrument software is also compliant to Welmec 7 Issue 5 of the MID 2004/22/EC/2011 and includes extensions L, S, T, D and I-2.

CERTIFIED
MID MODULE B

Self-Contained for Hazardous Locations

MICRO-Z5 supports completely self-contained operation in hazardous locations.

Certified DC output for powering external analog or smart type transmitters, eliminate the need for costly external intrinsically safe power supplies and zener barriers.

Broad Range of Calculations

Calculations include volume, density, compressibility, as per the AGA 8, NX19, and GERG standards.

Extensive Remote Communication Features

MICRO-Z5 offers comprehensive features for modern, Internet based remote access via GPRS networks. All configuration, reporting, monitoring and diagnostics facilities are also available remotely via designated communication channels, to form a modern supervisory distribution management system which requires very low number of visits to remote stations and fewer personnel for network operations and maintenance.

MICRO-Z5 is able to provide numerous remote communications features without having to be powered from an external power source. This gives a great advantage when remote sites are difficult to reach and mains power is unavailable. This also eliminates the need for costly solar power systems. It can perform periodic reporting at scheduled times of day via the GPRS interface, exchange data with remote center, transfer runtime and archive information, and execute scheduled tasks.

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CERTIFIED
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BASIC SPECIFICATIONS

POWER

Primary (EVCD) battery	3.6V certified battery. 10 years typ. 5 years min., under the specified operating conditions.
GPRS/GSM battery	3.6V certified battery, 5 years min., under the specified operating conditions.

GENERAL

Ambient temperature	-30˚C...+70˚C operating, -25˚C...+70˚C classification accord. to MID 2004/22/EC
Relative humidity	95% non-condensing
Dimensions	180H x 240W x 70D mm
Weight	1.3 kg
Housing	IP65 polycarbonate
Display	120 x 240 graphics LCD with backlight
Keyboard	6 front panel keys
Mechanical environment class	M3
Electromagnetic environment class	E2

CERTIFICATES AND APPROVALS

Measurements and calculations	NMI EN12405-A2, MID 2004/22/EC (T10745)
Safety	KIWA ATEX II 1 G Ex ia [ia IIC] IIB T3 Ga (KIWA 15ATEX0049X)
CE	IEC 61000-4-2 (ESD), IEC 61000-4-3 (EM), IEC 61000-4-4 (EFT), IEC 61000-4-5 (Surge), IEC 61000-4-6 (Conducted), IEC 61000-6-4 (Emission)

COMMUNICATIONS

Pluggable GPRS option board (P3)	QUAD band GSM/GPRS, TCP/IP client
Antenna	2.4 dBi internal antenna standard. External antenna optional.
SIM card holder	Internal micro SIM
Smart sensor (P2)	Half duplex, 1/8 load, fail-safe, 38400 bps, 8 bits, 1 stop bit, no parity
Optical (P4)	Full duplex, 9600 bps, 8 bits, 1 stop bit, no parity (native protocol only)
Protocols	Auto detect Native, Smart Sensor (P2 only)

METROLOGY

Pressure inputs	
Analog	PT1 input for 0/4...20mA external transmitters, reading accuracy ≤ 0.005% FS
Smart	TType LD20 sensor(s) via RS485 (P2) interface, 1...200 bara, accuracy ≤ 0.15% FS, 10m cable max.
Transmitter power	12.6V / 0.15A max.
Temperature sensor input	RTD1 input, 2 wire Pt1000 sensor, 5th order polynomial linearization, reading accuracy ≤ 0.01˚C
LF input	LF/HF input for dry reed contact, closed ≤ 10kΩ, open ≥ 500kΩ, 4Hz max., 0.2 sec on/off time min., 5m cable max.
Input scan rate	≥ EN12405-1 Par. 6.1.4
Pressure transmitter	0...1/2/5/10/20/50/100 bara, 0.25% standard, 0.1% optional, -40˚C...+100˚C, 10m cable max.
Temperature sensor	2 wire Pt1000, DIN EN 60751, class A standard, 5m cable max.

DIGITAL INPUTS

Channels	DI1-DI2, dry reed contacts, closed ≤ 10kΩ, open ≥ 500kΩ, 50ms debounce filter, 0...60s digital filter

DIGITAL OUTPUTS

Channels	DO1-DO2, open collector, 30V/0.15A max., 10Hz pulse rate max., 50ms on time min.