AERIUS

MICROTHERMAL GAS METER

SAPPEL

APPLICATION

The electronic gas meter AERIUS detects the standard volume of natural gas due to microthermal measuring principle. It can be used for domestic and industrial applications.

FEATURES

- CMOS Sensor Technology
- MID approval (PTB)
- Pressure independent
- Temperature converting
- Very low starting flow
- Differentiation between natural gas and air
- Interfaces wired M-Bus and wM-Bus Radio 868 MHz according to OMS®
- Noiseless
- Wear-free
- Compact design

DIEHL
Metering

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AERIUS

MICROTHERMAL GAS METER

FUNCTIONAL PRINCIPLE

The electronic gas meter AERIUS utilises a CMOS semiconductor sensor, which is placed in the bypass channel. The sensor is based upon a microthermal measuring principle and contains a heating element, which is flanked by two temperature sensors. The heating elemt is used to heat the gas; a uniform temperature distribution is formed, which is deferred through a gas flow. Therefore a temperature difference is generated between the two temperature sensors. The resulting measuring signal is processed by a microprocessor into a flow rate and therefore shows into standard volume (m^3).

TECHNICAL DATA

			AERIUS
Measuring principle			Microthermal - pressure independent and temperature converting
Application			Natural gas type H (EN 437), air
Measuring range		m³/h	0.04 ... 6.0
Approval			MID (DE-11-MI002-PTB004), DVGW (DG-4710CM0427), ATEX
Standard temperature for volume output		°C	0 and 15
Standard pressure for volume output		mbar	1013.25
Max. operating pressure	P_{max}	mbar	500
Measuring accuracy Q_t ... Q_{max}		%	± 1.5
Measuring accuracy Q_{min} ... Q_t		%	± 3.0
Accuracy class			1.5
Battery supply			1 x 3.6 VDC (D-Cell)
Battery lifetime			Up to 20 years
Max. accumulated volume		m³	99'999
Starting flow rate		m³/h	0.009
Heat resistance			HTB 650 °C according to EN 1359
Display			1-line LCD 8-digit

AMBIENT CONDITIONS

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Operating temperature	°C	-25 ... +55
Storage temperature	°C	-25 ... +70
Protection class		IP 54

INTERFACES

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Optical	IRDA interface for communication and testing
M-Bus	Telegram according to EN 13757-3, data reading and parametrization via two wires with polarity reversal protection
Radio M-Bus	868 MHz according to EN 13757 OMS®, unidirectional, transmission interval 10 seconds up to 1 hour

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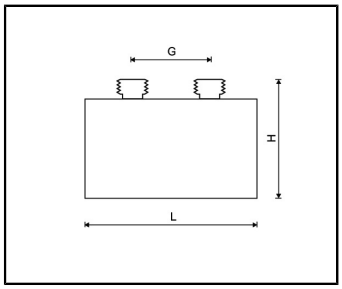
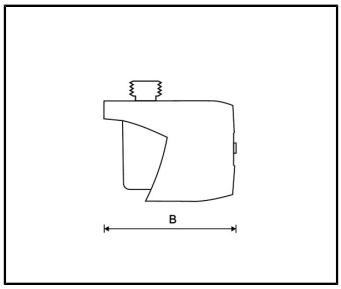
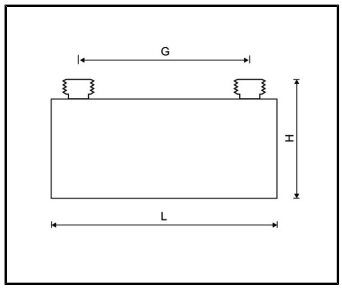
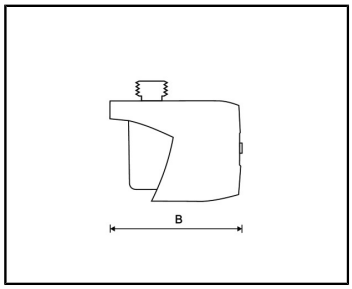
PRODUCT PICTURES

DIMENSIONS



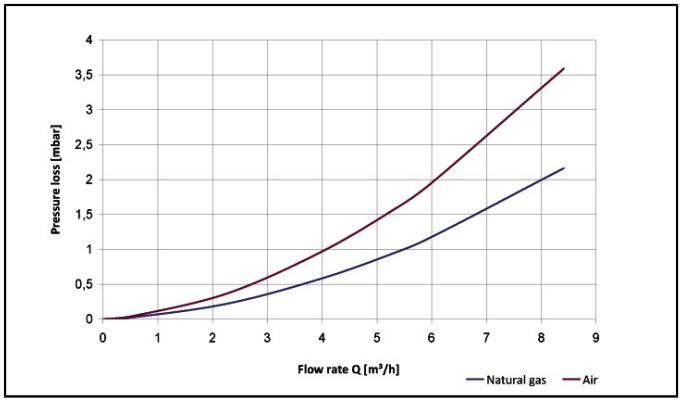


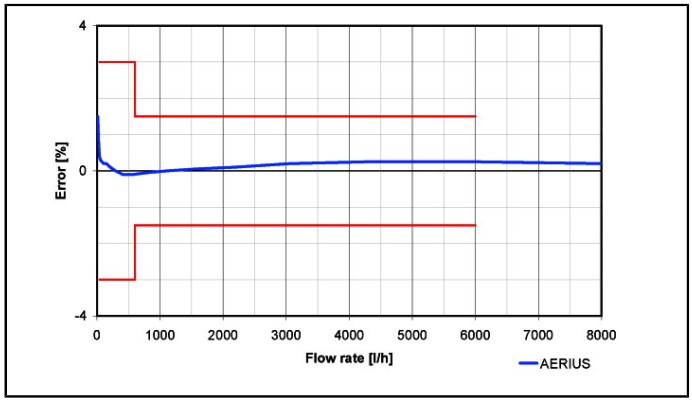




Connection distance	G	mm	Concentric	110	110	130	152.4	250
Nominal diameter	DN	mm	25	25	25	25	25	25
Overall length	L	mm	230	230	230	230	230	327
Connection thread with screw joint		Inch	G2 (DIN 3376 - AB25)	G1¼ (DIN 3376)	G7/8 (GRDF)	G1¼ (DIN 3376)	G1¼ (DIN 3376)	G1¼ (DIN 3376)
Height	H	mm	115	115	115	115	115	115
Width	B	mm	125	125	125	125	125	125
Weight		kg	2.0	2.0	2.0	2.0	2.0	2.4

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH





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Subject to technical adjustments