gasQS™ Measurement System
High Pressure

Plug and play

Metrology Swiss Made

Modbus RTU/ASCII

Mems AG's many years of experience in the field of flow measurement and gas analysis is used here to offer the customer a perfectly tailored measurement system. The heart of each set-up is based on gasQS technology. The robust correlative measuring devices are an in-house devel-opment of Mems and the answer to the increasingly de-manding tasks in dealing with combustible gases.
This is a complete solution for the use in potentially explo-sive areas. The system contains alle measurement and ATEX relevant components directly in the housing and re-quires no additional installations. The user must only pro-vide power, field bus, the measuring and exhaust gas lines. The design consists of technically proven components and is manufactured, calibrated, and tested in Switzerland.

Pictures may differ from original product.

Quickly usable | Exterior & interior | Robust design | Easy to install | Compact design

Measurement range

Output value std.[1]		**Unit**	**Range**	**Accuracy**[2]	**Repeatability**[3]
Norm Density	*d*	*kg/m³*	0.711 … 0.970	±0.4%	±0.04%
Relative density to air	*SG*	-	0.55 … 0.75	±0.4%	±0.04%
Lower calorific value	H_i	*MJ/m³*	27.0 … 43.0	±1.0%	±0.03%
Lower Wobbe Index	W_i	*MJ/m³*	35.3 … 50.3	±1.3%	±0.04%
Higher calorific value	H_s	*MJ/m³*	30.0 … 47.0	±1.0%	±0.03%
Upper Wobbe index	W_s	*MJ/m³*	39.6 … 56.5	±1.3%	±0.04%
Methane number AVL	*MN AVL*	-	60 … 100	±3.0%	±0.06%
Hydrogen content	H_2	*mol%*	0 … 100	±1.0%	±0.05%

This table shows only a selection of possible output values.

[1] The standard scope of delivery includes density plus one selectable value; up to 10 additional values are currently programmable, additional output values can be found in the order code or on request
Standard conditions 0 °C, 25 °C, 1013.25 mbar absolute
Factory settings: MJ/m3, kg/m3 at standard conditions, further reference conditions and units are stored
[2] The precision of H gases is more precise and listed in a separate data sheet. %-values refer to the measured value
[3] Statistical scatter value with 2 sigma of moving average with 8 values

Specifications

Measuring time:	≤30 seconds
Measuring interval:	Continuous, programmable in seconds
Response time:	T90 within 3 measurement intervals
Operating/storage temperature[4]:	standard -10 … +55 °C
	extended -20 … +55 °C
Ex device protection type:	Ex II 3G Ex ec IIC T4 Gc

Media

Media:	dry, neutral gases (10 µm filtering)
Load limit supply line:	+33 bar relative
Supply line pressure range:	+3.5 … +33 bar relative
Outlet line pressure range[5]:	+0 … +200 mbar relative
Gas consumption:	approx. 0.03 l_n/measurement interval, unchanged gas quality

Electrical

Output signal[6]:	Modbus-RTU (EIA-485 2-wire)
	Terminal blocks
Supply voltage:	100 … 240 VAC -15/+10 % (50-60 Hz ±6 %)
	Terminal blocks
Power consumption:	approx. 1 W

Mechanical

Gas connection:	Swagelok 6 mm external thread
Dimensions (L x W x H) :	600 x 600 x 210 mm
Weight:	30 kg
Protection class:	IP66

Accessories (optional)

Power cable measurement system	Koflex CENELEC PUR Robust black 7G1.5
Fieldbus cable measurement system	Koflex HF bus (C) PUR UL (2x2x0.25/AWG24/19)
Bus converter	Modbus RTU to customer specific bus profile
Maintenance cable	USB-RS485-M12, 5 m

[4] Medium and ambient temperature
[5] Feed into free-flowing exhaust or low-pressure line, tolerant of weather fluctuations
[6] Factory settings Modbus: 19200 bps, even parity bit + 1 stop bit, slave address: 0x01