

LABORATORY GAS METER

Dry Type

Volumetric flow meter



Applications

● Media:

Non-aggressive gases, inhaled air, boron chloride, butane, CO, dry CO₂, inert gases, forming gases, helium, isobutyl exhaust gases, engine exhaust gases*, methane, propane, oxygen, city gas, nitrogen, hydrogen

● Branches:

Physical and chemical laboratories, analyses and environmental technologies, measurement of exhaust gas on engine benches

● Functions:

Registration, controlling, monitoring, analysis

* without any guarantee

Brief information

The Experimental diaphragm gas meter is a compact gas meter, which has been designed to meet the highest demands with respect to accuracy of measurement and safety. They incorporate both innovative features and ELSTER's gas measurement know-how of many decades.

Experimental gas meters in dry version are used in the laboratory enterprise and in the industrial range. Handy form enables the universal employment in the mobile measuring laboratory and in other chemical-physical application ranges.

Working Principle

Four measuring chambers, which are separated by synthetic diaphragms, are filled and emptied periodically. The movement of the diaphragm is transferred via a gear to the corresponding crankshaft. The shaft drives the slides, which control the gas flow. The rotations of the gear are transferred, via a magnetic coupling, to the index.

The instrument dial has a scale in litres and can be read to an accuracy of $\frac{1}{10}$ of a litre. A further scale allows the user to read the consumption in litres per hour. The five-digit roller counter, which can be reset, displays the gas volume in cubic meters. On request, the meter can be fitted with a Namur pulser or a rotary pulser. It is recommended the rotary pulser is used with 100 or 1000 pulses/360°. Special versions up to 1500 pulses/360° are also available.

Installation tips

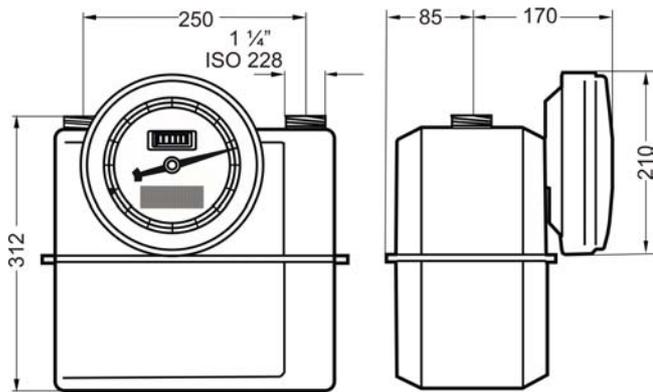
With the connection of the entrances and output exits to the gas line the counter is ready for use. It is advisable to examine the connections between laboratory gas meter and gas line for tightness.

Main Features

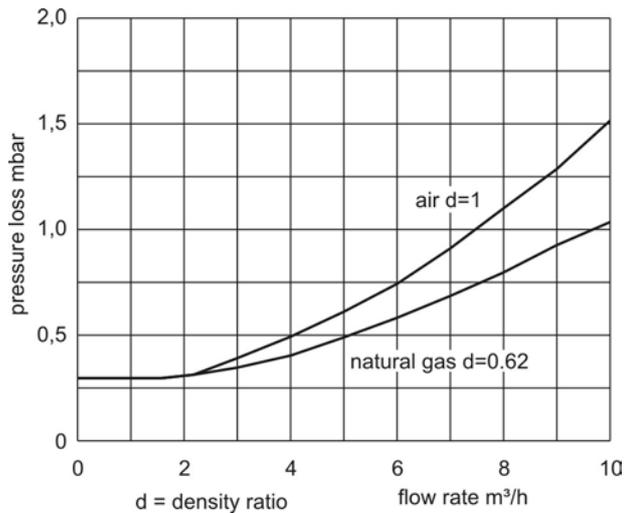
- Volumetric flow meter for laboratory and analysis technology
- Maintenance-free
- Flow rates:
 - Standard version: 0.06 – 10 m³/h, Measuring range 1:160
 - Special version: Extension of measuring range optional
- Max. Operating pressure 0.5 bar
- Overload reliability up to 120% of maximum flow rate
- Maximum measurement error up to ± 2%
- Operating temperature –20° C up to +50° C
- Synthetic diaphragm
- Special version with carrier handle
- Option: mechanical drag indicator resettable

LABORATORY GAS METER DRY TYPE

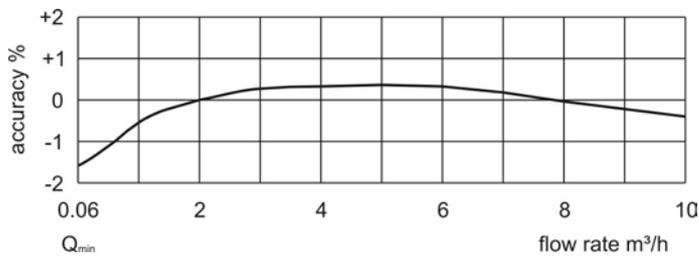
Dimensions



Pressure drop curve



Error curve



Pulsar (Option)

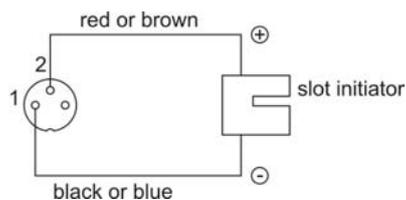
MF-sensor (Namur)

Switch characteristics –N
in accordance to DIN EN 50227

rated voltage: $U_n = 8 \text{ V DC}$ ($R_v = 100 \Omega \pm 20\%$)

Current consumption:

active area free $I \geq 3 \text{ mA}$
active area covered $I \leq 1 \text{ mA}$



Incremental pulser MOZ 30

Characteristic values:

rated voltage: +5 V DC

optionally: +24 V DC
(+/-5%)

Power input: < 50 mA

Outputs: open Collector
or npn $R_a = 2K \Omega$

Signal generator: $H = U_B - 1 \text{ V}$
 $L = < 0.5 \text{ V}$
at max. 20 mA

Output signal: rectangle

Your contacts

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