Measuring Instruments for Industrial Gases

Flow measurement of industrial gases

Flow measurement (cryogenic fluids)
Promass F 500 (Coriolis)

- For highly accurate measurement of mass flow, density and volume flow of cryogenic liquefied gases such as nitrogen (N_2), argon (Ar) or liquefied natural gas
- Applicable down to −196°C (−321°F)
- No straight inlet runs required
- Suitable for custody transfer

Flow measurement
t-mass F/I 300/500 (single gas/gas mixtures)

- Patented fully metallic, drift-free sensor provides reliable measurement over prolonged periods of time and even after repeated exposure to temperature cycling
- Optional bidirectional measurement and reverse flow detection — a first for thermal mass flowmeters!
- Heartbeat Verification allows for onboard, traceable verification without process interruption — third-party attested

Flow measurement (dry gases in distribution pipelines)
t-mass A 150/B 150 (thermal)

- For direct mass/corrected volume measurement of industrial gases without pressure or temperature compensation
- Negligible pressure loss compared with mechanical flowmeters
- High turndown (up to 100:1), ideal for identifying leaks
- No moving parts
- Low-cost insertion version (t-mass B 150) or in-line version (t-mass A 150)

Flow measurement (wet gases)
Prowirl F 200 (vortex meter)

- With integrated (optional) pressure and temperature measurement for the direct measurement and calculation of mass flow and corrected volume flow (Nm^3/h or SCFM)
- High long-term stability: no zero point drift, "lifetime" calibration factor
- Negligible pressure loss

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Pressure and temperature measurement

Pressure measurement
Cerabar PMP51B

- Pressure measuring range: up to 400 bar (6,000 psi)
- Process temperatures up to 400 °C (752 °F) with diaphragm seal
- Wireless control of the device in the process area with the SmartBlue App without process interruption
- Reduce systematic failures-error free SIL commissioning and Proof testing
- High accuracy (up to +/- 0.055%)

Temperature measurement
TH13

- For reliable temperature monitoring (e.g. if liquefied gas from the vaporizer enters the main pipeline)
- Tapered shank design allows for fast response times
- High flexibility due to modular assembly with standard terminal heads and customized immersion length

Data logging and evaluation

Data logging/evaluation
Memograph M RSG45

- Flexible, high-performance system for the visualization, storage, organization and analysis of process values
- System-compatible: supports common fieldbus systems like Modbus, Profibus DP, PROFINET or EtherNet/IP
- Integrated web server: remote access to device operation and visualization for lower maintenance costs

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