

McON Air Compact

Other measurements



Drift-free, calibration-free and maintenance-free, up to 1000 °C

McON Air

Reliable hot and dusty gas flow measurement

amperis

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Correlation-based flow measurement for hot, heavily dust-laden gases.

Product overview



Evaluation unit and probes of the Compact version

The principle: measure time, not pressure

The system measures the time of flight of the signal patterns created by the particles carried in the gas itself. Being a time measurement, it is accurate and drift-free over the whole life of the equipment, with no K-factors and no auxiliary pressure or temperature measurements.

Where dust is the problem, here it is the signal

The measurement remains accurate with dust loads up to 2500 g/m³ and gases up to 1000 °C, with no purging and no cleaning, and the plausibility of the raw signals is supervised continuously.

Main advantages

- Digital online measurement with $\pm 2\%$ accuracy.
- Gas temperatures up to 1000 °C and dust up to 2500 g/m³.
- Drift-free: no calibration, no purging, no K-factors.
- Virtually maintenance-free; payback in under 3 months.
- Turn-down ratio up to 25:1.
- Flange mounting and hot tapping without stopping the plant.



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Versions and applications



Pair of correlation probes with their junction boxes

Compact, SIL and Portable

The Compact version is the fixed single-channel solution with 4-20 mA outputs for velocity and volume flow. The SIL variant adds the SIL 2 certified version for safety loops, and the Portable version brings the same principle to a mobile kit with rugged cases, CSV logging on SD card, an additional 4-20 mA output and probes of several lengths.

Applications

- Cement: tertiary air, downcomer, vertical raw mill, clinker cooler, bypass and waste heat recovery.
- Steel: electric arc furnace off-gas.
- Power: primary and secondary air, flue gas and unburned carbon.
- Waste-to-energy and emission monitoring: total stack flow.

Installation without interruptions

The probes are flange-mounted, with hot tapping available, and the reading in m/s appears as soon as they are connected, with no prior calibration of the sensors.



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McON Air – MEASUREMENT DATA

Measuring principle	Correlation: time of flight of the gas's own signal patterns
Quantities	Gas velocity (m/s) and volume flow (m ³ /h)
Gas temperature	Up to 1000 °C (1800 °F)
Dust load	Up to 2500 g/m ³
Accuracy	±2%
Turn-down ratio	Up to 25:1
Outputs	4-20 mA for velocity and flow; additional one on the Portable version
Compensations	Unnecessary: no auxiliary pressure or temperature measurements
Logging (Portable)	SD card in CSV format, for campaigns lasting weeks

The measurement continuously monitors the plausibility of the raw signals.
Suitable for emission monitoring: accurate measurement of the total stack flow.



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McON Air – TECHNICAL SPECIFICATIONS

Type	Single-channel correlation flow measurement system
Versions	Compact (fixed), SIL (SIL 2 available) and Portable (mobile kit)
Probes	Two, of different lengths depending on the duct diameter
Mounting	Via flange; hot tapping supported
Calibration	Unnecessary, including after installation
Maintenance	Virtually none; no purging or cleaning
Outputs	4-20 mA (velocity and volume flow)
Start-up (Portable)	Plug and play, with instantaneous result in m/s
Transport (Portable)	Rugged cases, even suitable for air travel
Cost effectiveness	Usual return on investment under 3 months



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