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Analytical Products and Solutions

ULTRAMAT 23 Gas Analyzer

Continuous and economical gas measurement

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The well proven ULTRAMAT 23 gas analyzer provides a perfect and economical yet powerful continuous gas measurement. With single or dual NDIR channels up to three infrared absorbent gas components can be measured simultaneously. By means of an additional sensor Oxygen or H₂S can be added. The multi-layer IR detectors permit highly selective measurement and therefore minimizes cross interference. It is available in a 19" rack or desk top design with an internal or external pump. Results and status information are communicated via serial or analog means.

The compact well proven design combines the measurement of infrared active gases with O₂ or H₂S in a single unit. Utilizing ambient air for validation, simplifies the system solution and reduces operational cost without sacrificing performance. Proven design ensures simple maintainability. The versatility permits selection of the best combination of key components in a single unit for continuous analysis of a wide variety of measurements from combustion emission, biogas, heat treating to cement production and many others.

The ULTRMAT 23 is used for the measurement of a wide variety of components that absorb in the infrared spectrum. The multicomponent NDIR technology design permits the measurement of up to three constituents simultaneously in an economical and space saving manner. The sample gas does not come in contact with the measurement sensor and therefore cannot be contaminated. The robust and corrosive resistant measuring cell can easily be cleaned in case of fouling. The measurement of Oxygen is achieved with an electrochemical cell or for lower concentrations and wet gases, it is measured with a paramagnetic dumbbell cell. Hydrogen Sulfide is measured with an electrochemical cell. The comprehensive design includes the flow control, optionally a pump as well as relays for status indication and external stream switching. The integrated automatic calibration function utilizing ambient air enables maximum ease of use and minimum maintenance attention for effective economic and reliable operation.

Applications

Because the versatility ULTRMAT 23 is widely utilized:

- Biogas from digester, fermenters and landfills
- Rotary kiln effluent in cement industry
- Metal heat treating atmosphere control
- Combustion engine emission testing
- Vent emission monitoring
- Atmospheric control in green houses, during fruit transportation and warehouse storage
- Furnace effluent monitoring
- Medical gas monitoring

Technical Details

Number of components	up to 3 IR + O ₂ or H ₂ S
Measuring components	CO, CO ₂ , CH ₄ , C ₂ H ₄ , NO, SO ₂ , SF ₆ , O ₂ , H ₂ S
IR Smallest measuring range	Component specific: 0-50 vpm / 0-500 vpm
O ₂ measuring range	0-5% / 0-25% EC and 0-2% / 0-100% Dumbbell
H ₂ S measuring range	0-5 / 0-50 vpm
Auto Calibration	Ambient air for IR components
Housing	19" Rack Mount or Desktop (Portable)
Communication	Analog Outputs, RS485, Profibus PA/DP, SIProm GA

For more information, please contact:

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Your Benefits

- **Economic operation**
 - Multicomponent measurement often permits utilizing a single analyzer unit.
 - Validation with ambient air minimizes analyzer test gas consumption.
 - Very beneficial cost performance ratio.
- **Reliability**
 - Multi-layer detector, inert absorption cell, flow control and auto calibration promotes long term stability and minimizes cross interference.
 - Service information and logbook assists in recognizing or diagnosing maintenance.
- **Communication**
 - Simplified operating interface and remote operation and control via open interface architecture.
- **Product quality**
 - IR sensor not wetted.
 - Inert and cleanable measuring cell.
- **Measurement system solution**
 - Single source responsibility
 - Front end engineering assistance for proper system solution.
 - Best product, sample and measurement system solution
 - Installation and commissioning
 - Life time support responsibility

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