ULTRAMAT 23 CONTINUOUS GAS ANALYZER

Landfill and biogas monitoring

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Multi-Component NDIR Gas Analyzer Up to 4 gas components can be measured simultaneously including three IR active gases such as CH_4, CO_2, CO, NO, SO_2, and in addition can measure O_2 using an electrochemical cell.

Applications: Landfill gas monitoring, biomass digester sites for continuous measurement of (CH_4, CO_2), methane, carbon dioxide, and (O_2) oxygen in recovered gases from landfill and biogas sites.

Landfill sites recover large quantities of gas (methane, carbon dioxide, oxygen, nitrogen) along with other trace constituents. Methane as renewable energy is consumed as a fuel to generate electricity while also reducing the carbon footprint.

A gas fired generator in continuous operation consumes the recovered gas stream for fuel to produce the electricity and must be operated at optimum efficiency. In order to monitor the concentration of methane, carbon dioxide, and oxygen in the recovered gas stream an analyzer instrument is utilized. The methane concentration in the gas stream can vary and this measurement is critical to the generator control system so that adjustments to speed and air/fuel ratio set points can be updated in order to minimize emissions and optimize electricity generated. For these reasons it often is required and makes sense to monitor the gas in a continuous fashion and therefore an analyzer is needed that requires minimal operation and maintenance attention, and that it is reliable through long periods of unmanned plant operation. The Ultramat 23 continuous gas analyzer capable of (real-time) measuring up to (4) gas components at once is the right choice for the task at hand.

Ultramat 23 specification

- Zero -Ambient air for O_2 span and CO_2 and CH_4
- Span -Calibration standard gas mixture of CH_4, CO_2, in N_2 balance
- Simple menu driven interface via HMI
- Per component 4-20ma outputs
- 8 freely programmable relay outputs
- 3 binary inputs
- RS-485 Serial communication port
- 100Vol% CH_4 0-100Vol% CO_2
- 0-25Vol% O_2
- Repeatability: += 1% of measuring range for (CH_4, CO_2) += 0.05% for O_2
- Zero Drift: Negligible with AUTOCAL enabled. < 2% of measuring range/week.
- Span Drift: Negligible with AUTOCAL enabled. <2% of measuring range/week.

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1-800-448-8224
info.us@siemens.com

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For more information, please contact:
Siemens Industry, Inc.
5980 West Sam Houston Parkway North
Suite 500
Houston, TX 77041
Phone: 713-939-7400
Email: ProcessAnalyticsSales.industry@siemens.com