THE STANDARD OF EXCELLENCE

WDG-V SERIES
COMBUSTION ANALYZERS
AMETEK Process Instruments is a worldwide manufacturer of process analyzers and instrumentation. We focus our experience on designing new, innovative analyzers that help our customer achieve the highest levels of productivity and quality. It is through this focus that we have created some of the most capable technologies in the world. Our primary focus in analyzer design is reliability. We understand that you must have confidence that the analyzer will provide the information that you need when you need it.
WDG-V SERIES
COMBUSTION ANALYZERS

Reliability

The WDG-V is designed with measurement redundancy and continual diagnostic functions that analyze the health of the instrument and validate the proper combustion measurements.

These features provide high safety availability with low probability of failure which insures maximum reliability and reduces process risk.

Safety

Continual diagnostic checks while in operation allow the analyzer to send out alerts when there is an issue with the combustion measurement.

Service alarms inform the control system or safety implemented system (SIS) if inspection or service is required.

Communication through MODBUS RTU or Fast Ethernet with everything needed for diagnostics, calibration, verification and error notification for the SIS.

Maintenance

All components are easily serviceable without having to remove the analyzer from the process flange.

The analyzer will pro-actively let you know when components need to be serviced.

Ethernet connection allows remote performance monitoring for maintenance LANs or asset management systems (AMS).

WDG-V
O₂ Analyzer

WDG-VC
O₂ Analyzer and Combustibles (COe)

WDG-VCM
O₂, Combustibles (COe), and Hydrocarbon

RoHS COMPLIANT
Modular snap in terminal strips with laser etched labels simplify wire connections. Recessed electronics and bottom conduit connections eliminate problems due to conduit stress, moisture ingress, and improve the reliability and integrity of the sensor connection in high radiant heat areas.
Flow Sensor Accuracy

The WDG-V analyzer uses a thermal dispersion flow sensor to accurately measure the analyzer sample flow across the Oxygen, COe, and Hydrocarbon sensors to guarantee that proper flow is maintained for accurate sensor measurements. The flow is measured every 90 seconds to ensure proper signal measurement. Sample system integrity is continually monitored from sample probe tip to sensor exhaust.

Aspirator Design

The WDG-V series of combustion gas analyzers features a new and improved aspirator design which incorporates larger orifices that reduce the chance of particulate interference. Instrument air or nitrogen gas aspirator consumption is reduced by over 20%.

Accurate Combustibles (COe) & Hydrocarbon Monitoring

The COe and Hydrocarbon sensors are mounted in a thermally regulated stainless steel block where temperature is controlled to within 0.1°C to keep sensor temperature variations to a minimum regardless of ambient air temperature extremes, to maximize measurement accuracy.

Sensor Temperature Stability

The sensor enclosure is lighter with a smaller footprint than previous designs. The weight has been decreased by 30% and it features a hinged door IP65 enclosure as standard. A lightweight, high "R" value insulation blanket inside the enclosure provides sensor temperature stability throughout wide ambient air temperature fluctuations.
Asset Management

The WDG-V series of analyzers continually monitor the performance and health of the analyzer and provide details regarding the analyzer’s proper operation and the interpretation of its measurements through MODBUS RTU and Fast Ethernet transmission.

Date and Time Stamped Alarm Logs

AMEVision HMI Display Unit

Enables the convenience of site calibration and communication with the analyzer via MODBUS RTU, TCP/IP Fast Ethernet via RJ45, USB port and 4.2” VGA display.

AMEVision offers:

• End of life prediction of zirconium oxide cell and combustible detector with warning
• Stability Indicator during the calibration process
• Analog Output verification of accuracy
• Individual controls of analog outputs and relays for diagnostics
• Trend Data logging
• Cell enclosure and electronics temperature monitoring
• Up to 8 sensors can be configured to one AMEVision

CERTIFICATIONS

AMEVision Host Display
Class I, Div 2, Groups A-D; Class I, Zone 2, Group IIC
IECEX, EX nA NCIIIC

Ambient Temperature
-20°C to +55°C

Temperature Classification
T4
**Versatility**

Designed for fast response in a wide variety of combustion applications, these analyzers mount directly or remotely on the combustion process to provide a continuous measurement of excess oxygen, combustible, and hydrocarbon levels in combustion exhaust gas. They are suitable for gas streams up to 3000°F (1648°C). They are available in a range of mounting styles that match process connections. For hazardous area locations, purged or explosion proof versions are available.

**WDG-V DIVISION II, Zone 2 Series**

*Class I, Division 2, Groups B, C, D IP65*

- **Enclosure Protection:** NEMA 4X (IP65)
- **Ambient Temp. Range:** -20°C to 60°C
- **Temperature Code:** T3
- **IECEx Certificate of Conformity:** -20°C < Ta < 60°C
  - EX pz IIC T3 Gc
  - IECEx ETL 13.0003X
AMETEK Thermox WDG-V extractive combustion analyzer offers industry leading safety and support. First in its class to be designed for SIL-2 implementation in safety instrumented systems. The WDG-V provides a complete solution for combustion control and safety.

Control and Safety

AMETEK Thermox WDG-V extractive combustion analyzer offers industry leading safety and support. First in its class to be designed for SIL-2 implementation in safety instrumented systems. The WDG-V provides a complete solution for combustion control and safety.

Hazardous Environments

New enclosure design certified for IEC Zone 1 requirements. Threaded IP65 (NEMA 4X), weather resistant, aluminum with powder coat, white, EXd flameproof. Certificate No. Ex II 2G EXd IIC T3 Gb / IECEx ETL 16.0028X.

Self Contained

Integral unit with no purge required, self-contained housing that provides a new layer of safety. Integral sample flow sensor standard with Zone 1.

Range of Measurement

Measurements of O₂, COe and Hydrocarbon in one unit.

Connectivity

Digitally transmitted information via MODBUS and Ethernet that can be used for predictive and proactive asset management.