AMETEK®
PROCESS INSTRUMENTS

MEASURES: O_2, COe

PRODUCT DATA SHEET

WDG-VC

Flue gas oxygen and combustibles analyzer

The WDG-VC has a close-coupled extractive design that allows for fast response in a wide range of flue gas applications up to 1648°C (3000°F).

Reliability

The WDG-VC is designed with measurement redundancy and continual diagnostics functions that validate the health of the analyzer and validate the proper combustion measurements.

Safety

SIL-2 approved, capable for use in SIS combustion safety systems. Onboard diagnostics provide low probability of undetected analyzer faults. Communication through Modbus RTU or Fast Ethernet allows remote communication for diagnostics, calibration, verification, and error notification for the safety system.

Maintenance

This completely field-serviceable analyzer also has an Ethernet connection that allows remote performance monitoring for maintenance LANs or Asset Management Systems (AMS).

KEY BENEFITS

- Internal flow sensor for probe tip to exhaust port sample system confidence
- Accurate combustibles (COe) monitoring
- Versatility in flange mounting options, digital communications and data management
- Completely field-serviceable

APPLICATIONS

- Process heaters
- Steam boilers
- Thermal oxidizers

KEY MARKETS

- Refining and petrochemical
- Power and steam generation
- Furnace and kilns

PERFORMANCE SPECIFICATIONS (Moisture applications)

Principle of operation	Zirconium oxide for net oxygen (O_2) measurement and dual hot-wire catalytic detectors for COe
Output range	O_2: From 0-1% to 0-100% COe: 0-500 parts per million (ppm) to 0-10,000 ppm, 0-2% to 0-5% Hydrocarbon: 0-5%
Accuracy	O_2: ±0.75% of measured value or ±0.05%, whichever is greater COe: ±2% of full-scale output range
Response	O_2: 90% of a step change < 11 seconds with Flame Arrestors COe: 90% of a step change < 20 seconds with Flame Arrestors
Aspirator air requirements	3 SCFH typical at 3 to 6 psig, instrument air or nitrogen (N_2)
Analog output	Three isolated linear current outputs for O_2, combustibles. Each output can be 4-20 mA, 0-20 mA, 20-4 mA or 20-0 mA and is fully scalable. NAMUR configurable. Hold or track during calibration. Max. load 1200 Ω
Alarms	Five independent NO alarms Set relays to energize or de-energize on alarm
Contact rating	0.5A, 30V, 10VA max. non-inductive load, AC or DC
Digital communication	2 wire MODBUS RTU, 57.6 KBaud
Configuration	MODBUS RTU, AMETEK configuration software, or AMEVision HMI
Diagnostics	Low sample flow, cell and detector age tracking, cell resistance, calibration required, analog current verification
Sample pressure	±6 in. water gauge
Max. sample dewpoint	200°C (392°F)
Max. flue gas temperature/ probe type/lengths	704°C (1300°F)/316 SS/910 to 2740 mm (36 to 108 in.) 1024°C (1875°F)/310 SS/910 to 2740 mm (36 to 108 in.) 1648°C (3000°F)/Hexoloy®/600 to 1820 mm (24 to 72 in.)
Environment	Ambient temperature: -30 to 65°C (-22 to 149°F) Relative humidity: 5 to 95%, non-condensing
Enclosure	Hinged IP65 (NEMA 4X), weather-resistant, stainless steel, purged, and floor mount versions available. UL Class I, Div 2, Gp B, C, D or ATEX II 3G Ex pz IIC T3 Gc and IECEx Zone 2, T3 with purge
Power requirements	115 VAC, ±10%, 47-63 Hz, 740 VA max.; 230 VAC, ±10%, 47-63 Hz, 740 VA max

New England - ETA Process Instrumentation
119 Foster Street, Bldg #6
Peabody, MA 01960
Tel: (978) 532-1330
www.etapii.com
sales@etapii.com

Upstate NY - Martech Controls
2000 Teall Avenue
Syracuse, NY13026
Tel: (315) 876-9120
www.martechcontrols.com
sales@martechcontrols.com