

PRODUCT DATA SHEET

WDG-IVC 0-500 PPM

Flue gas oxygen & combustibles analyzer

The WDG-IV analyzers measure oxygen (O₂), combustibles (COe), and methane (CH₄) in natural gas-fired applications. They are ideal for gas-fired power boilers or for boilers using natural gas during start-up and shutdown. With these analyzers, you can monitor O₂ and combustibles for maximum fuel efficiency.

The WDG-IVC 0-500 PPM analyzer features a close-coupled extractive design for fast response in flue gases up to 1648°C (3000°F). A thick-film, laser-trimmed combustibles detector provides ±25 parts per million (ppm) accuracy between 0 to 500 ppm. This analyzer is recommended for applications with natural gas and light oil as fuel and is available with a Series 2000 control unit.



KEY BENEFITS

- Hot/wet analysis
- Measurement of COe for combustion optimization and boiler safety
- Easy to remove probe
- Weatherproof, stainless steel sensor enclosure

APPLICATIONS

- Combustion optimization
- Safety
- Pre-heater

KEY MARKETS

- Refineries
- Petrochemicals
- Industrial boilers

PERFORMANCE SPECIFICATIONS

Sensor Specifications

Principle of operation	Net O ₂ and combustibles analyzer using zirconium oxide (ZrO ₂) for O ₂ and a catalytic detector for COe Completely field serviceable
Output range	O ₂ : From 0-1% to 0-100%, COe: From 0-500 ppm to 0-10,000 ppm or from 0-1% to 0-5%
Accuracy	O ₂ : ±0.75% of measured value or ±0.05% O ₂ , whichever is greater COe: ±25 ppm between 0 to 500 ppm or ±5% of full scale output range
Response	O ₂ : 90% of a step change <13 seconds, COe: 90% of a step change <30 seconds
Aspirator air requirements	10-20 scfh (4.72 - 9.4 L/min.) at 15-100 psig (1.05 - 7.04 kg/cm ²)
Maximum flue gas temperature/ probe type/lengths	704°C (1300°F)/316 SS/36"-108" (910 to 2740 mm) 1024°C (1875°F)/310 SS/36"-108" (910 to 2740 mm) 1648°C (3000°F)/Hexoloy®/24"-72" (610 to 1820 mm)
Maximum sample dewpoint	200°C (392°F)
Sample pressure	±10 in. water gauge
Environment	Ambient temperature: -20 to 71°C (-5 to 160°F); -20 to 60°C (-5 to 140°F) with Division 2 option Relative humidity: 10 to 90%, non-condensing
Enclosure	Hinged, stainless steel, weatherproof TYPE 4X (IP65). Flame arrestors standard. Optional NEC Class I, Division 2 available
Power requirements	115 VAC, ±10%, 47-63 Hz, 600 VA max. 650 VA max. floor mount version); 230 VAC, ±10%, 47-63 Hz, 1850 VA max. (1900 VA max. floor mount version)

Series 2000 Control Unit Specifications

Display	Four-line x 20-character vacuum fluorescent. Displays O ₂ , % or ppm combustibles, time and date, cell temperature, user programmable text, thermocouple mV or cell mV. Password protection, programmable pressure compensation and context-sensitive help are also provided
Analog output	Two isolated linear current outputs for O ₂ and one for COe. Select O ₂ , COe, cell temperature, thermocouple mV or cell mV. Each output can be 4-20 mA, 0-20 mA, 20-4 mA or 20-0 mA and is fully scalable Hold or track during calibration and select degree of damping. Maximum load 1200 ohms
Alarms	Two independent O ₂ alarms, high or low selectable. One alarm can be assigned as O ₂ , calibrate or verify Two high COe alarms. Set relays to energize or de-energize on
Contact rating	0.5A, 30V, 10VA max. noninductive load, AC or DC
Diagnostics	Watchdog timer and service alarms System test for A/D, RAM, EEPROM and keypad Display line four reserved for full text error and diagnostic messages 20-entry event log
Communications	RS-485, two-way addressable
Environment	Ambient temperature: -10 to 50°C (14 to 122°F) Relative humidity: 10 to 80%, non-condensing
Power requirements	Nominal 115-230 VAC ±10%, 47-63 Hz, 75 VA max
Enclosure	Standard weatherproof TYPE 4 (IP 65) wall/panel mount Optional GP (General Purpose) wall mount, GP 19" rack mount, GP panel mount, or stainless steel weatherproof TYPE 4X (IP65) wall/panel mount All are UL Listed for NEC Class I, Division 2 areas. Purged and explosion-proof versions also available
System compliance	EMC Directive: 2004/108/EC, Low Voltage Directive: 73/23/EEC

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, NY 13026
Tel: (315) 876-9120
www.martechcontrols.com
sales@martechcontrols.com



© 2018, by AMETEK, Inc. All rights reserved. Printed in the U.S.A. F-0376 Rev 6 (0818)
One of a family of innovative process analyzer solutions from AMETEK Process Instruments. Specifications subject to change without notice.



To find out more or request a quote visit our website

ametekpi.com