

ADVANCED MICRO INSTRUMENTS
An ENPRO Company

WATCHDOG

OXYGEN ANALYZER

PERFECT BALANCE OF MEASUREMENT PERFORMANCE & VALUE

The **WATCHDOG** is an advanced Trace or Percent Oxygen Analyzer designed to include all the essential features and deliver a high level of accuracy and reliability for sheltered installations in Class 1, Div. 2 areas at a lower price point.

ELIMINATOR CELL BLOCK FOR A LEAK-FREE DESIGN

The proprietary **ELIMINATOR CELL BLOCK** provides a unique, compact sample system approach and a flow- efficient sensor pocket machined into a solid metallic block. Precision cross-drilled intersecting gas passages eliminate the need for long lengths of tubing and leak-prone compression fittings. Additionally, a uniquely engineered 3-way selector valve, a metering valve, and flow meter are all integrated into the **ELIMINATOR CELL BLOCK**.

COMMON APPLICATIONS

- NATURAL GAS
- AIR SEPARATION
- BIOGAS

PROPRIETARY SENSOR TECHNOLOGY

AMI's proprietary oxygen sensors deliver unmatched performance for ultra-fast response times, accuracy, and reliability. Every sensor undergoes an intense battery of tests to ensure they meet our strict quality control standards. Our trace and percent oxygen sensors operate safely, accurately, and reliably in inert or flammable gas streams even when containing high levels of H_2S, up to 500 ppm H_2S, for their entire warranted life. This eliminates installing a maintenance intensive H_2S scrubber that competitive oxygen analyzers require!

EXCEPTIONAL VALUE

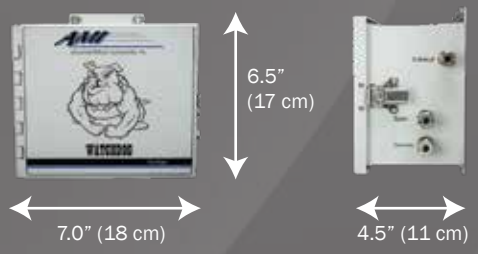
The **WATCHDOG** is a perfect low-cost solution for O_2 measurements requiring a complete sample system and limited key features. It has been designed for mounting inside a shelter or metering building in Class 1, Div. 2 areas and operates on 12–24VDC power. Its combination of advanced AMI technologies, reliability, intuitive controls and essential features make it a very cost-effective oxygen analyzer option for select applications.

WATCHDOG

PHYSICAL & ELECTRICAL SPECIFICATIONS

WEIGHT	MOUNTING	GAS CONNECTIONS	WETTED PARTS
6.0 lbs (2.72 kg)	Wall Mount or 2.0" Pipe	¼" 316 S.S. compression fittings	316 S.S. fittings, electro-less nickel-plated cell block, gold-plated contacts, acrylic flow meter & O-rings (Viton, kalrez, or Buna-N)

POWER	
DC	AC
10 – 28 VDC < 50 mA max @12VDC	Not Available



OPERATIONAL SPECIFICATIONS

Note: 2-year Warranty for Parts & Labor for any defects in materials or workmanship. 6-month Warranty for oxygen sensors

OUTPUT RANGES (USER SELECTABLE)		AMBIENT OPERATIONAL TEMPERATURE	FLOW RATE (RECOMMENDED)	INLET GAS PRESSURE
0 – 10 ppm	0 – 5000 ppm	25°F to 115°F (–3.9°C to 46°C)	0.1 to 2.0 SCFH (0.05 – 1.0 Lpm)	0.5 – 150 psig (0.03 – 10.3 bar)
0 – 50 ppm	0 – 1.0%			
0 – 100 ppm	0 – 5.0%			
0 – 500 ppm	0 – 10.0%			
0 – 1000 ppm	0 – 25.0%			

SENSOR & ANALYZER PERFORMANCE SPECIFICATIONS

T-2 SENSOR	T-4 SENSOR	P-3 SENSOR	P-4 SENSOR	P-5 SENSOR
Max Range: 0 –10,000 ppm **Special Conditions**: <10 ppm H_2S 100% CO_2	**Max Range**: 0 –10,000 ppm **Special Conditions**: <500 ppm H_2S 100% CO_2	**Max Range**: 0 –25% **90% upscale response**: 30 sec **Special Conditions**: Up to 100% CO_2	**Max Range**: 0 –100% **90% upscale response**: 30 sec **Special Conditions**: Enriched Oxygen	**Max Range**: 0 –25% **90% upscale response**: 30 sec **Special Conditions**: <500 ppm H_2S, 100% CO_2

90% UPSCALE RESPONSE TIMES FOR SPECIFIC RANGES		REPEATABILITY T-2/T-4	REPEATABILITY P-3/P-4/P-5	APPROVALS
<25 sec for 0.0 – 10 ppm	<10 sec for 10 ppm – 25.0%	±1% of selected range or ±0.2 ppm of oxygen, whichever is greater	±1% of selected range or ±0.1% of oxygen, whichever is greater	Designed to meet requirements of Class I, Div. 2, Groups C,D applications

ANALYZER KEY FEATURES

ELIMINATOR CELL BLOCK	Contains a Complete Sample System with all components, including the flow meter, metering valve, and 3-way Selection (Sample/Span/Off) Valve, fully integrated
ANALOG OUTPUTS	1 – 5 VDC and 4 – 20mA isolated output signals and Modbus bi-directional RS485 communication
COMMAND CENTER	Software that works across AMI's Analyzers and gives users access to advanced functions: ▸ Calibration Details ▸ Data Logger (records O_2 measurements, temperature, and power)
ACCESSORIES	▸ Demister ▸ Analyzer Guardian

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