



AIM Model 5600

AIR INSTRUMENTS & MEASUREMENTS, LLC.

DUV In-Situ Across-Stream Gas Analyzer, for Process and Compliance Monitoring

**MEASURING any or all:
NO, NO₂, NH₃, HONO,
SO₂, Cl₂, ClO₂, BTX, and others**

The AIM Model 5600 in-situ gas analyzer incorporates the most advanced technology available, and is derived from AIM's popular E6200 EPA compliant NDIR analyzer.

The Model 5600, like the extractive Model 5000, employs DOAS (differential optical absorption spectroscopy), with a patented PLS pattern recognition processing of the dispersive UV spectral signature, with digital signal processing and communications. Outputs include 4-20 MA analog, Programmable digital outputs, and modem interface [optional]

The Model 5600 is available as a high resolution limited wavelength range analyzer, or low resolution broad wavelength range, or the combination of the two. The high sensitivity achieved with UV spectroscopy allows measurements typically from ppb to ppm levels for longer pathlengths, and low ppms to % levels for short optical pathlengths

The Model 5600 was developed from more than 30 years of practical field in-situ IR and UV experience, in over 4,000 installations in 35 countries.

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FEATURES

- ! **In-Situ, Across-Stream** - No sample contact
- ! **Fast Response Time** - Fraction of a second – allows prompt process analysis and adjustments.
- ! **High Sensitivity** - Accurate measurements from mid ppb level concentrations and higher.
- ! **High Precision** - $\leq 1\%$ of Range
- ! **High Accuracy** - $\leq 1\%$ of Range
- ! **Low Drift** - $\leq 1\%$ of Range over 24 hours [zero and span]
- ! **EPA Compliant** - With daily zero & span checks, and capable of automatic CGAs.
- ! **Reliable Design** - The Model 5600 Analyzer features a simple, low-maintenance, rugged design. The dispersive system with a 2048 array detector and no moving parts, and the PC based signal processing insure long-term trouble-free operation.

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MODEL 5600 IN-SITU UV ANALYZER

Principle of operation: UV absorption spectroscopy; pattern recognition
Differential Optical Absorption Spectroscopy [DOAS]

Sampling Technique: The Sample is measured in place in the Stack at temperatures to 300°C

Analysis and Spectral Ranges: The Model 5600 UV absorption analyzer takes a complete spectra over the range selected, typically from below 200 nm to above 450 nm

NOX measurement: NOX is the sum of NO and NO₂, 5600 can measure each of these separately and sum them, offering three continuous outputs, NO, NO₂ and NOX, if desired

Measurement Ranges: Depends upon optical pathlength, from ppb to % levels. NO 10ppm.M, SO₂ 5ppm.M, NH₃ 5ppm.M

Path Length: Less than 1 meter if Dust > 50 Mg/m³
(use 9050 for high dust applications)

Accuracy: Better than ±2% of minimum full scale

Repeatability: Better than ±1% of minimum full scale

Linearity: Better than ±1% of minimum full scale

Zero Drift: Less than ±2% of minimum full scale, per 30 days

Span Drift: Less than ±2% of minimum full scale, per 30 days

Analyzer Response time: 90% FSD within 1 minute

Output/Input: 6 or 12 Analog Outputs 4-20mA or 0-5VDC
and eight Analog Inputs 4-20mA or 0-5VDC

Signal Processing: Digital



5600 TRANSCEIVER UNIT

Ambient temperature: 32°F to 105°F (0°C to 40°C) standard;
(Extended range available with temperature control)

Power: 115 V ±10%, 10 amp, 50/60 Hz; 230 V ±10%, 5 amp, 50/60 Hz

Size: 60 cm x 60 cm x 70 cm; **Weight:** 35 Kg



Purging Blower : Optional

Function: Purges Transceiver and the Retro-Reflector unit Windows continuously, one Box for each

Power: 115 V ±10%, 10 amp, 50/60 Hz; 230 V ±10%, 5 amp, 50/60 Hz

Mounting: Rail/Wall Mounted

Air connection: 0.5 inch NPT Hose

Size: 24 x 24 x 12 inches

Weight: 10 Kg

RETRO-REFLECTOR

Function: Folds the beam (1.5 inches Dia) from the Transceiver unit back.

Mirrors: Corner-cube type, Borosilicate with Aluminum reflective coating

Mounting type: Flange mounted (ANSI 150 LBS, 4 inches Std.)

Size: 9.5 x 10.5 x 12 inches (including air-purge cast)

Weight: 5 Kg