

SO₂ Analyzer Model 6020



Overview

The Model 6020 SO₂ Analyzer provides an accurate and convenient means of measuring low levels of Sulfur Dioxide in ambient air.

Principle of Analysis - UV Fluorescence Method

The Model 6020 measures sulfur dioxide by detecting the fluorescence of SO₂ when exposed to ultraviolet (UV) radiation at wave lengths near 214 nm. The SO₂ molecule fluoresces (reradiates) at longer wave lengths of approximately 360 nm, which is detected and measured by a photomultiplier tube (PMT). Narrow band optical filters are used to separate the 214 nm excitation light from the 360 nm fluorescing light. The Model 6020 consists of a sample inlet, pump, hydrocarbon scrubber (kicker), optics, UV lamp, reaction chamber, PMT, UV detector, and associated electronics.

Advanced, easy to use, menu-driven software allows access to sample conditions and diagnostics and the strip chart feature allows the user to view a time series plot for SO₂ readings.

The 6020 Analyzer offers a bright color display, data logging capability and advanced communications via Ethernet, USB and RS-232

Standard Features

- ▶ Ranges: User selectable up to 20ppm (500 ppb US EPA Approved)
- ▶ Large color TFT LCD display measured concentrations and graphs/charts
- ▶ Various user interface options including touch screen, front panel keypad, external keyboard and mouse
- ▶ Menu driven software
- ▶ Ethernet (TCP/IP), USB and RS-232 ports
- ▶ Front panel USB connections for peripheral devices and firmware updates
- ▶ Automatic temperature and pressure compensation
- ▶ Comprehensive internal data logging
- ▶ Modbus protocol
- ▶ Universal Line voltage in the range of 90-260 VAC, 50/60Hz

Optional Feature

- ▶ Zero/Span ports
- ▶ Additional gas measurement module
- ▶ Four independent analog outputs with flexible ranges
- ▶ 8 digital input/outputs (I/Os)



SPECIFICATIONS

Specifications subject to change without notice

EPA Approved Ranges	User selectable up to 20ppm (500ppb EPA Tested)
Noise	<0.0005 ppm
Lower Detectable Limit	<0.3 ppb
Zero Drift	<±0.001 ppm per 24 hours
Span Drift	<±1 % Full Scale per 24 hours
Cycle Time	1 sample/second
Precision	<1 % of Full Scale
Linearity	<1 % of Full Scale
Sample Flow Rate	0.4 to 0.8 LPM
Operating Temperature	5° to 40° C (EPA approved range)
Power Requirements	200 Watts (depends on analyzer)
Voltage Output Ranges	0.1V, 1V, 2V, 5V, 10V, user-selectable
Input/Output Ports	0.1V, 1V, 5V, 10V or other, user-selectable with over & under range
Physical Dimensions (HxWxD)	5.25 in. x 17 in. x 22.5 in. (133 x 432 x 571.5 mm)
Weight	25 lbs. (10.3 kg)
Certification	US EPA: RFSA-0616-237

- ▶ Specifications subject to change without notice
- ▶ All Specifications are based on typical lab conditions



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