

TELEDYNE ANALYTICAL INSTRUMENTS

6400E



UV Fluorescence SO₂ Analyzer

Features

- Ranges are 0-50 ppb to 0-20 ppm, user selectable
- Dual ranges and auto ranging
- Microprocessor controlled for versatility
- Multi-tasking software allows viewing test variables while operating
- Continuous self checking with alarms
- Dual bi-directional RS-232 ports for remote operation (optional RS-485 or Ethernet)
- Digital status outputs indicate instrument operating condition
- Adaptive signal filtering optimizes response time
- Temperature and pressure compensation
- Internal Zero & Span check (optional)
- Internal data logging with 1 min to 365 day multiple averages
- Critical orifices provide flow stability

Teledyne's 6400E uses a proven UV fluorescence principle coupled with state-of-the-art microprocessor technology to provide accurate and dependable measurements of low level SO₂.

Exceptional stability is achieved with the use of an optical shutter to compensate for PMT drift and a reference detector to correct for changes in UV lamp intensity.

A hydrocarbon "kicker" and advanced optical design combine to prevent inaccuracies due to interferences. The multi-tasking software gives real time indication of many operational parameters and provides automatic alarms if diagnostic limits are exceeded.

Advanced Performance

The 6400E includes a built-in data acquisition capability using the analyzer's own internal memory. This allows the logging of multiple parameters including averaged or instantaneous concentration values, calibration data and operating parameters such as flow, pressure and lamp intensity.

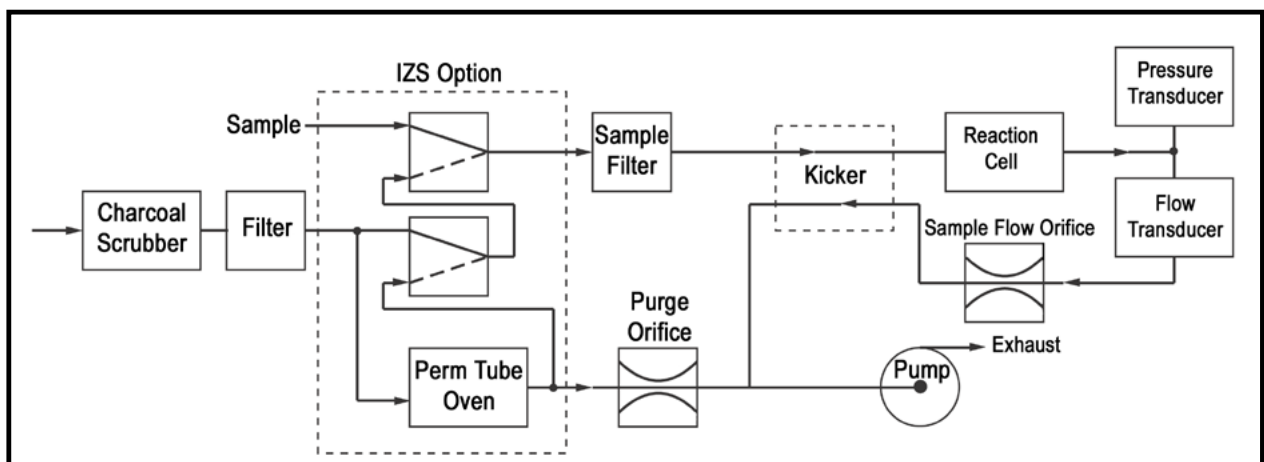
Stored data are easily retrieved through the serial port or optional Ethernet port via our software or from the front panel, allowing operators to perform predictive diagnostics and enhanced data analysis by tracking parameter trends.

The 6400E combines lighter weight, rugged construction, ease of use, powerful diagnostics, modular design and outstanding performance to meet air monitoring requirements.

Applications

- Detect low trace levels of SO₂ in medical air and medical oxygen to satisfy USA and European pharmacopeia requirements.
- Detect trace levels of H₂S in methane-rich Bio-Gas streams used as the feed for fuel cell power generation devices. The H₂S impurities, which can poison the platinum based catalyst, are converted into SO₂ on a 1:1 basis via Teledyne's THC converter. The resultant converted sample gas is then fed to the 6400E for continuous analysis purposes.

6400E Schematic



6400E FLUORESCENT SO₂ ANALYZER

SPECIFICATIONS

Ranges:	0-50 ppb to 0-20,000 ppb full scale, user selectable; dual ranges and auto ranging supported
Units:	ppb, ppm, µg/m ³ , mg/m ³
Zero noise:	<0.2 ppb (RMS)
Span noise:	<0.5% of reading (RMS) above 50 ppb
Lower Detectable Limit (LDL):	0.4 ppb
Zero drift:	<0.5 ppb / 24 hours, <1 ppb / 7 days
Span drift:	<0.5% of FS / 24 hours, <1% of FS / 7 days
Lag time:	20 seconds
Rise and Fall time:	<120 seconds to 95%
Linearity:	1% of full scale
Precision:	0.5% of reading above 50 ppb
Sample flow rate:	700 cm ³ / min ±10%
Operating temp range:	5 - 40°C (with EPA equivalency)
Dimensions (HxWxD):	7" x 17" x 23.5" (178 x 432 x 597 mm)
Weight:	35 lbs (16 kg)
Power:	100V - 120V, 220V - 240V, 50/60 Hz, 250W
Analog outputs:	10V, 5V, 1V, 0.1V, selectable
Recorder offset:	±10%
Serial outputs:	Serial Port 1: RS-232 (DB-9M); Serial Port 2: standard RS-232 or optional RS-485 (DB-9F), Ethernet
Status (digital):	8 outputs, 6 inputs (opto-isolated), 6 alarm outputs (optional)
Current output:	Optional 4-20mA, select up to three channels
Approvals:	USEPA EQSA-0495-100, MCERTS certified Sira MC050067/00

CONFIGURATION

- Selectable voltage
- Internal pump
- Auto ranging and dual ranges
- 47mm diameter particulate filter
- 8 isolated digital status outputs
- Dual bi-directional RS-232
- Specified AC voltage and frequency
100V - 115V or 220V - 240V 50 Hz or 60 Hz
- Output DC voltage:
10V 5V 1V 0.1V

OPTIONAL EQUIPMENT

- Rack mount brackets (19") with chassis slides
- Rack mount brackets only
- 4-20mA outputs (specify up to three channels)
- Multi-drop RS-232 connection
- Ethernet port includes 7 ft. CAT-5 cable (disables one serial port)
- NO_x optical filter (recommended for high NO_x applications)
- Calibration options:
 - TFE valves for selection of customer-supplied zero and span gas
 - Internal zero and permeation tube oven for calibration check requires perm tube (separate option)

ACCESSORIES

- RS-232 Cable
- Expendables Kit
- Spare Parts Kit

NOTE: The values expressed above are in accordance with EPA definitions. All error specifications are based on constant conditions. Specifications exceed US EPA and Eignungsgeprüft requirements.

TELEDYNE **ANALYTICAL INSTRUMENTS**

A Teledyne Technologies Company

16830 Chestnut Street
City of Industry, California 91748, USA

TEL: 626-934-1500 or 888-789-8168
FAX: 626-934-1651 EMAIL: ask_tai@teledyne.com

www.teledyne-ai.com

Warranty

Instrument is warranted for 1 year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

