



Teledyne Analytical Instruments

6400A



Flourescent SO₂ Analyzer

- 0-50 ppb to 0-20 ppm ranges, user selectable
- Dual ranges and auto ranging
- Microprocessor controlled for versatility
- Multi-tasking software for viewing test variables while operating
- Continuous self checking with warning alarms
- Bidirectional RS-232 for remote operation
- Digital status outputs provide instrument condition
- Adaptive signal filtering optimizes response time
- Temperature and pressure compensation
- Internal zero and span check (optional)
- Internal data logging with 1 minute to 24 hour averages
- Critical orifices provide flow stability

PRINCIPLE OF OPERATION

Teledyne's 6400A 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 a large number of operational parameters and provides automatic alarms if diagnostic limits are exceeded.

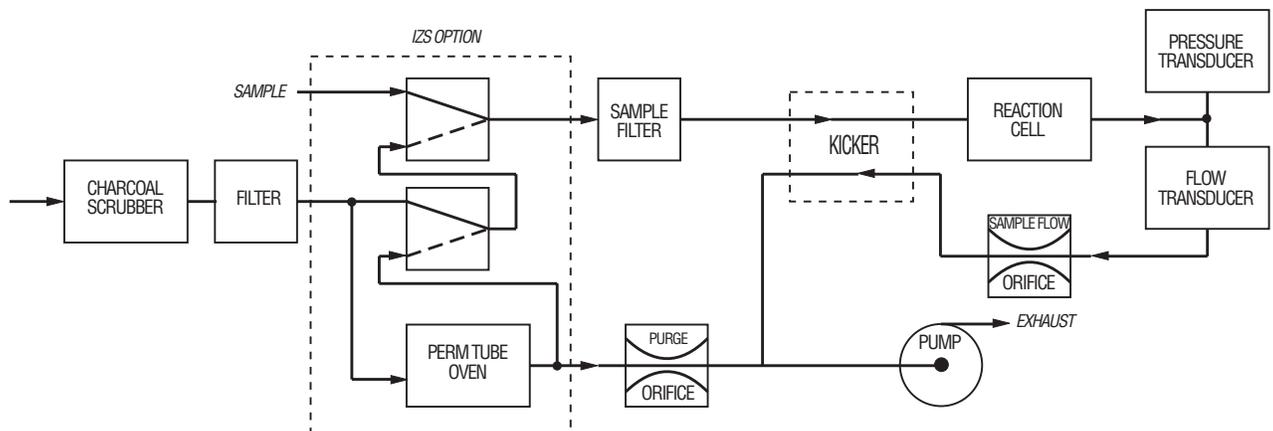
ADVANCED PERFORMANCE

Teledyne's 6400A 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 is easily retrieved through the RS-232 port or from the front panel allowing operators to perform predictive diagnostics by tracking parameter trends. The 6400A combines rugged construction, ease of use, powerful diagnostics and outstanding performance to yield the ideal tool for today's air monitoring requirements.

APPLICATIONS

The 6400A is well suited to detect low trace levels of SO₂ in medical air and medical oxygen to satisfy USA & European pharmacopeia requirements. The Model 6400A can also be used to 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 6400A for continuous analysis purposes.



MODEL 6400A FLOURESCENT 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:	(24 hours) < 0.5 ppb / (7 days) 1 ppb
Span drift:	(24 hours) < 0.5% reading / (7 days) 1% reading
Lag time:	20 seconds
Rise and fall time:	< 120 seconds to 95%
Linearity:	1% full scale
Precision:	0.5% of reading
Sample flow rate:	700 cc / min ±10%
Operating temp range:	5 - 40°C (with EPA equivalency)
Dimensions:	7" H x 17" W x 23.5" D (178 x 432 x 597 mm)
Weight:	45 lbs (20.5 kg)
Power:	100V 50/60 Hz, 115V 60Hz, 220V 50/60Hz, 230V 50Hz, 240V 50Hz, 250 Watts
Analog outputs:	10V, 5V, 1V, 100 mV, selectable
Recorder offset:	±10%
RS-232:	Standard, DB-9 connector
Status (digital):	12 outputs from optoisolator, included with standard configuration
Current output:	0-20 mA or 4-20 mA isolated output, optional
Approvals:	US EPA, Eignungsgeprüft, 

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.

CONFIGURATION

- Selectable voltage
- Internal pump
- Auto ranging and dual ranges
- 47 mm particulate filter
- 12 isolated digital status outputs
- Bi-directional RS-232
- Specify voltage/frequency:

100V / 50Hz	100V / 60Hz
115V / 60Hz	220V / 50Hz
220V / 60Hz	230V / 50Hz (CE)
240V / 50Hz	
- Output voltage:

10V	5V
1V	100mV

Additional Options:

- Rack mount (19") with chassis slides
- Rack mount only
- Isolated 0-20 mA or 4-20 mA output
- Multi-drop RS-232 connection
- NO_x optical filter (recommended for high NO_x applications)
- Calibration valves:
 - TFE valves for selection of customer-supplied zero and span gas
 - Internal zero and permeation tube oven for calibration check; requires perm tube

Accessories:

- RS-232 cable
- Expendables kit
- Spare parts kit

TELEDYNE ANALYTICAL INSTRUMENTS

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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.

