



**TELEDYNE**  
ANALYTICAL INSTRUMENTS  
Everywhere you look™

# 6400T Series

Sulfur Dioxide (SO<sub>2</sub>) Analyzer and  
Hydrogen Sulfide (H<sub>2</sub>S) Analyzers  
UV-Fluorescence Technology

## FEATURES

- User-settable ranges, 0-50 ppb to 0-5,000 ppm
- Large, vivid, and durable color graphics display with touch screen interface
- Comprehensive internal data logging with programmable averaging periods
- Front panel USB connections for peripheral devices and firmware upgrades
- Adaptive signal filtering optimizes response time
- Temperature and pressure compensation
- Internal Zero & Span check (optional)
- Ability to log virtually any operating parameter
- Continuous self checking with alarms



# 6400T Series - UV-Fluorescence SO<sub>2</sub> / H<sub>2</sub>S Analyzers

The Teledyne Analytical Instruments (TAI) 6400T series analyzers use a proven UV fluorescence principle coupled with state-of-the-art microprocessor technology to provide accurate and dependable measurements of low level SO<sub>2</sub>.

The 6400T-H<sub>2</sub>S measures hydrogen sulfide (H<sub>2</sub>S) by incorporating a catalytic converter set at 600°F (315°C) to oxidize H<sub>2</sub>S into SO<sub>2</sub> while leaving other more difficult to oxidize sulfurs unconverted. A switching mode allows analysis of both H<sub>2</sub>S and SO<sub>2</sub> concurrently.

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 interference. The multi-tasking software gives real time indication of many operational parameters and provides automatic alarms if diagnostic limits are exceeded.

## ADVANCED PERFORMANCE

The 6400T series analyzers offer an advanced color display, capacitive touch screen, intuitive user interface, flexible I/O, and built-in data acquisition capability. It 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 front panel or via RS232, Ethernet, or USB ports either locally or by remote connection using the included APIcom™ software. These innovative features allow operators to perform predictive diagnostics and enhanced data analysis by tracking parameter trends.

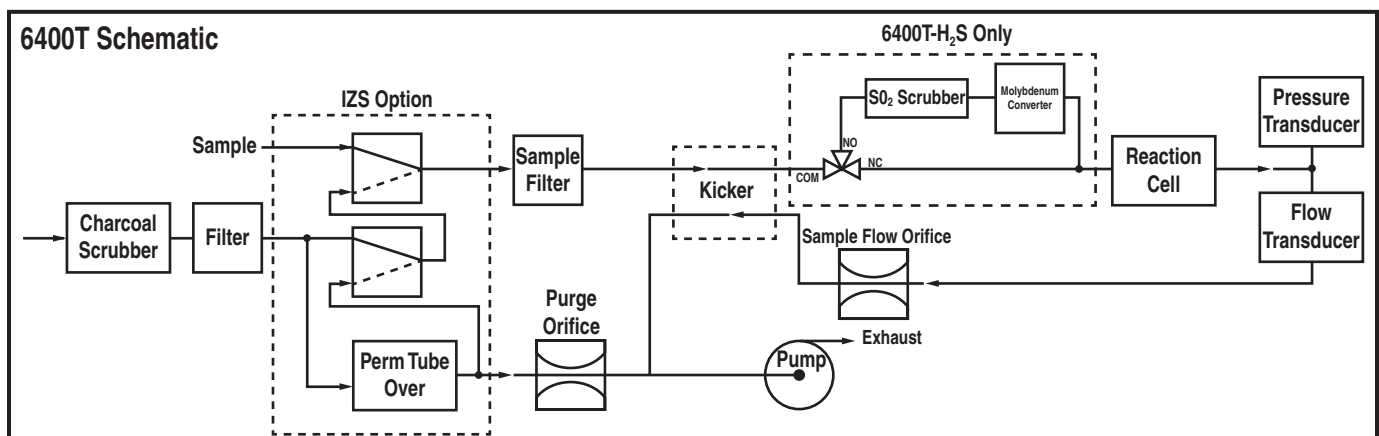
The 6400T series analyzers combine lighter weight, rugged construction, ease of use, powerful diagnostics, modular design and outstanding performance to meet air monitoring requirements.

## 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
- Up to 4 analog outputs: 4-20mA (3 max) or settable DC voltage (0-10V, 0-5V, 0-1V, 0-0.1V)

## OPTIONAL EQUIPMENT

- Rack mount brackets (19”) with chassis slides
- Rack mount brackets only
- RS-232 Cable
- Expendables Kit
- Spare Parts Kit
- Multi-drop RS-232 connection
- Ethernet port includes 7 ft. CAT-5 cable (disables one serial port)
- Nitric oxide optical filter (recommended for high NOx applications)
- Concentration alarm relays
- Calibration options:
  - Ambient zero and ambient span
  - Zero scrubber and pressurized span
  - Zero scrubber and internal span source (IZS)



## 6400T Series - UV-Fluorescence SO<sub>2</sub> / H<sub>2</sub>S Analyzers

SPECIFICATIONS	6400T	6400T H <sub>2</sub> S	6400TH
<b>Detection</b>	SO <sub>2</sub> Analyzer	H <sub>2</sub> S and SO <sub>2</sub> Analyzer	High Range SO <sub>2</sub> Analyzer
<b>Ranges</b>	Min: 0-50 ppb, full scale; Max: 0-20,000 ppb full scale; user selectable; dual ranges and auto ranging supported	Min: 0-50 ppb H <sub>2</sub> S, 0-50 ppb SO <sub>2</sub> full scale Max: 0-10,000 ppb H <sub>2</sub> S, 0-20,000 ppb SO <sub>2</sub> full scale user selectable; dual ranges and auto-ranging supported	Min: 0-10 ppm full scale; Max: 0-5,000 ppm full scale; user selectable, dual ranges and auto ranging supported
<b>Measurement Units</b>	ppb, ppm, µg/m <sup>3</sup> , mg/m <sup>3</sup> (selectable)	ppb, ppm, µg/m <sup>3</sup> , mg/m <sup>3</sup> (selectable)	ppm, mg/m <sup>3</sup> (selectable)
<b>Zero Noise</b>	< 0.2 ppb (RMS)	< 0.2 ppb (RMS)	0.1 ppm (RMS)
<b>Span Noise</b>	< 0.5% of reading (RMS) above 50 ppb	< 0.5% of reading (RMS) above 50 ppb	ppm, mg/m <sup>3</sup> (selectable)
<b>Lower Detectable Limit</b>	0.4 ppb	0.4 ppb	0.2 ppm
<b>Zero Drift</b>	<0.5 ppb / 24 hours, <1 ppb / 7 days	<0.5 ppb of FS / 24 hours	< 1 ppm/24 hours
<b>Span Drift</b>	<0.5 ppb / 24 hours, <1 ppb / 7 days	<0.5% of FS / 24 hours	< 0.5% of full scale/24 hours
<b>Lag Time</b>	20 seconds	20 seconds	5 seconds
<b>Rise and Fall Time</b>	<100 seconds to 95%	<120 seconds to 95% FS	< 30 seconds to 95%
<b>Linearity</b>	1% of full scale	1% of full scale	1% of full scale
<b>Precision</b>	0.5% of reading above 50 ppb	0.5% of reading above 50 ppb	0.5% of reading above 10 ppm
<b>Sample Flow Rate</b>	650 cm <sup>3</sup> / min ±10%	650 cm <sup>3</sup> / min ±10%	700 cm <sup>3</sup> /min ±10%
<b>ELECTRICAL</b>			
<b>Power Requirements</b>	100V - 120V, 220V - 240V, 50/60 Hz	100V - 120V, 220V - 240V, 50/60 Hz	100V-120V, 220V-240V, 50/60 Hz
<b>Recorder Offset</b>	±10%	±10%	±10%
<b>OUTPUTS</b>			
<b>Included I/O</b>	Up to 4 analog outputs: 4-20mA (3 max) or settable DC voltage (0-10V, 0-5V, 0-1V, 0-0.1V) 1 x Ethernet: 10/100Base-T 2 x RS232 (300-115,200 baud) 2 x USB device ports for firmware upgrades 8 x opto-isolated digital outputs 6 x opto-isolated digital inputs		
<b>Optional I/O</b>	1 x USB communications port 1 x RS485 8 x analog inputs (0-10V, 12-bit) 4 x digital alarm outputs Multidrop RS232		
<b>PHYSICAL</b>			
<b>Operating Temperature Ranges</b>	5 - 40°C	5 - 40°C	5 - 40°C
<b>Dimensions (HxWxD)</b>	7" x 17" x 23.5" (178 x 432 x 597 mm)	7" x 17" x 23.5" (178 x 432 x 597 mm)	7" x 17" x 23.5" (178 x 432 x 597 mm)
<b>Weight</b>	35.7 lbs (16.2 kg)	41 lbs (18.3 kg)	31 lbs (14 kg)



TAI Representative:

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**Warranty**

Instrument is warranted for one 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.

