460 SERIES
CONTINUOUS PROCESS INFRARED SULFUR DIOXIDE ANALYZER

APPLICATIONS
For continuous analysis of sulfur dioxide (SO₂) in process gas streams using an infrared detector or electrochemical sensor. Percent and PPM levels available as Models 460, 460L, or 461 respectively.

FEATURES
- Percent (460) or PPM (460L) SO₂ by infrared detector
- Low range PPM (461) SO₂ by electrochemical sensor
- NDIR detector is sensitive, reliable, and non-depleting
- Bright digital readout
- Fast response (T90 - less than 15 seconds)
- Microprocessor control with push button calibration
- Easy-to-maintain modular layout
- Sensor is temperature controlled for maximum stability
- Built-in sample pump, flowmeter, and filters
- 4 - 20 mA output

OPTIONS
- Hi/Low gas, low flow, and diagnostic alarms available
- Isolated analog, RS232, RS485, MODBUS®, and Ethernet outputs available
- Sample conditioning systems available
- Cabinet purge system available for use in hazardous areas
- Full automatic calibration with touch screen LCD display
- Cold weather package for operation to -5°F (-20°C)
- Cabinet coolers can be fitted to most models
- High temperature filters and probes

CALIBRATION
- Easily zero checked on ambient air
- Span using a known SO₂ in nitrogen (N₂) calibration gas.

NOVA ANALYTICAL SYSTEMS
www.nova-gas.com
DESCRIPTION

The Nova 460 Series SO₂ analyzers utilize a reliable, microprocessor-based, non-dispersive infrared detector or electrochemical sensor specific to SO₂. In operation, the internal sample pump draws the sample gas through the filter, secondary filter, flow meter, and then on to the sensor/detector. The detector output is digitally linearized and then displayed as percent or PPM SO₂ on the digital meter. The output is also available as an analog or digital signal. A regulator will be supplied for applications that have a pressurized sample.

MODELS

There are six types of mounting configurations available. All tubing connections are ¼” SS FPT.

- 460N4 - Wall mounted NEMA4 (IP65) enclosure rating
- 460N4X - Wall mounted corrosion-resistant NEMA4X (IP65) enclosure rating
- 460RM - 19" (483mm) rack mounted, on sliding rails
- 460Div1 - NEMA4 w/ Haz. Purge Kit - for Class 1 Div 2 areas
- 460Div2 - NEMA4 w/ Haz. Purge Kit - for Class 1 Div 2 areas
- 461N4 - Low Range PPM SO₂ by electrochemical sensor

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>Microprocessor-based single cell NDIR; low range PPM SO₂ by electrochemical sensor</th>
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<tbody>
<tr>
<td>Method of Detection:</td>
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<tr>
<td>Ranges Available:</td>
<td>460L - 0-2000, 0-3000, 0-5000 PPM SO₂</td>
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<td></td>
<td>460 - 0-1, 0-5, 0-10, 0-20, 0-30, 0-50, 0-100% SO₂</td>
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<td>461 - 0-200, 0-1000 PPM SO₂</td>
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<tr>
<td>Resolution:</td>
<td>0.1% SO₂ on % versions, 10 PPM SO₂ on PPM versions</td>
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<td>Accuracy and Repeatability:</td>
<td>1% of full scale</td>
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<td>Drift:</td>
<td>Less than 2% of full scale per month.</td>
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<td>Response Time (T-90):</td>
<td>Less than 15 seconds to T-90</td>
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<td>Ambient Temperature Range:</td>
<td>40-122°F (5-50°C). Lower temperatures (-20°C, -5°F) with Cold Weather Package.</td>
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<td>Linearity:</td>
<td>±1% of full scale</td>
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<td>Size and Weight:</td>
<td>Physical data will vary depending on enclosure style and options required</td>
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<tr>
<td>Power:</td>
<td>115VAC 60Hz (220VAC 50Hz available)</td>
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<td>Output Options:</td>
<td>4-20mA into 500 ohms non-isolated standard</td>
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<td></td>
<td>Isolated 4-20mA, RS232, RS485, MODBUS®, Ethernet outputs optional</td>
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<td>Alarms:</td>
<td>High and/or low alarm contacts available, relay contacts SPDT 5A @ 220VAC rating.</td>
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<td>Low flow alarm optional</td>
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Nova reserves the right to specification changes which may occur with advances in design without prior notice.

UNIQUE APPLICATIONS

All Nova analyzers are built using proven technologies and techniques. If this product does not suit your application, please contact Nova at 1-800-295-3771. In many cases, we are able to build an analyzer specific to your needs.

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