APPLICATIONS

Continuous analysis of flue gas for any combination and range of \( \text{O}_2, \text{CO}, \text{CO}_2, \text{SO}_2, \text{NOx} \) (as NO or NO + NO\(_2\)) or combustibles from combustion processes.

FEATURES

- Best value continuous flue gas analyzer
- Sensitive infrared detectors for % and > 1000 PPM CO, CO\(_2\), or SO\(_2\)
- Long life electrochemical sensor for 10 - 1000 PPM CO, NO, NO\(_2\), and SO\(_2\)
- Catalytic sensor for % combustibles
- Fast response time and bright digital readout for each gas
- Microprocessor based with push button or potentiometer calibration
- Easy to maintain modular layout
- Sample preparation includes filtration and continuous moisture removal
- 4-20 mA outputs for each gas measured
- Sensors are temperature controlled for maximum stability

OPTIONS

- Hi/Low gas, low flow, high vacuum, and diagnostic alarms available
- Isolated analog, RS-232, MODBUS®, and Ethernet outputs available
- Cabinet purge system available for use in hazardous or high dust areas
- One-step 'cal-now' button or full auto-calibration with touch screen LCD display
- Cold weather package for operation to -5°F (-20°C)
- Cabinet coolers can be fitted to most models
- Stack-mounted heated filters and high temperature probes
- Stack temperature readout

Optional sample conditioning includes:

1) Continuous water prewash system for acidic flue gases that are present but not to be analyzed (See Model 7300)
2) Nafion-Tube™ based sample dryer for high accuracy analysis of acidic samples, where NO\(_2\) or SO\(_2\) are to be measured
3) Heated stack filter for removal of dust from high particulate samples (Model 7240), automatic blowback available
4) Calibration gas injected at heated stack filter
5) Multiple sample point sequencer which allows multiple samples to be selected and analyzed (see Model 402AS)
DESCRIPTION

The Nova Model 7200 Series of flue gas analyzers are specifically designed for use on the flue gases from combustion processes burning gaseous fuels. The 7200 series analyzers can measure sample gases for oil or coal-fired processes with the addition of a Model 7240 heated sample filter. The 7200 can also measure flue gases in the presence of acidic or corrosive samples through the use of sample pre-conditioners.

Sample gas is drawn into the analyzer from the sampling probe, heated filter, or sample pre-conditioner, then pumped through a condensate removal system. Any condensate formed is collected then automatically purged. Next, the dried sample gas is filtered again then flows through a pressure regulator, PTFE liquid blocker, calibration gas valves, low flow switch, flow meter, then on to the gas detectors. An optional vacuum switch at the pump inlet warns if the pre-filter is becoming plugged up.

The 7200 Series analyzers are available in any combination of O$_2$, CO, CO$_2$, NOx (as NO or NO + NO$_2$), SO$_2$, or combustibles, with separate digital readouts and outputs for each. Special sampling probes are available for high temperature applications up to 3200°F (1760°C). The 7200 Series is multi-sample point capable (consult Nova).

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of Detection:</td>
</tr>
<tr>
<td></td>
</tr>
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<td></td>
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<td></td>
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<tr>
<td>Ranges Available:</td>
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<td></td>
</tr>
<tr>
<td>Resolution:</td>
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<tr>
<td>Accuracy and Repeatability:</td>
</tr>
<tr>
<td>Drift:</td>
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<tr>
<td>Response Time (T-90):</td>
</tr>
<tr>
<td>Ambient Temperature Range:</td>
</tr>
<tr>
<td>Linearity:</td>
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<tr>
<td>Size and Weight:</td>
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<tr>
<td>Power:</td>
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<tr>
<td>Output Options:</td>
</tr>
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<tr>
<td>Alarms:</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.
7200 SERIES
CONTINUOUS FLUE GAS ANALYZERS
MODELS & CONFIGURATION GUIDELINES

Standard analyzer system includes a wall mounted NEMA 4 (IP65) enclosure, stainless steel sample probe and an unheated stainless steel pre-filter. Sample conditioning consists of a built in sample pump, automatic condensate removal, main filter, PTFE liquid blocker, non-isolated 4-20mA output(s), and digital readout for each gas measured. Base model has manual calibration.

Voltage or isolated 4-20 mA outputs, multiple ranges, multi-point sampling, high temperature sampling probe, heated stack filter, automatic calibration, alarms, and stack temperature readout are all optional.

Note: The sample line between the probe or heated filter and the analyzer is not included. PTFE or stainless steel is recommended and may be available from Nova as an option.

Code Numbers for Gases Measured
1 - Oxygen (O₂)
2 - Carbon Monoxide (CO)
3 - Carbon Dioxide (CO₂)
4 - Oxides of Nitrogen (NOx) as Nitrogen Oxide (NO)
41 - Oxides of Nitrogen (NOx) as Nitrogen Oxide (NO) & Nitrogen Dioxide (NO₂)
5 - Total Combustibles
51 - Total Combustibles as Carbon Monoxide X 2 (CO X 2)
6 - Stack temperature °F
61 - Stack temperature °C
7 - Sulfur Dioxide (SO₂)

Sampling System
F1 - Std SS probe with unheated pre-filter
(Std. probe 3/8" OD x 18") (9.5 x 460 mm)
F2 - Model 7240 heated pre-filter with SS probe and manual blow back
F3 - Model 7240 heated pre-filter with SS probe and auto blowback. Add HT suffix in brackets for high temp. probe.
  eg. F3(HT) (Std HT probe 3/4" OD x 19" L; 19 x 480 mm)
F4 - Class 1 Division 2 Rated Area Purge Kit attached to NEMA 4 cabinet for use in hazardous areas (a source of dry N2 or air is required)

Sample Points
S1 - 1 Sample point (no sequencing)
S2 - 2 Sample points (D3 option req'd)
S3 - 3 Sample points ( " " )
S4 - 4 Sample points ( " " )
S5 - 5 Sample points ( " " )
S6 - 6 Sample points ( " " )

Calibration & Display Type
D1 - LCD display(s) - Manual calibration
D2 - Microprocessor controller with single graphic display. Allows auto sequencing, RS-485 output, and 'CAL NOW' single button calibration feature
D3 - Same as D3 but with full auto-calibration

Output
OP1 - 4-20mA non-isolated
OP2 - 4-20 mA isolated
OP3 - 0-5V
OP4 - 0-10V
OP5 - MODBUS®
OP6 - Ethernet

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