

# Thermo Scientific Model 60i NDIR Multi-Gas Analyzer

Five gas, non-dispersive infrared analyzer designed for full extractive systems

The Thermo Scientific™ Model 60i Multi-Gas Analyzer utilizes non-dispersive infrared (NDIR) optical filter technology to measure five gases in addition to an oxygen measurement via either chemical cell or paramagnetic technology.

- Automatic and continuous moisture measurement
- Built-in iterative interference algorithms
- Direct NO<sub>2</sub> measurement
- No permeation dryer needed
- Designed to meet U.S. EPA 40CFR Part 60 requirements



The Thermo Scientific Model 60i analyzer is the only gas analyzer with built-in safeguards to protect the instrument from moisture damage. The Model 60i analyzer utilizes a low sample flow rate, reducing the amount of maintenance due to high particulate and moisture loading on optical surfaces. The analyzer can shut off the sample pump and activate an alarm before high levels of moisture damage the sensitive components.

This analyzer is designed to eliminate the manual process of interference correction utilizing built-in iterative algorithms to automatically correct for fractional effects of interfering gases, resulting in more accurate measurements.

Additionally, the Model 60i analyzer provides a direct NO<sub>2</sub> measurement in place of a “calculated” NO<sub>2</sub> method common with most other analyzers.

The wide dynamic range of the Model 60i analyzer can accommodate most power utility emission levels as well as those industries such as petrochemical, cement, pulp and paper, and other heavy industry applications.

To further protect the instrument from moisture damage, the Model 60i analyzer was designed to operate without the need for a permeation dryer, eliminating any component related moisture risks as well as lowering the cost to operate and maintain.

The intuitive interface of the Model 60i Multi-Gas Analyzer is easy to operate at any experience level, and can be remotely accessed through the Thermo Scientific iPort software.



## Thermo Scientific Model 60i NDIR Multi-Gas Analyzer

Compound	O <sub>2</sub>	CO	CO <sub>2</sub>	NO	NO <sub>2</sub>	SO <sub>2</sub>
Minimum Range	0 - 5 %	0 - 100 ppm	0 - 5%	0 - 50 ppm	0 - 20 ppm	0 - 2 ppm
Full Scale Range	0% - 25%	0 - 2,500 ppm	0% - 25%	0 - 2,000 ppm	0 - 500 ppm	0 - 10,000 ppm
Lower Detection Limit	0.5 ppm	0.05%	0.5 ppm	0.2 ppm	0.2 ppm	
Electrochemical Cell	0.20%					
Paramagnetic Cell	0.10%					
Zero Drift (24 Hours)		< 1 ppm	< 0.1%	< 1.2 ppm	< 1 ppm	< 0.5 ppm
Electrochemical Cell	< 0.2%					
Paramagnetic Cell	< 0.1%					
Zero Drift (7 Day)		< 3.0 ppm	< 0.5%	< 5.0 ppm	< 3.0 ppm	< 3.0 ppm
Electrochemical Cell	< 0.2%					
Paramagnetic Cell	< 0.1%					
Span Drift (24 Hours)		< 1% of span	< 1% of span	< 1% of span	< 1% of span	< 1% of span
Electrochemical Cell	< 0.2%					
Paramagnetic Cell	< 0.1%					
Span Drift (7 Day)		< 1% of span	< 1% of span	< 1% of span	< 1% of span	< 1% of span
Electrochemical Cell	< 0.2%					
Paramagnetic Cell	< 0.1%					
Accuracy	+/- 2% of span	+/- 2% of span	+/- 2% of span	+/- 2% of span	+/- 2% of span	
Electrochemical Cell	+/- 0.25 % of span					
Paramagnetic Cell	+/- 0.1 % of span					
Response Time	70 seconds	70 seconds	70 seconds	70 seconds	70 seconds	70 seconds
Electrochemical Cell	60 seconds					
Paramagnetic Cell	45 seconds					
Linearity	2% of full scale or 5% of measured value (whichever is smaller)					
Electrochemical Cell	0.20%					
Paramagnetic Cell	0.10%					
Zero Noise	0.050%	<0.2 ppm	0.03%	<0.2 ppm	<0.1 ppm	<0.1 ppm
Display Resolution		0.1 ppm	0.01%	0.1 ppm	0.1 ppm	0.1 ppm
Electrochemical Cell	0.1%					
Paramagnetic Cell	0.01%					
Repeatability	1% of range					
Flow Rate	1.0 liter per minute					
Operating Temperature	41° to 113° F (5° to 45° C) in non-condensing environments					
Power Requirements	100 VAC, 115 VAC, 220-240 VAC +/- 10% at 275 watts					
Size and Weight	16.75" (425mm W)x 8.62" (219mm ) H x 23" (584mm) D, 49 lbs. (22.2kg)					
Outputs	6 analog outputs selectable voltage, 6 additional optional outputs available					
Inputs	10 digital inputs (standard) or 16 digital inputs with an optional I/O board					
Precision (% of point)	+/- 1%, measured with single gases at the span concentration					

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For more information, visit our website at [www.thermoscientific.com/air](http://www.thermoscientific.com/air)

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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

<b>USA</b> 27 Forge Parkway Franklin, MA 02038 Ph: (866) 282-0430 Fax: (508) 520-1460 customerservice.aqi@thermofisher.com	<b>India</b> C/327, TTC Industrial Area MIDC Pawane New Mumbai 400 705, India Ph: +91 22 4157 8800 india@thermofisher.com	<b>China</b> +Units 702-715, 7th Floor Tower West, Yonghe Beijing, China 100007 +86 10 84193588 info.eid.china@thermofisher.com	<b>Europe</b> Takkebijsters 1 Breda Netherlands 4801EB +31 765795641 info.aq.breda@thermofisher.com
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