

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 NO₂ 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 NO₂ measurement in place of a “calculated” NO₂ 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.



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| Compound | O ₂ | CO | CO ₂ | NO | NO ₂ | SO ₂ |
|------------------------|--|----------------|-----------------|----------------|-----------------|-----------------|
| 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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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

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