

Thermo Scientific Model 51i Total Hydrocarbon Analyzer

Flame ionization for the detection of total hydrocarbon

The Thermo Scientific™ Model 51i Total Hydrocarbon (THC) Analyzer combines proven Flame Ionization Detector (FID) technology, easy to use menu-driven firmware, and advanced diagnostics to offer unsurpassed flexibility and reliability. The Model 51i analyzer is available in low temperature and high temperature versions.

- Flame Ionization Technology (FID) measures organic gases & vapors
- Adjustable ranges
- Real-time correction of THC readings
- Ethernet port and flash memory offer efficient global access



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The Model 51i analyzer uses a Flame Ionization Detector, or FID, to measure organic gases and vapors. FID is a wellknown technology that has been used in laboratories and industry for many years. Flame Ionization Detectors are highly efficient; providing a wide linear range and sensitive detection of organic compounds.

This state-of-the-art gas analyzer also offers features such as an Ethernet port and a flash memory for increased data storage. Ethernet connectivity provides efficient remote access, allowing the user to download measurement information directly from the instrument without having to be on-site.

Easily programmable short-cut keys allow you to jump directly to frequently accessed functions, menus or screens. The larger interface screen can display up to five lines of measurement information while primary screen remains visible.



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Thermo Scientific Model 51i Total Hydrocarbon Analyzer

Preset Ranges	0-1, 10, 100, 1,000, 5000, and 10000 ppmc
Custom Ranges	0-1 to 10000 ppmc
Zero Noise	0.025 ppmc RMS (10 second averaging time)
Minimum Detectable	0.050 ppm (10 second averaging time)
Zero Drift (24 Hours)	< 0.50 ppm
Span Drift (24 Hours)	< 2% of range or 0.20 ppm (whichever is larger)
Response Time (90%)	15 seconds at 1 second averaging time
Precision	2.0% of reading or 0.1 ppm (whichever is larger)
Linearity	+/-2.0% of span (at concentrations of 10% to 150% of span)
Sample Flow Rate	0.75 to 1.50 lpm nominal
Makeup Air Flow Rate	150 ccm to 300 ccm hydrocarbon free air
Fuel Flow Rate	10 to 35 ccm hydrogen or 50 to 120 ccm H ₂ /He mixture
Operating Temperature	15° to 35°C
Power Requirements	100 VAC, 115 VAC, 220-240 VAC +/-10%, 50/60Hz, 420W
Size and Weight	16.75"(W) x 8.62"(H) x 23"(D), 50 lbs. (22.7 kg)
Outputs	selectable voltage, RS232/RS485, TCP/IP, 10 status relays, and power fail indication 0-20 or 4-20 mA isolated current output (optional)
Inputs	16 digital inputs (standard), 8 0-10 Vdc analog inputs (optional)

Ordering Information

Model 51i Total Hydrocarbon Analyzer

Choose from the following configurations/options to customize your own Model 51i analyzer

Model 51i-HT

1. Voltage options:

A = 120 VAC 50/60 Hz (standard)
B = 220 VAC 50/60 Hz
J = 100 VAC 50/60 Hz

2. Internal zero / span:

M = No Internal Zero / Span,
Mixed Fuel
N = No Internal Zero / Span,
Hydrogen Fuel
Y = Internal Zero / Span,
Mixed Fuel
Z = Internal Zero / Span,
Hydrogen Fuel

3. Optional I/O:

A = None (standard)
C = 0-20, 4-20mA current output -
6 channel, 0-10v analog input -
8 channel

4. Mounting Hardware:

A = Bench mounting (standard)
B = Ears & handles, EIA
C = Ears & handles, retrofit

Your Order Code: 51i-HT - - - - -

Model 51i-LT

1. Voltage options:

A = 120 VAC 50/60 Hz (standard)
B = 220 VAC 50/60 Hz
J = 100 VAC 50/60 Hz

2. Internal zero / span:

N = No Internal Zero / Span,
Hydrogen Fuel
Z = Internal Zero / Span,
Hydrogen Fuel

3. Optional I/O:

A = None (standard)
C = 0-20, 4-20mA current output -
6 channel, 0-10v analog input -
8 channel

4. Mounting Hardware:

A = Bench mounting (standard)
B = Ears & handles, EIA
C = Ears & handles, retrofit

Your Order Code: 51i-LT - - - - -

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

For more information, visit our website at thermoscientific.com/air

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

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