

# NOVA

Dependable Gas Analysis Solutions



## 330 SERIES PORTABLE PROCESS THERMAL CONDUCTIVITY ANALYZER FOR BINARY GAS MIXTURES

### APPLICATIONS

For analysis of many binary gas mixtures comprised of H<sub>2</sub>, CO<sub>2</sub>, O<sub>2</sub>, CH<sub>4</sub>, SO<sub>2</sub>, Ar, He, NH<sub>3</sub>, SF<sub>6</sub>, air, and others. Applications include heat treating atmospheres, welding gas mixtures, blanketing gas mixtures, ammonia synthesis, leak detection, purge monitoring, magnesium blanketing by SF<sub>6</sub>, and others.

### FEATURES

- Rugged design that is easy to operate
- Fast warm up and response
- Long life thermal conductivity cell that provides accurate and stable readings
- Digital meter readout with backlight
- Modular layout that is easy to maintain
- Rechargeable 'gel cell' battery operated
- Built-in sample pump or pressure regulator
- Lightweight, compact and easy to use
- Weatherproof (WP) cabinet with clear lexan cover

### OPTIONS

- Recorder outputs of 0-1V or 4-20mA
- Sample pre-cooler for hot samples
- Suitcase (K) style cabinet available
- AC only power operation
- Helium alarm with LED
- Detachable/portable datalogger

### CALIBRATION

- Will vary depending on application



Weather Proof (WP) Enclosure



Suitcase Style (K) Enclosure

NOVA ANALYTICAL SYSTEMS

[www.nova-gas.com](http://www.nova-gas.com)

## DESCRIPTION

The Nova 330 Series Thermalconductivity (TC) Analyzer has many applications in industry where the measurement of one gas in a two gas or some multi-gas mixtures is required. Since the TC cell does not consume the sample, have any moving parts, hot wires, or sealed chemicals, it will last for many years.

In operation, a built-in sample pump draws in the gas sample through the probe, filters, flow meter, then on to the T/C cell. The TC cell detects the rate at which the sample gas conducts heat away from a heated Resistance Temperature Device (RTD) with reference to a similar heated RTD surrounded by air (or other reference gas). The A resulting resistance output from a wheatstone bridge measuring circuit is then amplified. The detected gas is displayed on an LCD digital meter which has a switchable back light for use in dark areas.

A rechargeable 'gel cell' battery provides enough power for approximately 6-8 hours of continuous operation and the analyzer can be used while it is being recharged. A red LED tells when to recharge and a green LED verifies that it is receiving recharging power. The recharger is included. The analyzer may be used while it is charging.

## SPECIFICATIONS

*Nova reserves the right to specification changes which may occur with advances in design without prior notice.*

### Description

<b>Method of Detection:</b>	Temperature compensated thermal conductivity (T/C) cell cannot be burned out due to loss of flow or changing gases
<b>Ranges:</b>	0-2.0 % up to 0-100.0% (specifications depend on gases measured and application)
<b>Resolution:</b>	0.1% of gas to be measured
<b>Accuracy and Repeatability:</b>	± 2% of full scale
<b>Drift:</b>	± 1% of full scale per week
<b>Response Time:</b>	90% of final reading in 10 seconds
<b>Ambient Temperature Range:</b>	55° to 120°F (12° to 50°C)
<b>Linearity:</b>	± 2% of F.S.
<b>Size and Weight:</b>	WP style - approx. 10" L x 7½" H x 6½" D @ 8 lbs (25.5 x 19 x 16.5 cm @ 3.6 kg) K style - approx. 14" L x 6" H x 10½" D @ 8 lbs (35.5 x 15.2 x 26.6 cm @ 5.5 kg)
<b>Power:</b>	AC/DC operation. 115VAC 60Hz for recharging (220VAC 50Hz available)
<b>Output Options:</b>	4-20 mA or 0-1 VDC

## 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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