

# NOVA

Dependable Gas Analysis Solutions

## 380 SERIES

### PORTABLE TRI-GAS ANALYZER FOR HYDROGEN/CARBON DIOXIDE/AIR PURGING



#### APPLICATIONS

For checking purity of hydrogen ( $H_2$ ) in  $H_2$ -cooled generators and synchronous converters. The Model 380 Series will also monitor the safe purging of  $H_2$  during shutdown or startup.

#### FEATURES

- Rugged design that is easy to operate
- Fast warm up and response
- Monitors 0-100%  $H_2$  in air, 0-100%  $H_2$  in  $CO_2$ , 0-100% Air in  $CO_2$
- Rugged long life thermal conductivity cell
- Digital readout meter with backlight
- Rechargeable battery operation
- Modular layout that is easy to maintain
- Built-in flow meter, flow control valve, and pump
- Built-in pressure regulator prevents over pressuring of pump and sensor
- Weatherproof (WP) cabinet with clear lexan cover
- Sample pressure ranges 0.5 PSI to 125 PSI

#### OPTIONS

- Recorder output of 0-1V or 4-20 mA
- Suitcase (K) style cabinet available

#### CALIBRATION

- Range 1: Air for Zero, 100%  $H_2$  for Span
- Range 2: 100%  $CO_2$  for Zero, 100%  $H_2$  for Span
- Range 3: 100%  $CO_2$  for Zero, Air for Span

NOVA ANALYTICAL SYSTEMS INC.

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



Weatherproof (WP) Enclosure



Suitcase (K) Enclosure

## DESCRIPTION

The Nova 380 Series Tri-Gas Analyzer is designed for monitoring the H<sub>2</sub> purity inside a power generator and to monitor the purging procedure during a generator shutdown or startup.

The analyzer contains a temperature compensated thermal conductivity (T/C) cell, amplifier board, digital read-out, range switch, pressure regulator, gas flow control valve, pump and a flow indicator. A recorder output is optional.

The T/C cell does not burn the sample nor is it consumed in any way, so it has a life expectancy of over 10 years. Measurement results are fast and accurate. A rechargeable 'gel cell' battery provides enough power for about 8 hours of continuous operation and the analyzer can be used while it is being recharged.

## 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
<b>Ranges Available:</b>	<b>Range 1:</b> 0-100% H <sub>2</sub> in Air; <b>Range 2:</b> 0-100% H <sub>2</sub> in CO <sub>2</sub> ; <b>Range 3:</b> 0-100% Air in CO <sub>2</sub>
<b>Resolution:</b>	0.1% of gas measured
<b>Accuracy and Repeatability:</b>	<b>Range 1:</b> ± 1% of Full Scale; <b>Range 2:</b> ± 2% of F.S.; <b>Range 3:</b> ± 2% of F.S.
<b>Drift:</b>	H <sub>2</sub> in CO <sub>2</sub> or Air in CO <sub>2</sub> , ± 2% F.S. per week maximum drift, 0-100% H <sub>2</sub> in Air range is ± 0.4% per week maximum
<b>Response Time (T-90):</b>	10-15 seconds to 90% step change - not including sample transport time
<b>Ambient Temperature Range:</b>	32-120°F (0-50°C)
<b>Linearity:</b>	± 1.0% of F.S. on H <sub>2</sub> in Air range. ± 2% of F.S. in H <sub>2</sub> or Air in CO <sub>2</sub> ranges
<b>Size and Weight :</b>	WP style - approx. 11½" L x 8" W x 7¼" H @ 8 lbs (29 x 20 x 18 cm @ 3.6 kg) K style approx. 9½" L x 7" W x 6½" H @ 8 lbs (24 x 17 x 18 cm @ 3.6 kg)
<b>Power:</b>	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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