

## PRODUCT DATA SHEET

# 120HD Portable Hydrogen Analyzer

Measures the hydrogen concentration in a gas sample, then digitally reports the percent volume of hydrogen in air

The 120HD analyzer functions as a katharometer. It operates by having two parallel tubes, both of which contain gas and heating coils. The gases are examined by comparing the rate of loss of heat from the heating coils into the gas. The coils are arranged in a bridge circuit so that resistance changes due to unequal cooling can be measured.

One channel contains moisture-saturated air and the mixture to be tested is passed through the other channel. Hydrogen has a much higher thermal conductivity than air and so the 120HD is very sensitive to it, but it will also respond to any gas whose thermal conductivity is different from that of air.



### KEY BENEFITS

- Battery-operated and fully portable
- Non-destructive: Sample can be used after analysis
- All wetted surfaces are stainless steel
- Measurement unaffected by changes in ambient temperature or pressure
- Factory-calibrated

### APPLICATIONS

- On ships
- In turbine halls
- During lead-acid battery charging

### KEY MARKETS

- Research and development (R&D)
- Hydrogen in air/steam

PERFORMANCE SPECIFICATIONS

<b>Operating principle</b>	Katharometer
<b>Operating range</b>	0 to 25% H <sub>2</sub> in water-saturated air
<b>Accuracy</b>	±4% full scale (±1% H <sub>2</sub> v/v)
<b>Response time</b>	<1 minute for 90% step change
<b>Repeatability</b>	±2% full scale (±0.5% H <sub>2</sub> v/v)
<b>Environment</b>	Ambient temperature: 10 to 38°C (50 to 100°F)
<b>Relative humidity</b>	0% to 100%
<b>Shock test</b>	MIL-S-901D (Navy) Grade B
<b>Recommended sample gas flow rate</b>	50 ml/min
<b>Sample pressure</b>	5 psi (34 kPa) gauge maximum
<b>Power supply</b>	(1) 6V industrial alkaline lantern battery
<b>Battery life (approximate)</b>	120 hours minimum with backlight
<b>Power drain</b>	210 mA, 6V (with backlight) 170 mA, 6V (without backlight)
<b>Weight</b>	Less than 15 lb with battery

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