

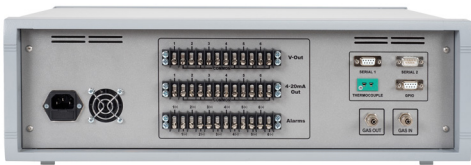


# Rapidox 7100 Syngas Analyser

The Rapidox 7100 Syngas Analyser is a high specification benchtop or rack mountable instrument designed for the analysis and calculation of calorific value for syngas produced from the gasification of waste material at high temperature in an environment low in oxygen, either in a research laboratory or on-site.



**Benchtop - Front and rear**



**Rack mountable - Front and rear**



The Rapidox 7100 Syngas Analyser can be used in a laboratory or on-site for the analysis of syngas (after sample conditioning / clean up) from the pipework leading to a CHP engine for either:

- biomass fuels - such as wood chips and digestate - via gasification or
- non-biomass fuels - such as tyre crumbs, plastics, metal coated plastics and foams - via cracking.

It will measure both gas content ( $H_2$ , CO,  $CH_4$ ,  $CO_2$  and  $O_2$ ) and energy content (calorific value, CV) for the syngas sampled; up to six gases can be measured simultaneously meaning that other gases can be analysed as well, if required. The Rapidox 7100 Syngas Analyser is available as either a benchtop version for the laboratory or in a 19" rack mountable case which can be housed in a suitable enclosure for use in an external or hazardous area.

The pump enables two modes of operation:

- for gas samples at atmospheric pressure or below, the pump is activated to draw a sample through the analyser.
- from gas samples at greater than atmospheric pressure, the pump can be deactivated to allow gas to flow through the analyser; gas flow is regulated manually via a rotary knob on the fascia and displayed electronically on the screen.

The Rapidox 7100 Syngas Analyser is highly configurable to suit individual syngas customer requirements and incorporates the following features to enhance functionality:

- Bespoke sensor combination
- Two programmable alarms
- 7" full-colour touchscreen
- Continuous data logging and 4GB internal data storage
- Multi-language
- Worldwide mains voltage
- Password protection

Please contact Cambridge Sensotec for further information or to discuss your requirements.

## Gasifier Connection Kit

The Gasifier Connection Kit comprises a male rectus fitting for use with gas digester pipework entry, sampling hose (2m braided steel) with self-sealing fittings, in-line stainless steel membrane housing to remove all water from gas, stainless steel drain port and blanking plug housing, fittings to enable braided cable to attach to membrane housing and to enable connection of end tubing to the analyser, in-line particulate and coalescing filter with 1/4" nipple fittings, 4m FEP tubing, 20m reel of polyurethane tubing to take exhaust gas from analyser to the outside.

All accessories in the above are available separately, if required.

Specification	
<b>H2 (hydrogen)</b>	0-100% TCD sensor with background gas correction. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>CO (carbon dioxide)</b>	0-2000ppm, 0-2%, 0-10% or 0-100% Infra-red sensor. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>CH4 (methane)</b>	0-5% (LEL) or 0-100% TLD sensor. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>CO2 (carbon monoxide)</b>	0-5000ppm, 0-5%, 0-20% or 0-100% Infra-red sensor. $\pm 1\%$ full scale accuracy. 0.1% resolution
<b>O2 (oxygen)</b>	0-30% or 0-100% electrochemical sensor. $\pm 1\%$ full scale accuracy. 0.01% resolution
<b>Other gases</b>	Contact us for further information
<b>Normal Operating Conditions</b>	Temperature 0°C to 40°C / Humidity 10 - 90% RH / Pressure 900 to 1100 mbar absolute.
<b>Sampling</b>	Fixed or continuous sampling modes
<b>Warm-up Time</b>	3-4 minutes at 20°C
<b>Voltage Outputs</b>	0-10V, user programmable
<b>Current Outputs</b>	4-20mA linear, user programmable
<b>Digital Outputs</b>	RS232 (RS485 option available) Data streamed on demand. Modbus RTU/Ethernet
<b>Data Output</b>	Excel compatible data via USB memory stick
<b>Alarms</b>	Relay circuits, user programmable
<b>Sample Connections</b>	6mm OD or 1/4" Swagelok fittings. Rear positioning
<b>Calibration</b>	Calibration by the user using zero and span gases An optional Auto-Cal system can be installed on certain models
<b>Display</b>	7" (180mm) full-colour LCD with touchscreen operation; resolution 0.01ppm or 0.01%
<b>Supply Voltage</b>	90-260 VAC, 50/60Hz
<b>Analyser Dimensions</b>	Rack Mount: 132mm(H) x 482mm(W) x 365mm(D) / Benchtop: 180mm (H) x 570mm (W) x 345mm (D)
<b>Weight</b>	Rack Mount: 6.5kg / Benchtop: 6.5kg

For detailed specs on individual sensor performance, please contact us.