Technical Data

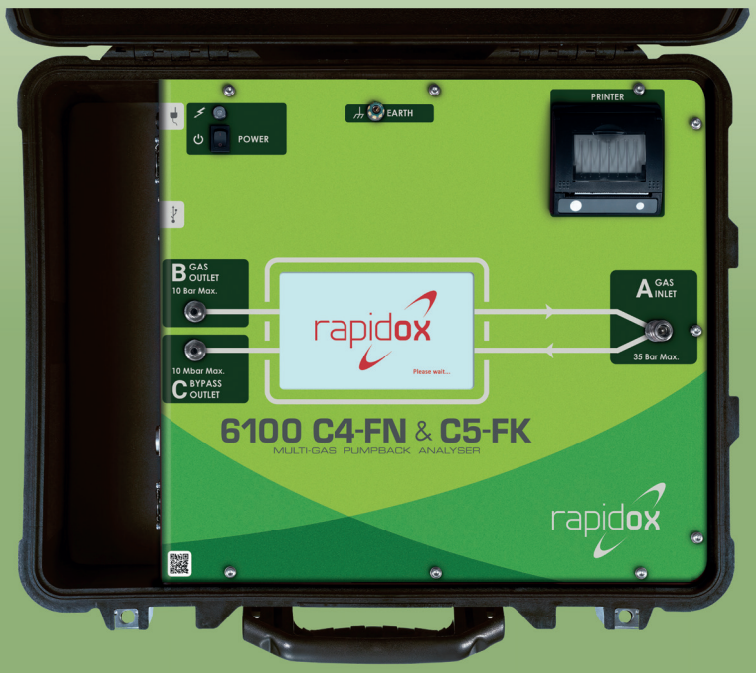
Rapidox 6100 C4-FN & C5-FK

Multi-Gas Pumpback Analyser

C4-FN | C5-FK

Features

- **Portable and user-friendly**
- **Handles gas mixtures of C4-FN & C5FK**
- **Battery operated**
- **Integrated thermal printer**
- **IP66 Peli case for protection**
- **Rapid Analysis and data logging**
- **7" Colour LCD touch-screen interface**
- **Multi-language**
- **Customisable options**



The **Rapidox 6100 C4-FN & C5-FK** is a fully-automatic zero-emissions multi-gas gas analyser for measuring gas compartments containing mixtures of C4-FN (Novec 4710) & C5-FK (Novec 5110) blended with CO_2 and O_2, all combined in a single portable instrument. Common brand names for these gases are g^3 and AirPlus. The modular design allows the customer to purchase only the gas types they require with the potential to upgrade the instrument in the future. The Rapidox measures the gas purity, water-content and contamination gases for each gas type in high voltage switchgear, circuit breakers and transformers as well as gas bottles. It is a fully portable lithium battery powered instrument.

Exceptional accuracy and stability are provided when measuring the purity of the compartment gas, through specially selected sensors. The modular configuration allows for up to six compatible gases to be analysed simultaneously in each gas type, using one analyser. The Rapidox is fully compatible with mixtures of C4-FN & CO_2/O_2, C5-FK & CO_2, together with carbon monoxide which is the primary toxic contamination gas. The unit also measures the water content of the gas in dewpoint or ppm to ensure dryness is acceptable.

The **Rapidox 6100 C4-FN & C5-FK** is housed neatly in an IP66-rated Peli transport case and supplied with sample hoses, DN8 and DN20 coupling accessories. Once powered and connected, the operator can select which gas blend to work with and the Rapidox configures the measurement screen correctly. If the user is changing gas type the unit will run a purge cycle to clean the existing gas from the analyser and into an external recovery bag. During the measurement the Rapidox automatically removes a small quantity of pressurised gas from the electrical equipment or gas cylinder, controlled with an automatic pressure sensing function. A vacuum purge cycle and internal gas storage system ensures that no air can contaminate the gas sample and that no test gas is able to escape during the testing period.

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All measured gases are analysed and data logged simultaneously with only a few minutes required to achieve a stable reading. A powerful compressor then returns the gas to the electrical equipment at high pressure. Results are displayed on screen and printed using the inbuilt thermal printer if required. The unit has multiple safety features built in to ensure the cycle is completed correctly without gas loss or cross contamination.

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

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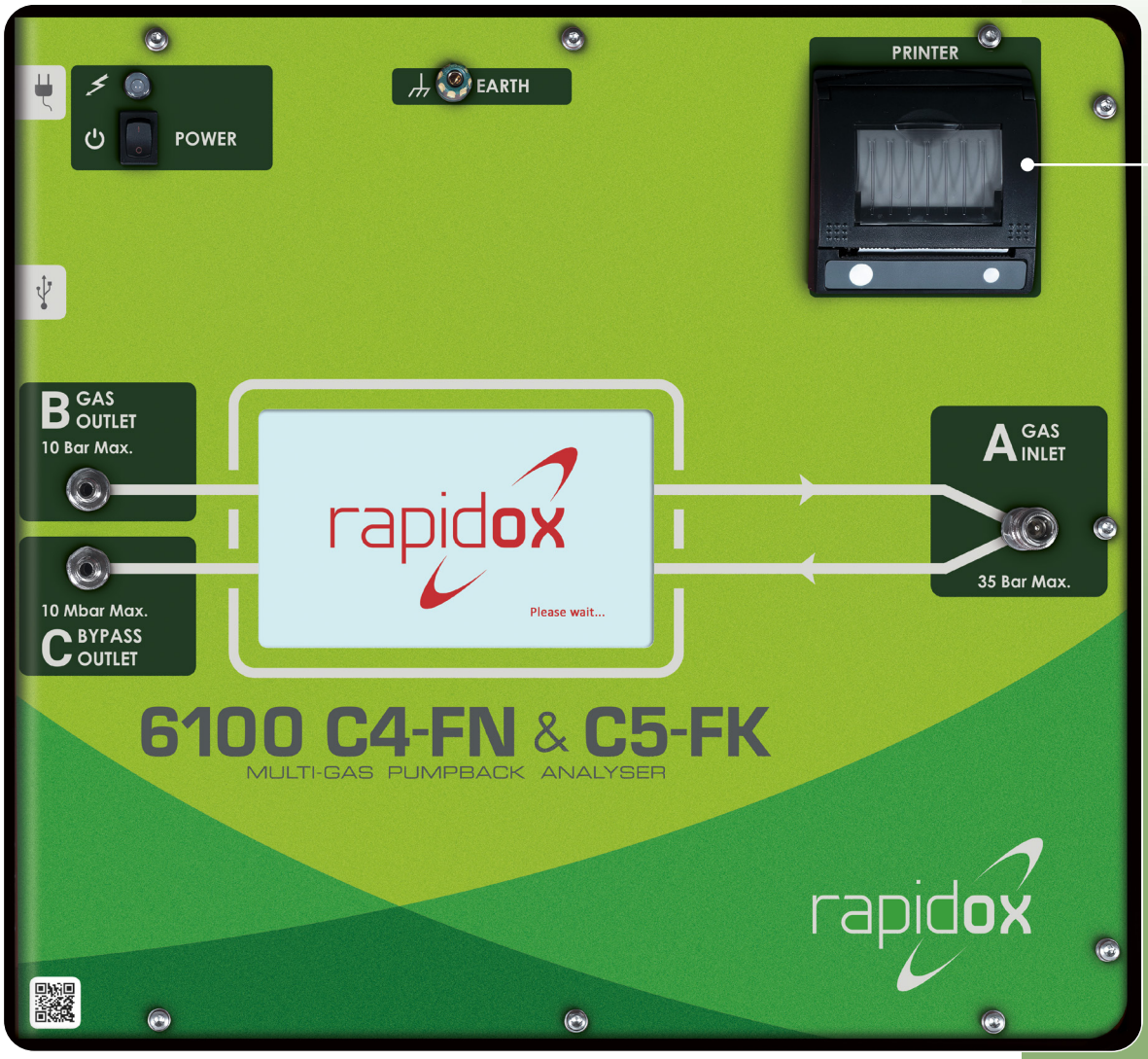

Integrated thermal printer

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Sensor Specifications

Rapidox 6100 C4-FN & C5-FK

Multi-Gas Pumpback Analyser

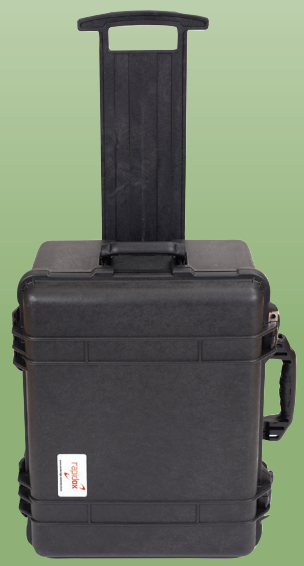
C4-FN & C5-FK	Range: 0-20% Accuracy: ±0.5% Calibration: Recommended every 12-24 months Life Span: >5 years
CO_2 - Carbon Dioxide	Range: 0-100%. Accuracy: ±0.5% Calibration: Recommended every 12-24 months Life Span: >5 years Sensor Type: Infrared (IR)
Air / O_2 / N_2	Range: 0-100% as air, 0-30% as O_2 Accuracy: ±1% full-scale Calibration: Recommended every 12-24 months Life Span: Up to 5 years Sensor Type: Electrochemical
H_2O - Dew Point	Range: -60 to +20°Cdp. (10 - 24,000ppmV) Reading is corrected to either RT or 20°C Accuracy: ±2°Cdp of reading Calibration: Recommended every 12 months by Sensor Exchange Life Span: 2-3 years Sensor Type: Polymer
CO - Carbon Monoxide	Range: 0-500ppm, 0-1,000ppm, 0-2,000ppm, 0-5,000ppm Accuracy: ±2% full-scale Calibration: Recommended every 12-24 months Life Span: Up to 5 years Sensor Type: Electrochemical

All sensor replacements are to be carried out by Cambridge Sensotec or an approved service partner.

SF_6 Replacement Gases

Gases such as C4-FN (known as g³ or Novec 4710) and C5-FK (known as AirPlus or Novec 5110) are being used more commonly for medium to high voltage applications as a replacement for SF_6. Whilst these gases have much improved GWP (Global Warming Potential) compared with SF_6, they remain harmful to the atmosphere and must be equally controlled during testing to prevent any unwanted release into the atmosphere.

For the power transmission and distribution network, gas insulation technology using C4-FN & C5-FK is becoming increasingly important. To protect personnel, equipment and the environment regular gas analysis should be adopted within the maintenance schedule. The early identification of any decomposition products and moisture within these gases will help avoid unnecessary shutdowns, outages and failures, in addition to reducing maintenance expenditures.



Robust Peli case with integrated trolley and carry handles

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Specifications

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	Rapidox 6100 C4-FN & C5-FK
Ambient Operating Conditions	-10°C to +40°C, 10-90% RH, 600-1100mbara
Warm-up Time	Min 3-4 minutes at 20°C (Recommended 15 mins to achieve full accuracy)
Charging Voltage	90-260 VAC, 50/60Hz
Battery Life	Up to 8 hours. 4-6 hour charge
Sample Connections	Rectus style fitting compatible with famous brands
Data Outputs	Excel compatible data via USB memory stick
Data Storage	4GB internal data storage allowing for approximately 1 year of continuous monitoring
Compressor	Up to 10 Bar with up to 25 cycles per battery charge at 20°C
Measurement Time	2 -8 minutes (Min 6 minutes required for H_20)
Pressure Range	0.5-35 Bar
Gas Flow Rate	0.5L.min-1
Max Inlet Pressure	35 Bar gauge (10 Bar for Pumpback operation)
Display	7" (178mm) full-colour LCD touch screen interface with soft menu keys
Printer	Integrated thermal printer allows output of results on demand
Analyser Dimensions	270mm(H) x 560mm(W) x 450mm(D)
Weight	21kg (Total instrument and case)

Due to continuous product development necessary changes to specifications may be made without prior notice. Issue no: D62-203-1

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