

Sub MkIIP

Portable Hyperbaric Carbon Dioxide
and Oxygen DISSUB Analyser



The Sub MkIIP is a portable monitor, which has been specifically designed for use in a distressed submarine (DISSUB) escape and rescue situation. It is a lifesaving decision-making tool, and the only continuous gas monitor capable of meeting the requirements of NATO STANAG 1476:2014 (ANEP/MNEP-86).

In a DISSUB situation, the senior survivor needs to determine whether the crew needs to escape the submarine, or wait for rescue. The Sub MkIIP provides critical information on the state of the atmosphere inside the submarine at different locations, enabling a decision to be made. Its minimal controls and long battery life ensure it's easy to use in stressful scenarios and can be operated by any crew member during a DISSUB event. A backlight ensures readings can be seen and taken in low light.

Over 700 units are in active service with more than 20 nations. Each unit is subjected to extensive testing, ensuring that the accuracy and reliability of each unit is never compromised. The unit is built in a waterproof enclosure, which is vented to prevent collapse in hyperbaric environments. The SubMkIIP measures the partial pressure of oxygen (ppO2) and carbon dioxide (ppCO2) up to 10 bar absolute, as well as depth, temperature, elapsed time and battery hours. It can store DISSUB atmospheric data for post event analysis. Automatic correction of pressure effects on the readings allows the true partial pressure of the oxygen and carbon dioxide to be displayed. The analyser operates using two measuring principles, electrochemical for oxygen measurement and infrared absorption for carbon dioxide. The gases enter the measuring cells by diffusion via two waterproof and dustproof membranes ensuring the elimination of cell contamination.

KEY FEATURES

Easy to use - can be used by anyone in a DISSUB situation - just turn it on and you are ready to monitor

Backlit - can be seen easily in low/no light

Portable and lightweight - can be used anywhere on a submarine

Internal batteries provide power for more than seven days of continuous real-time measurements

Robust and saltwater resistant - will still be working in an emergency situation

Temperature and drift compensated - allows for long periods between calibration

Datalogging - so the DISSUB event can be recorded for analysis

ANALOX RECOMMENDS

Having a Sub MkIIP in all areas of a submarine incase a DISSUB situation occurs.



Manufactured
in Great Britain

SUBMARINE
ATMOSPHERE
MONITORING
SYSTEMS

ANALOX
Military Systems

SPECIFICATIONS

General

Power source: internal batteries or external DC supply 9-40 V DC, with regulation of better than +/- 300mV (optional 100-240 V AC power supply)

Batteries: 4 x 'D' size alkaline cells Hyperbaric tested for power, 2 x LR43 alkaline manganese cells for clock backup

Fuses: individual fuses for the two supply sources, fuses 1A-T

Display panel: 6 x 4 character LCD, 9999 counts max, character size 8x5 mm. Simultaneous displayed readings for oxygen, carbon dioxide, depth, temperature, elapsed time and battery condition

Display accuracy: ±2 counts

Operator controls: Push button to control display backlight and reset elapsed time and data log period. Backlight times out after 15 seconds when turned on.

Operating temperature: 0°C to 40°C (32°F to 104°F)

Storage temperature: -5°C to 50°C (23°F to 122°F)

Dimensions: Prior to April 2015 - 232 x 192 x 111 mm (9.12 x 7.6 x 4.37 inches)

After April 2015 - 240 x 198 x 109 (9.44 x 7.8 x 4.29 inches)

Weight: 2kg (44lbs) with batteries installed

Oxygen sensor

Sensor: Analox 9100-9212-9HSUB oxygen sensor with microprocessor applied temperature compensation, 2-3 year life at 210 mbar ppO₂ (0.21ppATS)

Range: 0 to 2000 mbar ppO₂ or 0.000 to 2.000ppATS (0.0 to 200.0%SEV)

Accuracy: ±1% of reading when at constant temperature, otherwise: ±2% of reading

Pressure sensor

Sensor: Analox solid state bridge sensor

Range: -3.0 to 90.0MSW or -10.0 to 300.0FSW (0.7 to 10 barA)

Accuracy: ±0.15% of range when at constant temperature, otherwise: ±0.5% of range

CO₂ sensor

Sensor: Analox BL5 low power, long life infrared sensor with microprocessor applied temperature and pressure compensation

Range: 0.0 to 100.0 mbar ppCO₂ or 0.00 to 10.00% SEV

Accuracy: ±5% of range when 0.8 < ambient pressure < 6 bar absolute and 0 < ambient ppCO₂ < 50 mbar (5%SEV), otherwise: ±10% of range

Analox has a policy of continuous improvement and we reserve the right to upgrade or change specifications without prior notice.

Full technical specifications are available upon request and can be found in the User Manual.

If you require a datasheet in another language please contact us.

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