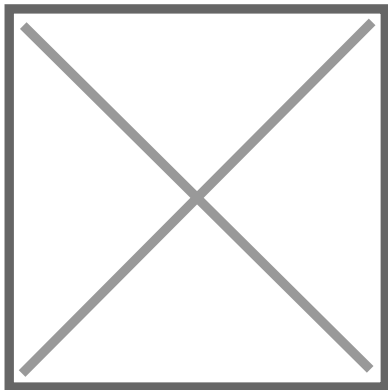


Nuvair Multigas SAT Color Alarm Analyzer

SKU: SAT

Price: ?0.00



Description

The Nuvair Multigas Color is mounted in a water- and impact-resistant case with a powder-coated aluminum instrument panel. TFT 320×240 dpi color display with backlit LED generates 600 nits (cd/m²) light intensity and allows for viewing of dynamic gas concentration graphs. For hyperbaric chamber operations, both the Multigas SAT instrumentation box and sensors can be placed inside of the chamber to allow for onboard monitoring, or the sensor connections can be routed outside of the chamber to allow for external monitoring. The unit can display the following values:

- Actual reading of sensors
- Partial Pressure (PP) of gas sensors
- Surface Equivalent Value (SEV) of the sensors related to surface pressure of 14.7 psi (1 bar)
- Sensor electrical values
- Graph of sensor values over time

General Specifications

Input Voltage Requirement 10–35 VDC

Internal Battery Lithium-ion rechargeable battery: 1400 mAh 3.7V

Inputs Up to six (6) sensors

Output Onboard acoustic buzzer alarm

Serial Connection 1 RS232 interface. Baud rate up to 115000 baud, on request: RS485 interface

Measure Resolution 24 bit bipolar A/D converter
Drift in temperature automatic compensation

Conversion Rate 10 ms

Sampling Time 100 ms (min) for each channel

Signal Measuring Accuracy 0.1% Full Scale $\pm 1/2$ LSB

Display Screen Size 5.3×2.9 in (135×74 mm)

Display Device	TFT 320×240 dpi resolution, backlit LED
Display Light Intensity	600 nits (cd/m ²)
Memory	Nonvolatile micro SD card writer/reader
Microprocessor	Cortex M4
Standard Case Dimensions	12 × 10.6 × 5.7 in (305 × 270 × 144 mm)
Weight	4.4 lb (2 kg)

Advantages

- Programmable alarm thresholds
- Audible and visual alarms
- Fast response
- Packaged in a compact water- and impact-resistant container
- Easy to operate, reliable, and accurate
- Optional external panel mounting of sensors and instrumentation
- Upgrade firmware using an SD card
- Designed for use in hyperbaric chambers and commercial dive operations; tested to 35 bar/ata*

Features

- Digital analyzer with color display plots dynamic gas concentration graphs
- Audible and visual alarms
- Standard (6) sensor configuration: oxygen (O₂), carbon dioxide (CO₂), hydrogen sulfide (H₂S), moisture (H₂O), temperature, and pressure
- Controlled by a rotary/push knob
- Sensor status indicators
- User-replaceable Li-ion batteries and sensors
- Onboard acoustic buzzer alarm
- Battery voltage indicator
- Includes a car lighter socket external power supply
- Plug the unit into a personal computer for continuous data reading
- Bluetooth LE equipped
- Micro SD card reader/writer produces a .CSV spreadsheet file

CO₂ Sensor

- Non-dispersive infrared (NDIR) sensor
- Resolution: 0-5000 ppm / 50 ppm resolution from 0 to 2500 ppm then 100 ppm up to full scale
- Temperature working range: -20°C to 50°C (-4°F to 122°F)
- Humidity working range: 0 to 95% rh, non-condensing

H₂S Sensor

- Range: 0–50 ppm
- Sensitivity range: 1200 ±250 nA/ppm
- Resolution at 68°F (20°C): <0.1ppm

- Linearity: <5% full scale

O₂ Sensor

- Range: 0-100%
- Accuracy: $\pm 2\%$ over full scale
- Linearity: Within $\pm 2\%$ over full scale
- Long life medical galvanic cell (up to 48 months)
- No effects with gases like CO, CO₂, NO_x, N₂, H₂, Ar, or He

Moisture Monitor

- Measuring range: 0.0 to 100% rh
- Resolution: 0.5% rh
- Accuracy: $\pm 2\%$ rh

Temperature Sensor

- Range: -4 to 176°F (-20 to 80°C)
- Display options: °F or °C

Pressure Sensor

- Displayed as:
 - bar
 - psi
 - atmospheres (ATM)
 - feet/meter seawater (fsw/msw)
 - feet/meter freshwater (ffw/mfw)

Software Menu

- Start Log
- Settings
 - Brightness
 - Languages
 - Units
 - Alarm Configuration
 - Date and Time
 - Select Skin
 - Factory Reset
- Calibration
- Alarm
- Export Data

Page Displays

- Page 1: Startup
- Page 2: Gas mixture (percentage, ppm, or other scale)
- Page 3: Gas mixture (partial pressure related to actual ambient pressure)
- Page 4: Gas mixture (surface equivalent value [SEV] of 14.7 psi [1bar])
- Page 5: mA and mV values of sensor and transducers
- Page 6: Gas reading graphs over time (each gas has its own display page)

Power Options

- Wall Plug-in: US (United States) includes power adapter for cigarette car lighter
- Wall Plug-in: AU (Australia) includes power adapter for cigarette car lighter
- Wall Plug-in: UK (United Kingdom) includes power adapter for cigarette car lighter
- Wall Plug-in: EU (European Union) includes power adapter for cigarette car lighter
- Rechargeable Lithium Battery & Charger
- DIN Rail Power Supply

*In pressurized environments, the calibration of sensors must be performed at the same pressure with sample or ambient gas of known concentration.

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WARNING: Never expose gas sensors to pressure or you may cause damage and/or false readings. Damaged sensors will not provide accurate gas analysis. Most gas analyzers can be used to analyze a regulated gas sample flow, the contents of a gas cylinder, or the flow from a regulator. The flow rate of gas must equal 1–5 L/min. To produce this flow, a [Flow Restrictor and Regulator](#) may be required. A faulty Flow Restrictor can lead to a false analyzer reading. Flow Restrictors should be regularly tested with a Flow Meter. Inaccurate gas analysis can lead to serious personal injury or death.

Excessive flow rates create unacceptable sensor pressure and cause false readings. All Nuvair gas sensors have been tested to pressures of 35 bar/ata, but analyzers do not read accurately unless calibrated at the same pressure of intended use. Use of sensors at pressures other than ambient requires special knowledge and training.