



User Manual

Pro N₂ Alarm

Nitrogen Analyzer

Rev. 08.22

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Warning

This User Manual contains important safety information and should always be available to those personnel operating this equipment. Read, understand and retain all instructions before operating this equipment to prevent injury or equipment damage.

Every effort was made to ensure the accuracy of the information contained within this manual; however, we retain the right to modify its contents without notice. If you have problems or questions after reading the manual, stop and call for information.

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.

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1.0 Introduction

This manual will assist you in the proper set-up, operation and maintenance of the Pro N₂ Alarm nitrogen Analyzer. Be sure to read the entire manual.

Throughout this manual we will use certain words to call your attention to conditions, practices or techniques that may directly affect your safety. Pay particular attention to information introduced by the following signal words:

Danger

Indicates an imminently hazardous situation, which if not avoided, will result in serious personal injury or death.

Warning

Indicates a potentially hazardous situation, which if not avoided, could result in serious personal injury or death.

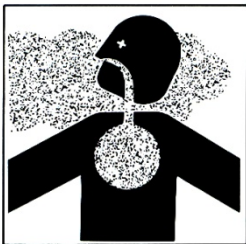
Caution

Indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

Notice

Notifies people of installation, operation or maintenance information which is important but not hazard-related.

Warnings Graphics Defined:



Gas Inhalation



Skin damage

2.0 System Description

The Pro N₂ Alarm nitrogen analyzer measures nitrogen (N₂) levels in gases in the range of 0.0 to 100%. The Analyzer is designed to verify N₂ concentration in stored gas cylinders, enclosed spaces and with compressors pumping nitrox. When used in breathing gas applications, redundant Analyzers must be used for verification. In diving, for example, one Analyzer must be used to monitor nitrogen during breathing gas production and a second independent Analyzer must be used to verify the nitrogen content of the stored breathing gas prior to diver use.

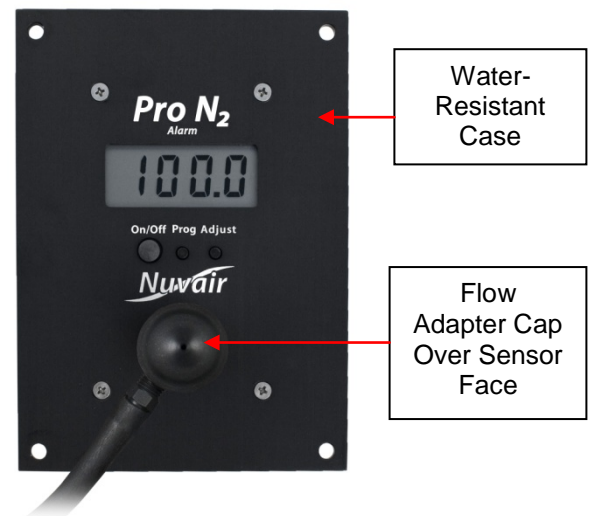
Warning

When using the Analyzer for diving applications with mixed gases other than air, you must first obtain proper instruction from a certified diving instructor with a nationally recognized training agency qualified in mixed gas diving. Improper use of this analyzer may result in incorrect gas analysis which can lead to serious personal injury or death.

The Analyzer is battery powered and includes an internally mounted Sensor with audible alarm. The Water-Resistant Case includes a Digital Display and controls that are environmentally sealed

The Analyzer uses a Flow Adapter Cap and Flexible tubing to deliver sample gas to the Sensor. Pressurized gases must be regulated to avoid damage to the analyzer. Use of this Analyzer in a hyperbaric chamber will void the owner's warranty.

The Analyzer comes in a high impact storage case. It is ready for use after calibration with an appropriate certified calibration gas.



Warning

This analyzer is designed for use at atmospheric pressures only. It is not designed for exposures in a hyperbaric chamber. Use of this analyzer in a hyperbaric chamber will result in incorrect readings and may damage the unit.

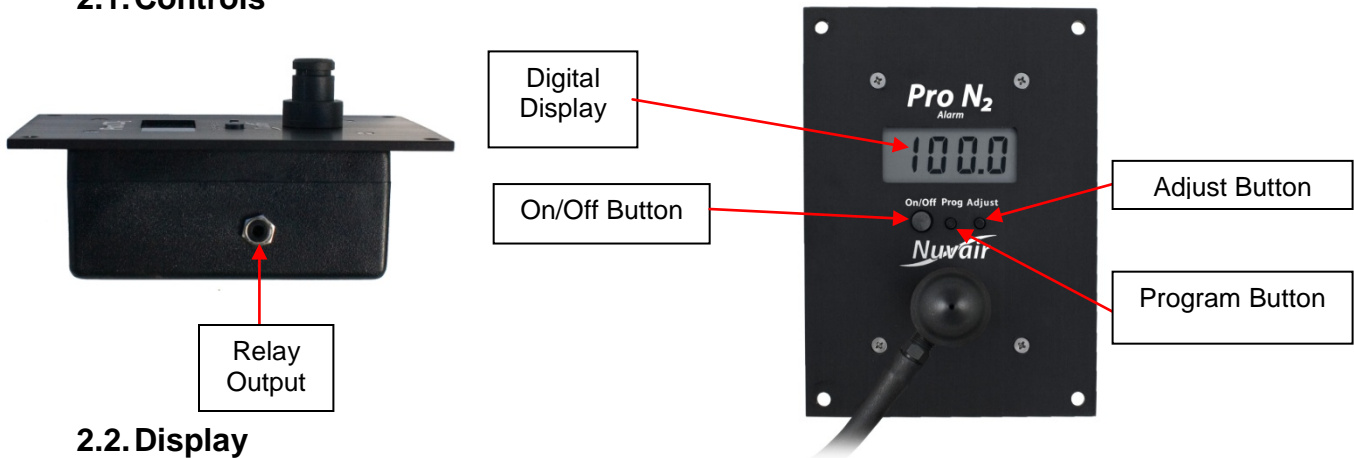
Warning

Although the Analyzer is a rugged instrument, careless handling or abuse may result in damage to the Analyzer resulting in inaccurate gas analysis. Inaccurate gas analysis can lead to serious personal injury or death.

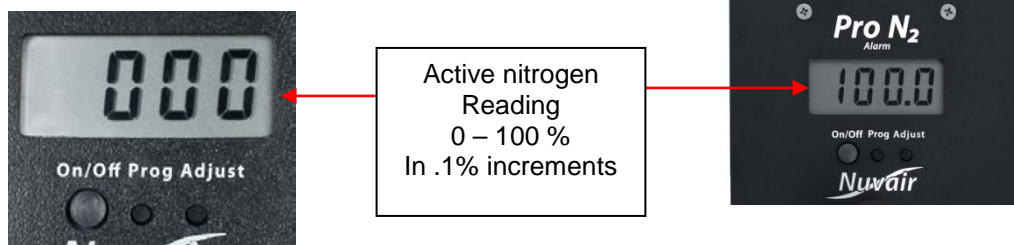
Warning

Breathing gas must always be analyzed by two separate Analyzers, with one used for production and one used for analysis after production. Never depend on a single Analyzer during both gas production and delivery. If the Analyzer readings do not agree, both units must be recalibrated. Inaccurate gas analysis can lead to serious personal injury or death.

2.1. Controls



2.2. Display



2.3. Alarm

The Analyzer includes an audible alarm that is activated when the sensor reaches a user programmed minimum % of nitrogen and/or maximum % of nitrogen. The alarm will not clear until the concentration of N₂ returns within the parameters programmed by the user. The alarm function may be activated and deactivated, and must be re-activated every time the analyzer is powered on.

2.4. Sensor

The Analyzer uses a electrochemical sensor that measures content in gases. The sensor is disposable and user-replaceable, with a life expectancy of up to 48 months, depending on usage. The sensor is designed for use at atmospheric pressure (0 psi.). The gas mixture to be analyzed must be regulated accordingly and any potential for pressure or vacuum must be avoided.

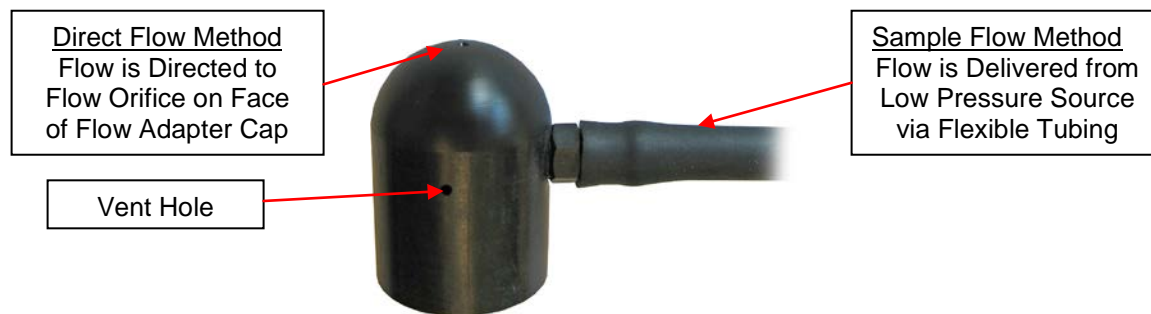
2.5. Batteries

One 9 volt battery provides power. The battery is located inside the Analyzer and is user-replaceable. The battery should be removed any time the Analyzer will be stored without use for extended periods of time. The screen will blink alternately from "000" to "bAt" at start up when battery is low.



2.6. Flow Adapter Cap

The Analyzer includes a Flow Adapter Cap with flexible tubing and flow orifice. It attaches to the Sensor port and is sealed by an o-ring. It can be used to direct the gas sample flow to the Sensor via one of two methods:



Flow to the sensor must be restricted to 2.0 Liters Per Minute (L/min) maximum. NuVair offers flow restrictors to accomplish this task. See appendix.

3.0 Calibration

Warning

Nitrogen Analyzers must be calibrated before each use. Improper calibration may result in the use of incorrect breathing gas mixtures, which may cause serious injury or death to the person using the gas mixture.

Warning

Calibration or use of the Analyzer with a low battery may result in inaccurate readings. Inaccurate gas analysis can lead to serious personal injury or death.

Warning

When Analyzer calibration is performed at different atmospheric conditions than the gas being measured, a calibration correction value may be required. Improper calibration may result in the use of incorrect breathing gas mixtures, which may cause serious injury or death to the person using the gas mixture.

Notice

If the Analyzer has been subjected to a recent change in ambient temperature, allow it to stabilize for one hour before checking calibration.

Warning

During the warm up time, if the nitrogen percentage of the mixed gas flow is different from the value of calibration set in the instrument, a failed calibration is obtained and a wrong analysis value will be displayed.

3.1. Calibration Methods

Calibration should always be performed at the same temperature and humidity conditions as the gas being measured. This is not always possible, for example, in a tropical environment where dry breathing gas from a high-pressure SCUBA cylinder will be measured after Analyzer calibration has been performed in the warm, humid ambient air. Under these conditions a calibration correction value may be required, or dry air must be used for calibration. It may be required for the analyzer to be calibrated to a certified calibration gas.

⚠ Warning

Obtain proper training before attempting special calibration procedures. Improper calibration may result in the use of incorrect breathing gas mixtures, which may cause serious injury or death to the person using the gas mixture.

To assure the greatest accuracy, use a Calibration Gas with a nitrogen concentration as close as possible to the expected concentration in the gas being produced.

4.0 Operation

Prior to each Analyzer use:

- 1) Remove the flow adapter cap to expose the sensor to ambient air, **OR** start the flow of Calibration Gas. Calibration gas must contain 20.9- 21% oxygen.
- 2) Turn unit the on by holding the “**On/Off**” button until the display shows “**On**”, then release the button. The “**Att**” (Wait) message will be displayed, followed by the software version.
- 3) The analyzer stores the previous calibration values, which need to be reset.
- 4) To calibrate, depress and hold the “**On/Off**” and “**Adjust**” buttons until the screen changes. Release the buttons and wait until the screen reads **79.0**.
- 5) Install the flow adapter cap on the sensor.
- 6) The instrument is now ready to read nitrogen concentration of the gas. You may now begin nitrogen production.
- 7) The display will now show the nitrogen percentage of the gas.
- 8) **ANY TIME THE ANALYZERS ARE RE-CALIBRATED THE SENSORS MUST BE EXPOSED TO AMBIENT AIR. REMOVE THE FLOW ADAPTER CAPS AND LET THE SECURE THEM OUT OF THE WAY IN SUCH A MANNER THAT ANY NITROGEN ESCAPING FROM THEM WILL NOT AFFECT THE CALIBRATION READING.**

Tip: You can check the battery life and current temperature by holding Adjust button for 3 seconds. The display will alternate from battery life to current temperature (Celsius) twice before returning the home screen.

⚠ Warning

Gas, even under moderate pressures, can cause extreme bodily harm. Never allow any gas stream to be directed at any part of your body.

⚠ Warning

Never expose the sensor to pressures above atmospheric pressure (0 psi) or you may cause damage to the sensor and/or receive false readings. Damaged Sensors will not provide accurate gas analysis. Inaccurate gas analysis can lead to serious personal injury or death.

4.1. Programming Procedures

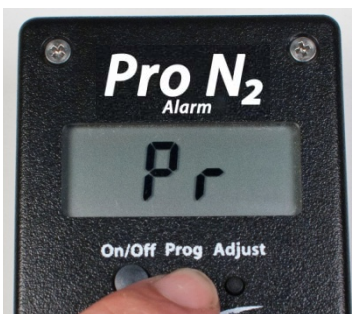
Press the “**Prog**” button until “**Pr**” appears on the display. The display will then change to “**AL 1**” and alternate with the 3 digit set value.

It is possible to program:

- **AL 1** Minimum alarm point expressed in % of nitrogen concentration
- **AL 2** Maximum alarm point expressed in % of nitrogen concentration
- **FSC** Value expressed in % of nitrogen concentration corresponding to the current output full scale value (20mA). 20mA always correspond to 100% nitrogen concentration.
- **O2c** nitrogen sensor calibration point

At the end of the programming procedure the display will show “End” and the instrument will display the nitrogen content of the gas mix.

Below are the actual screen views of each of the modes:



Program



First Alarm



Second Alarm



Full Scale Value



Nitrogen Sensor
Calibration



21% reading

4.2. Alarm Setting (AL 1 & AI 2)

- 1.) Press the “**Prog**” button for more than two seconds and then release the button. “**Pr**” will appear on the display, followed by “**AL 1**” and the currently set value in N₂% (0% default) alternating.
- 2.) The blinking digit shows the cursor position.
- 3.) Press the “**Prog**” button to increase the value (from 0 to 9)
- 4.) Press the “**Adjust**” button to move the cursor to the next digit, the “**Adjust**” button will be used to cycle through the rest of the digits.
- 5.) To complete your entry and save the N₂% value, press the “**On/Off**” button. You will then automatically jump to “**AL 2**” programming view.
- 6.) Repeat steps 3 through 5 to modify and save the “**AL 2**” N₂% desired value (100% default).
- 7.) To complete your entry and save the alarm values press the “**On/Off**” button. The display will then scroll to the “**FSC**” programming view. Or continue to press the “**On/Off**” button until the “**End**” screen appears.

4.3. Full Scale Value Setting (FSC)

It is not necessary to modify this value which is factory set at 100. This value corresponds to 100% nitrogen, which translates to 20mA at the analog output. 4mA is the value at 0% of nitrogen. This value can be changed in the same manner as the Alarm settings:

- 1.) Press the “**Pro**” button for more than two seconds and then release the button. On the display will appear “**Pr**” for two seconds, then “**AL 1**” will appear. Press the “**On/Off**” button to cycle through the Alarm settings until you reach the “**FSC**” view. “**FSC**” and a 3 digit value will then alternate.
- 2.) The blinking digit shows the cursor position.
- 3.) Press the “**Pro**” button to increase the value (from 0 to 9)
- 4.) Press the “**Adjust**” button to move the cursor to the next digit, the “**Adjust**” button will be used to cycle through the rest of the digits.
- 5.) To complete your entry and save the “**FSC**” value, press the “**On/Off**” button. The display will then scroll to “**O2c**” programming view. Or continue to press the “**On/Off**” button until the “**End**” screen appears.

4.4. Calibration nitrogen Value (O2c)

The “O2c” value is the calibration value assigned based on the percentage of oxygen in the gas being analyzed. The default calibration value is 21.0 (corresponding to 21% O₂ and 79% N₂ in ambient air). It is not necessary to modify this value if the unit is always calibrated in ambient air.

- 1.) Press the “Prog” button until “AL 1” appears on the display. Use the “On/Off” button to cycle through the settings until you reach the “O2c” screen.
- 2.) The blinking digit shows the cursor position.
- 3.) Press the “Pro” button to increase the value (from 0 to 9)
- 4.) Press the “Adjust” button to cycle through the digits.
- 5.) To complete your entry and save the O2c value, press the “On/Off” button.

Warning

The nitrogen calibration value will be the same value of the calibration set when the instrument is switched on. If, during auto-calibration the nitrogen percentage of the gas flowing across the sensor is a different value from calibration set in the instrument, a failed calibration is obtained and the wrong gas percentage will be displayed. Wrong nitrogen analysis may lead to death.

Warning

The calibration value of the Pro N₂ Alarm is factory set at 21% and any adjustments to this value will change the analyzers ability to properly ready the % of nitrogen in a gas. A wrong value in this parameter will give a wrong reading of N₂ concentration and the instrument will not be accurate. All the analysis concentration shown on the display will be wrong. If you modify this setting you must test the analyzer for accuracy with certified testing gas. Do not modify this value. Wrong nitrogen analysis may lead to death.

5.0 Threshold Alarms

The Alarm function must be activated every time the unit is powered on. To activate, wait until the unit has cycled through its startup and is steadily displaying the analyzer's reading. Press the **On/Off** and **Prog** buttons at the same time until an arrow appears on the left side of the display.

Should the nitrogen reading exceed the threshold alarms (AL1 or AL2), the instrument will go into alarm mode and activate the (optional) relay output (open collector max 100mA) and the audible alarm. The display will show the trespassed alarm and the actual measured value. To stop the audible alarm, press any key. In this event the Pro N₂ Alarm Analyzer will remain in alarm mode until the analyzed value goes below the alarm.

The relay output typically is used to shut down the compressor. NuVair can supply the necessary components to adapt your compressor to the relay or provide them at the time of install on a new compressor.

To deactivate the alarms, press the **On/Off** and **Prog** buttons at the same time until the arrow goes away.

6.0 Powering on and warming up

Before powering on the unit, ensure the sensor is exposed to a gas mixture with the 21% oxygen. This value corresponds to 79% nitrogen and 21% oxygen in ambient air. Be sure that air flowing across the sensor is 21% oxygen (if using the default setting) **before** turning on the analyzer.

Press the “**On/Off**” button and hold until the display shows “**ON**”. The “**Att**” (wait) message will then be displayed for several seconds.

Perform calibration as described in Section 4.0.

Activate the alarm function by pressing the **On/Off** and **Prog** buttons at the same time until an arrow appears on the left side of the display.

Warning

If the nitrogen percentage of the gas flowing across the sensor during calibration, a failed calibration is obtained and the wrong gas percentage will be displayed. Wrong nitrogen analysis may lead to death.

6.1. Powering Off

At the home or gas reading screen, hold down the “**On/Off**” button for a couple of seconds. The Analyzer will display “**OFF**” and then go blank.



7.0 Factory Reset

In case it is necessary to reset the Pro N₂ Alarm Analyzer to the factory settings, power on the Analyzer by pressing “On/Off” and “Adjust” buttons simultaneously. The display will flash “res”, then scroll to the programming menu.

The Alarms, FSC value, and O2c value will all need to be checked and/or reprogrammed at this point.

Warning

In case of reset, the instrument will delete all the alarms settings, the full scale value, and any new conversion value of nitrogen sensor will be reset to factory settings. Before using again the instrument, it may be necessary to program again the alarm values, the full scale value, and the nitrogen sensor calibration if changed. All the analysis concentration shown on the display would be wrong. Wrong nitrogen analysis may lead to death.

8.0 Maintenance

8.1. Analyzer Care

Warning

Analyzers immersed in liquid or stored in wet environments may not operate properly. This may result in incorrect readings. Incorrect gas analysis may result in personal injury or death.

Warning

Protect the analyzer from excessive shock and impact. Excessive shock and impact may result in incorrect readings. Incorrect gas analysis may result in personal injury or death.

Warning

Protect the analyzer from exposure to hyperbaric environments. Exposure to hyperbaric environments may result in incorrect readings. Incorrect gas analysis may result in personal injury or death.

- Do not clean Analyzer with anything other than a damp soft cloth.
- Do not immerse in liquid, leave unprotected outside, or store in a wet environment.
- Protect Analyzer from excessive shock and impact.
- Protect Analyzer from excessive exposure to sunlight and extreme temperatures.
- Do not use the Analyzer in a hyperbaric environment.

8.2. Battery Replacement

⚠ Notice

Be sure to dispose of spent, leaking, or damaged Battery properly, according to local regulations.

The following pictures illustrate the steps required to replace the batteries in the Analyzer.

Step 1. Remove
Screws

Step 2. Remove
Back Cover

Step 4. Replace
Back Cover -
Do Not Pinch
Wires

Step 5.
Reinstall
Screws



Step 3.
Remove &
Replace Old
Battery

Step 6. Turn
Analyzer On

Step 7.
Perform
Calibration



8.3. Sensor Replacement

The replacement sensor for the N₂ Analyzer is part number: 9507M.

You may take note of your sensor number before installing a new sensor serial number.

Sensor Serial
Number



⚠ Caution

Be sure to dispose of spent, leaking, or damaged Sensors properly, according to local regulations.

⚠ Danger

Do not swallow (ingest) either the electrolyte from the Sensor or the Sensor itself. The Potassium hydroxide chemical contained in the Sensor will cause severe injury or death. If electrolyte or the Sensor is swallowed, seek medical attention immediately.



Warning

If after handling the Analyzer or Sensor, you find that your fingers or other parts of your body feel “slippery” or the skin or eyes sting, immediately flush affected area with clean, fresh water for at least 15 minutes. The stinging or slippery sensation is an indication of a leaking Sensor. The Potassium Hydroxide chemical contained in the Sensor can cause severe injury or death. Seek immediate medical attention if eye contact is made or skin stinging persists.

8.4. Handling Sensors

Replacement Sensors are supplied in sealed bags. Normally Sensors do not present a health hazard. Before opening the bag, check that the electrolyte has not leaked. However, if electrolyte leakage has occurred, do not open bag. Dispose of Sensor properly or return for replacement. If electrolyte leakage occurs while the Sensor is in service, use rubber gloves and chemical splash goggles for handling. Rinse contaminated surfaces thoroughly with water.

Electrolyte First Aid Procedures

- Ingestion - Drink a large volume of fresh water. Do not induce vomiting. Get immediate medical attention.
- Eye Contact - Flush eyes with clean, fresh water for at least 15 minutes and get medical help immediately.
- Skin Contact - Flush the affected area with clean, fresh water for at least 15 minutes and removed contaminated clothing. If stinging persists get medical attention.



Warning

Do not try to disassemble the sensor. Sealed unit contains caustic liquid (KOH) which may cause severe burns to skin and eyes. In case of contact, flush 15 minutes with water. For contact to eyes also get medical attention. Do not wet in any case. If not properly cured the eyes may have permanent damages.

The following pictures illustrate the steps required to replace the Sensor in the Analyzer.

Step 1.
Remove Flow
Adapter Cap



Step 2.
Remove
Screws

Step 3.
Remove
Back



Step 4.
Disconnect
Electrical
Connector



Step 5. Remove
Old Sensor from
Case by
Unscrewing

Step 6. Replace
with New
Sensor



Step 7. Remove
Shorting Plug from
Sensor Electrical
Connector & Reconnect

Note: Reversing Polarity
Will Cause Display to
Read Negative



Step 8.
Replace
Front Cover
- Do Not
Pinch Wires

Step 9.
Reinstall
Screws



Step 10. Replace
Flow Adapter Cap

Step 11. Turn
Analyzer On

Step 12. Check
Calibration



9.0 Sensors

Sensor replacement for Pro N₂ Alarm.
 Use part number: 9507M.



Analyzer Sensor Specifications

Flow Rate:	.5 -2 L/min
Resolution:	0.1% of volume
Linearity:	±1% over full scale
Sensor Type:	Electrochemical
Expected Sensor Life:	48 months
Range:	0-100% oxygen
Alarms:	User-adjustable minimum and maximum audible and visual alarms
Response Time:	<15 sec. for 90% response; <25% for 97% response
Operating Temperature:	41° to 86°F (5° to 30°C)
Operating Humidity:	0 to 95% RH, non-condensing
Storage Temperature:	5° to 122° F (-15° to 50° C)
Power:	9 V battery, rechargeable lithium battery or 10/230 V wall plug-in
Output Signal:	11+- 3 milliVolt @ dry ambient air 74°F (23°C)
Drift:	< 1% volume N ₂ / month @ air
Pressure:	750 to 1250 hPa
Linearity Error:	= 2% @ 100% N ₂ applied for 5 min.
Zero Offset Voltage:	= 200 uV in 100% N ₂ , applied for 5 min.
Influence of Humidity:	-0.03% rel. N ₂ reading /%RH
Humidity:	up to 100% RH
Temperature Compensation:	NTC
Interferences:	according to DIN EN 12598 and ISO 7767
Material in contact media:	PA, PPS, PTFE, stainless steel

In the interest of product improvement these design specifications may change without notice.

Note: All specifications are at ambient / sea level, 77°F / 25°C

10.0 Troubleshooting

No display	Switched off Bad connection Low Battery	Switch on Check display/ battery connection Change the battery
Reading erratic	Pressure on sensor Radio transmission Sensor old or faulty Condensation on sensor.	Check flow Move unit away Contact Nuair Dry in air
Display segments missing	Display faulty	Return to dealer
Reading drifts	Rapid temperature change	Stabilize temperature & recalibrate

11.0 Spares and Accessories

Nitrogen Sensors

Use part number 9507M.

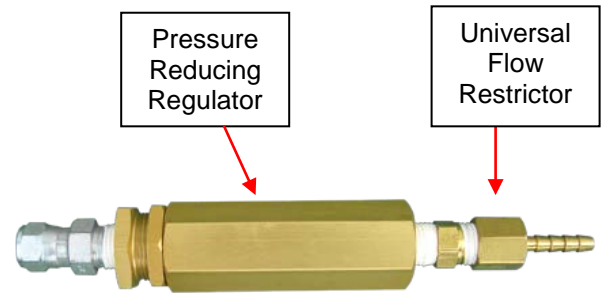


Flow Restrictors and Regulators (Pro N₂)

A variety of Flow Restrictors and Pressure Regulators for the Sample Flow Method are available from NuVair, all calibrated to produce a flow rate of 1 – 5 L/min with a Regulator output of 100 – 160 psi.

Universal Flow Restrictors are used for most applications and are typically provided complete with Regulator.

When analyzing Scuba Cylinder gases, special Flow Restrictors can be used to obtain the sample gas directly from the BC inflator hose. A variety of BC Flow Restrictors are available to fit the different types of inflator hose QD fittings used.



Pressure Reducing Regulator

Universal Flow Restrictor

Part No. 9519



1/4" FNPT Flow Restrictor Part - 9518



ScubaPro™ Flow Restrictor Part – 9518-SCUBAPRO



Mares™ Flow Restrictor Part – 9518-MARES



Standard Flow Restrictor Part - 9518-STD



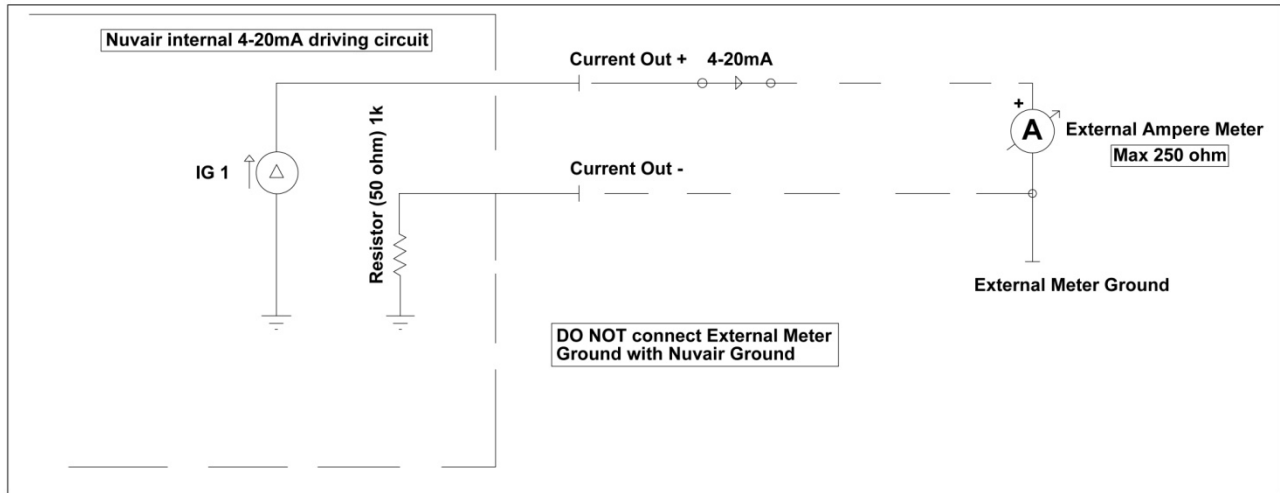
HP Regulated Flow Restrictor Part No. 9520-Int



HP Regulated Flow Restrictor Part No. 9520-DIN

12.0 Relay Output Schematics

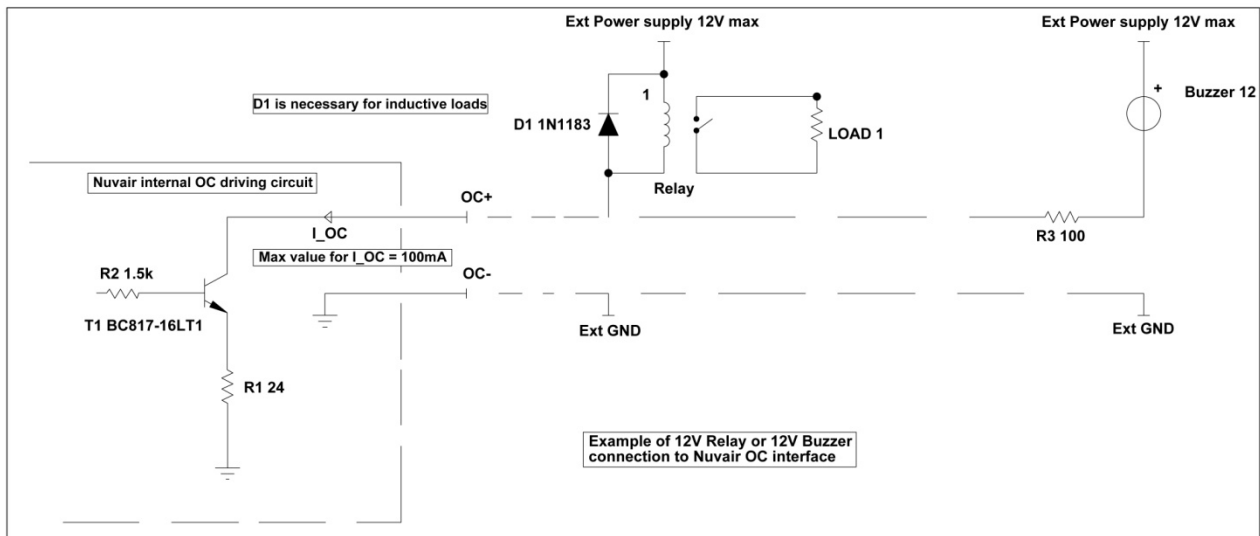
4-20mA Connections: The relay output uses a special “Mini Jack” plug that can be purchased separately from Nuair. Insert the plug into the output jack. Connections diagram below for additional wiring.



Warning

The plug should be connected or disconnected when the instrument is switched off, or the instrument will automatically switch off.

Open Collector Connections:



Nuvair Pro N₂ Alarm Warranty

Nuvair extends a limited warranty, which warrants the Pro N₂ Alarm to be free from defects in materials and workmanship under normal use and service for a limited period. The Pro N₂ Alarm is warranted according to the terms as set forth below. This warranty is not transferable.

Nuvair will, at its discretion and according to the terms as set forth within, replace or repair any materials which fail under normal use and service and do not exhibit any signs of improper maintenance, misuse, accident, alteration, weather damage, tampering, or use for any other than the intended purpose. Determination of failure is the responsibility of Nuvair, which will work together with the customer to adequately address warranty issues. When any materials are repaired or replaced during the warranty period, they are warranted only for the remainder of the original warranty period. This warranty shall be void and Nuvair shall have no responsibility to repair or replace damaged materials resulting directly or indirectly from the use of repair or replacement parts not approved by Nuvair.

Terms:

Nuvair warrants the Pro N₂ Alarm to be free from defects in material and workmanship for a period of twelve (12) months from date of purchase with the exception of the Nitrogen Sensor. The warranty covers parts and labor.

Nuvair warrants the N₂ sensor to be free from defects in material and workmanship for a period of twenty-four (24) months from date of purchase. The warranty covers parts and labor and is prorated as follows:

- | | |
|------------------|---------------------|
| • 0 – 12 Months | Free Replacement |
| • 13 – 18 Months | 50% Off Replacement |
| • 19 – 24 Months | 25% Off Replacement |

A warranty registration card, supplied with system documentation, must be filled out and submitted to Nuvair for the warranty to be registered. If the warranty registration card is not received within ten (10) days of purchase, the warranty will begin with the date of manufacture by Nuvair.

Maintenance Items:

Any materials which are consumed, or otherwise rendered not warrantable due to processes applied to them, are considered expendable and are not covered under the terms of this policy. This includes batteries.

Return Policy:

Application for warranty service can be made by contacting Nuvair during regular business hours and requesting a Return Material Authorization number. Materials that are found to be defective must be shipped, freight pre-paid, to the Nuvair office in Oxnard, California. Upon inspection and determination of failure, Nuvair shall exercise its options under the terms of this policy. Warranty serviced materials will be returned to the customer via Nuvair's preferred shipping method, at Nuvair's expense. Any expedited return shipping arrangements to be made at customer's expense must be specified in advance.

Limitation of Warranty and Liability:

Repair, replacement or refund in the manner and within the time provided shall constitute Nuvair's sole liability and the Purchaser's exclusive remedy resulting from any nonconformity or defect. Nuvair shall not in any event be liable for any damages, whether based on contract, warranty, negligence, strict liability or otherwise, including without limitation any consequential, incidental or special damages, arising with respect to the equipment or its failure to operate, even if Nuvair has been advised of the possibility thereof. Nuvair makes no other warranty or representation of any kind, except that of title, and all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, are hereby expressly disclaimed. No salesman or other representative of Nuvair has authority to make any warranties.

Notes:



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