**Nuvair**®
*Compressed Gas Solutions*

The Nuvair **PRO DUO** series of gas analyzers come in different pairings to match your multigas analyzing requirements. Mounted in a rugged, water-resistant carrying case with black lid, the **PRO DUO** has two user-programmable audible and visual alarms for each gas sensor. Powered by a rechargeable lithium-ion battery (or 24V external DIN power for 9599-DP and 9599F-DP), the **PRO DUO** comes in the following configurations:

· Oxygen/Carbon Dioxide [SKU 9618-LB]
· Carbon Monoxide/Carbon Dioxide [SKU 9598-LB]
· Carbon Monoxide/Moisture [SKU 9599-DP]
· Oxygen/Carbon Monoxide [SKU 9623-LB]

*9618-LB ($CO_2$ · $O_2$) with Black Cover Carrying Case*

*9598F-LB ($CO_2$ · CO) with Flow Meter in a Clear Cover Mountable Case*

Each **PRO DUO** is available with an optional flow meter [9618F-LB, 9598F-LB, 9599F-DP, 9623F-LB], and is mounted in a rugged, water resistant mounting case with clear lid.

Each sensor has two user-programmable audible and visual alarms. The internal sensors are plumbed together to monitor a single input. The analyzer has visual and optional audible alarms for each gas. An audible alarm sounds if any alarm set point is reached. When in alarm, the analyzer's analog output can activate an optional relay that shuts down compressors automatically, sounds a remote alarm, or activates emergency backup systems. All -LB models come equipped with a rechargeable lithium-ion battery and include a universal 110/230V charger. The -DP models are DIN powered.

### Advantages
· Programmable alarm thresholds
· Audible and visual alarms
· Fast response
· Compact water-resistant container
· Designed to test breathing gases
· Easy to operate
· Reliable and accurate
· Optional relays for external alarm or compressor control
· Optional flow meter on some models

### Features
· Audible and visual alarms for oxygen ($O_2$), carbon monoxide (CO), carbon dioxide ($CO_2$), and/or moisture ($H_2O$)
· Temperature compensated sensors
· User replaceable battery and sensors
· Low battery warning indicator
· Factory reset

### $CO_2$ Analyzer
· 50 ppm resolution from 0 to 1000 ppm, then 100 ppm up to full scale
· 0-2000 ppm range

### $O_2$ Analyzer
· 0-100% range oxygen monitor
· 36-month electrochemical sensor
· ±1% accuracy

### CO Analyzer
· 0-100 ppm range CO monitor
· 18-month electrochemical sensor
· ±1% accuracy

### Moisture Monitor
· Audible visual alarms for high moisture content in filters
· Warning light for filter changes

### Replacement Sensors
· Oxygen Sensor Replacement | SKU 9507M
· Carbon Monoxide Sensor Replacement | SKU 9501-300 & SKU 9501-50

PLEASE NOTE: All Nuvair **PRO DUO** alarm analyzers are custom-made at the time your order is placed. If a rush order is required, please contact the sales team for estimated lead times.

**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.

| SKU | 9598-LB | 9598F-LB | 9618-LB | 9618F-LB | 9623-LB | 9623F-LB | 9599-DP | 9599F-DP |
|---|---|---|---|---|---|---|---|---|
| Carbon Monoxide (CO) Sensor | X | X | | | X | X | X | X |
| Carbon Dioxide ($CO_2$) Sensor | X | X | X | X | | | | |
| Oxygen ($O_2$) Sensor | | | X | X | X | X | | |
| Moisture ($H_2O$) Sensor | | | | | | | X | X |
| Flow Meter | | X | | X | | X | | X |
| Rugged, Water-Resistant Carrying Case with Black Lid | X | | X | | X | | | |
| Rugged, Water-Resistant Mounting Case with Clear Lid | | X | | X | | X | X | X |
| Lithium-ion Battery Powered with 110/220V Recharger | X | X | X | X | X | X | | |
| External 24V DIN Power | | | | | | | X | X |

## SENSOR SPECIFICATIONS

| Sensor | Pro O2 · Oxygen | Pro CO2 · Carbon Dioxide |
|---|---|---|
| Flow Rate | 0.5–2 L/min | 0.6–1 L/min |
| Resolution | ±0.1% | 50 ppm resolution from 0 to 1000 ppm, then 100 ppm up to full scale |
| Repeatability | N/A | ±2% of full scale @ 68°F (20°C) ambient |
| Linearity | N/A | At ambient temperature and pressure: ± 2% FSD or ± 10% of the reading, whichever is greater |
| Accuracy | Within ±1% of full scale at constant temperature and pressure (0-1 atm) when calibrated with 100% oxygen | ±2% over full scale |
| Sensor Type | Electrochemical | Non-dispersive infrared (NDIR) |
| Expected Sensor Life | Up to 36 months in air at 25°C/77°F and 50% rh | 5-10 years based on analyzer handling and use. Check sensor accuracy frequently with test gas and attempt to recalibrate if reading is inaccurate. Replace sensor if recalibration fails. |
| Range | 0-100% oxygen (max), 0-1% oxygen (min) | 0-2000 ppm |

| Sensor | Pro CO · Carbon Monoxide | Pro H2O · Moisture |
|---|---|---|
| Flow Rate | 0.5–1 L/min | No limit. Working Pressure: 100–6000 psi (0–80 bar) |
| Resolution | 1 ppm | 0.1 ppm |
| Repeatability | <+5% | N/A |
| Linearity | N/A | N/A |
| Accuracy | ±5% | 5 ppm + 9% from measured value |
| Sensor Type | Electrochemical | Capacitive |
| Expected Sensor Life | >24 months of normal use from date of manufacture | 3 years |
| Range | 0–50 ppm CO | 0-500 ppm H2O |