

# LD8000



## TRACE NITROGEN AND/OR OXYGEN IN ARGON, HELIUM AND CRUDE ARGON ANALYZER



The LD8000 is an online analyzer to monitor trace N<sub>2</sub> and/or O<sub>2</sub> in Ar/He/Crude Argon. Different technologies combination is used to achieve the complete solution inside one compact 3U cabinet:

Plasma Emission  
Detector  
for N<sub>2</sub>



Electrochemical  
cell for O<sub>2</sub>



### FEATURES:

- Trace Nitrogen and Oxygen in Argon/Helium/Crude Argon
- Compact 3U rackmount enclosure
- Large scale measurement
- 4-20 mA outputs as standard
- LAN/Web control
- Range Identification Relay
- Micro-valve for very low dead volume and fast purging time
- Low sample consumption
- Front adjustment valve for sample bypass flow to purge the sample gas line before the analyzer
- Optional zero gas calibration free system

### APPLICATIONS:

- Air separation unit
- Helium cryogenic installation
- Cryogenic truck loading station
- Speciality gas laboratories
- Process control
- Argon purification plant
- Steel Industries
- Chemical plants
- Welding gas control
- Helium liquification plants
- Gas management system
- Semiconductor manufacturing
- Quality control for truck fills and gas cylinders
- Inert glove box systems
- Universities and laboratories

## SPECIFICATIONS:

|   |  |  |
|---|--|--|
| <b>DETECTOR TYPES</b>                         | Plasma Emission Detector for N <sub>2</sub> / Electrochemical cell for O <sub>2</sub>  |  |
| <b>RANGE FOR N<sub>2</sub></b>                | 0 – 1 ppm, resolution to 10 ppb<br>0 – 10 ppm, resolution to .1 ppm  | 0 – 100 ppm, resolution to 1 ppm<br>other range possible up to 10000 ppm configurable  |
| <b>RANGE FOR O<sub>2</sub></b>                | 0 – 10 ppm, resolution to 100 ppb<br>0 – 100 ppm, resolution to .1 ppm   | 0 – 1000 ppm, resolution to 1 ppm<br>other range possible up to 25% configurable   |
| <b>STANDARD FEATURES</b>                      | <ul style="list-style-type: none"> <li>Manual or autoranging (user selectable)</li> <li>Microprocessor controlled</li> <li>5.6" TFT intelligent LCD module with Touch Screen</li> <li>Self diagnosis system with auto-resolve alarm</li> <li>4-20 mA isolated outputs</li> </ul> | <ul style="list-style-type: none"> <li>Alarm Historic</li> <li>Safe calibration procedure to avoid any bad calibration</li> <li>Digital outputs for remote monitoring: (all dry relay contacts) <ul style="list-style-type: none"> <li>- System status (1 output)</li> <li>- Range in use (3 outputs per impurity)</li> <li>- Calibration in use (1 output)</li> </ul> </li> </ul> |
| <b>OPTIONS</b>                                | <ul style="list-style-type: none"> <li>Internal sampling system for zero, span and sample</li> </ul>   | <ul style="list-style-type: none"> <li>Serial port: RS-232 / 422 / 485 / Profibus</li> <li>2 alarm outputs (user programmable set point)</li> <li>Zero calibration gas free system</li> </ul>  |
| <b>GAS CONNECTIONS</b>                        | Sample: 1/8" compression fittings  | Vent: 1/8" compression fitting   |
| <b>CALIBRATION GAS</b>                        | Zero: LDP1000 purified gas (Getter)  | Span: 8.0 to 9.5 ppm N <sub>2</sub> and O <sub>2</sub> (application dependant)   |
| <b>SAMPLE FLOW REQUIREMENTS</b>               | 75 to 200 sccm   |  |
| <b>RECOMMENDED MAXIMUM OPERATING PRESSURE</b> | 30 PSIG (206 kPAG)   |  |
| <b>RECOMMENDED MINIMUM OPERATING PRESSURE</b> | 4 PSIG (28 kPAG) optional 1 PSIG (7 kPAG)  |  |
| <b>OPERATING TEMPERATURE</b>                  | 10 °C to 45 °C   |  |
| <b>SUPPLY</b>                                 | 115 VAC, 50 – 60 Hz or 220 VAC, 50 – 60 Hz   |  |
| <b>ACCURACY</b>                               | Better than ± 1% full scale  |  |
| <b>DRIFT</b>                                  | < ± 1%   |  |
| <b>RESPONSE TIME</b>                          | T90 < 10 seconds   |  |
| <b>O<sub>2</sub> SENSOR LIFE</b>              | 15-21 months (depending O <sub>2</sub> concentration level exposition)   |  |
| <b>WEIGHT</b>                                 | 29 lbs (13 kg)   |  |

## ORDERING INFORMATION:

| LD8000 | -X  | -X  | -XXX   | -X                     | -XX   | -X                             | -XXX  | -X                                  |
|--------|---|---|--|------------------------|---|--------------------------------|---|-------------------------------------|
|        | <b>N2:</b> Nitrogen<br><b>O2:</b> Oxygen<br><b>N2 + O2:</b> Nitrogen + Oxygen | <b>A:</b> Argon<br><b>H:</b> Helium<br><b>C:</b> Crude Argon<br><b>D:</b> Dual (Argon + Helium) | Operating Voltage:<br><b>120:</b> 120 volts<br><b>220:</b> 220 volts | <b>A:</b> Alarm option | Integrated sampling system<br><b>S1:</b> 1 sample + zero + span<br><b>S2:</b> 2 samples + zero + span | <b>C:</b> Zero gas free system | Serial communication:<br><b>RS2:</b> RS-232<br><b>RS4:</b> RS-485<br><b>PFB:</b> Profibus | <b>P:</b> Purge valve and flowmeter |

## DIMENSIONS:

