



# ECO PHYSICS nCLD 811 M

## APPLICATION EXAMPLES

- Emissions test benches
- Testing of burner systems
- Catalyst development
- Engine test cells
- Car production
- Exhaust analysis

*The nCLD 811 M is the next generation in two-channel emissions monitoring instrumentation. Unique in speed and reliability, the nCLD 811 M is modular designed and allows the continuous and simultaneous analysis of NO, NO<sub>2</sub> and NO<sub>x</sub> in raw exhaust gasses with NO<sub>x</sub> concentrations ranging from several thousand ppm down to a ppb. Its graphical user interface also individually displays and connects to other instruments' data.*

Measurement of:

- NO
- NO<sub>2</sub>
- NO<sub>x</sub>

### When Decimals are Decisive

The nCLD 811 M fulfills the requirements of the automotive industry when it comes to producing reproducible and reliable NO<sub>x</sub> data. With the heated inlet and the built in automated pressure control system, the analyzer is capable of handling rough samples, such as raw exhaust gas. With a detection limit as low as 1 ppb, the nCLD 811 M is also suited for analyzing bag samples. The instrument has a broad range of capabilities designed to fit into this state of the art NO<sub>x</sub> monitor with included temperature stabilization. Furthermore, calibration and adjustment of the unit runs quickly and automatically with all necessary data stored and available.

### User Friendliness

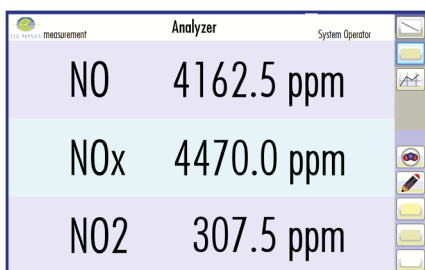
The new touch sensitive graphical user interface enables the user to individually adjust the instrument operation and data management according to his/her needs and applications. The bright 7" monitor gives a clear overview and allows numerical and graphical display of values. Multiple digital in- and outputs guarantee a maximal connectivity for your remote operation, control and maintenance of the nCLD 811 M, ensuring unsurpassed precision and reliability.

### Compact, Modular and Intelligent!

The nCLD 811 M is manufactured in a new compact and modular layout, in which each essential component of the chemiluminescence analyzer hosts its own CPU and interacts with other CPUs by BUS-communication. This assembly increases accessibility and serviceability by reducing wiring and piping.

- Compact design without any additional space required
- Minimized CO<sub>2</sub> and H<sub>2</sub>O quenching
- Four freely selectable measurement ranges
- Touch screen operation or remote operation

Graphical user interface "GUI" for individual analyzer operation and data management



Measurably better

# SPECIFICATIONS

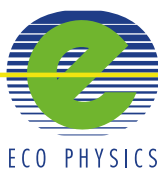
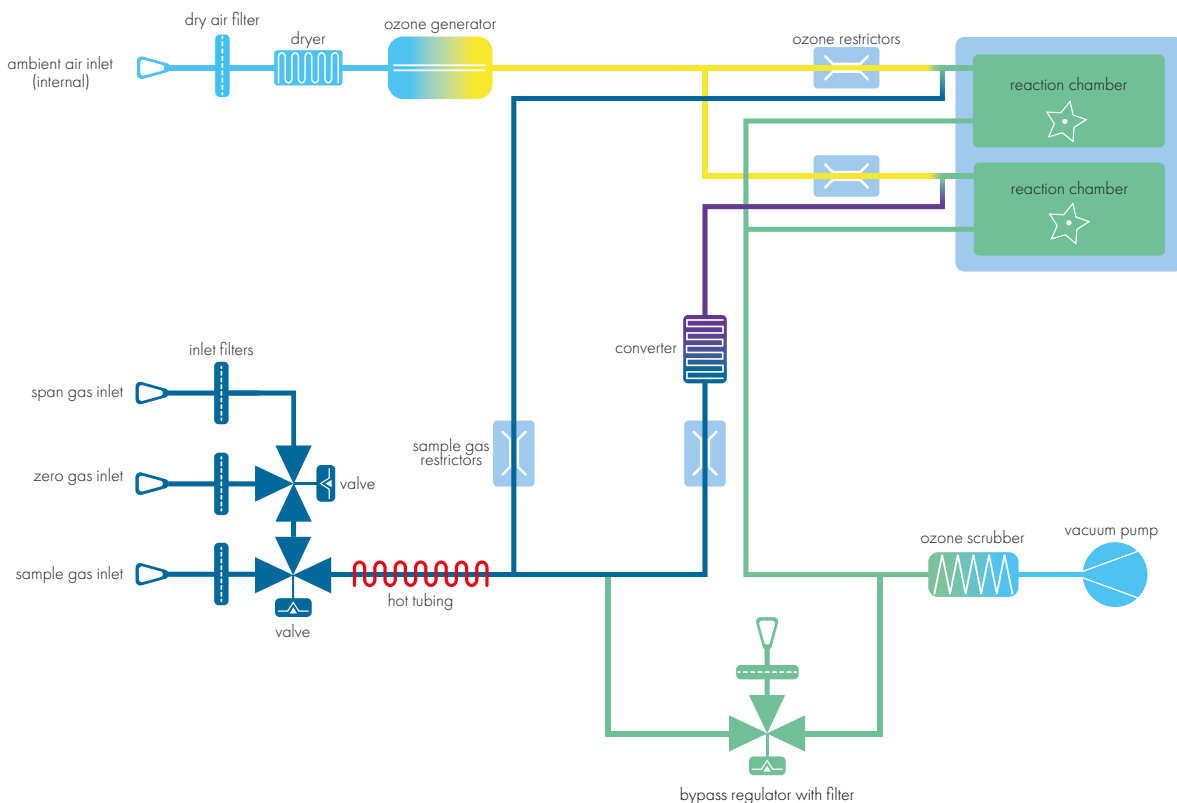
# nCLD 811 M

|  |   |                              |  |
|--|---|------------------------------|--|
| Analyzer type                            | dual chamber CLD with cooled PMT for measurement of NO, NO <sub>2</sub> and NO <sub>x</sub> | Supply voltage               | 100 - 240 V / 50 - 60 Hz   |
| Measuring ranges                         | four freely selectable ranges from 1 ppm - 10'000 ppm                                       | Interface                    | USB(3x), HDMI, Bluetooth, RS232 (w/o 9pin connector), LAN, WLAN  |
| Min. detectable concentration*           | 1 ppb   | Dimensions                   | height: 178 mm<br>width: 450 mm<br>with molding: 495 mm<br>depth: 540 mm   |
| Noise at zero point (1σ)*                | 0.5 ppb   | Weight                       | 45 kg (91 lb)  |
| Lag time                                 | <3 sec  | Delivery includes            | nCLD 811 M analyzer, power cable, FTDI-RS232-USB cable, USB-LAN adapter, HDMI adapter  |
| Rise time (0 - 90%)                      | <1 sec  | Standard                     | nCLD 811 M   |
| Temperature range                        | 5 - 40 °C   |                              | <ul style="list-style-type: none"> <li>· <b>M</b> - metal converter</li> <li>· <b>h</b> - hot tubing</li> <li>· <b>r</b> - electro-mechanical pressure regulation</li> <li>· <b>V2</b> - two calibration valves for pressurized calibration (zero &amp; span / 2-3 bar)</li> </ul> |
| Humidity tolerance                       | 5 - 95% rel. h (non-condensing, ambient air and sample gas)                                 | Options                      | <ul style="list-style-type: none"> <li>· <b>V8</b> - valve manifold</li> <li>· USB-RS232 9pin connector</li> <li>· 0 - 10 V</li> <li>· 4 - 20 mA into 500 Ω max.</li> </ul>  |
| Sample flow rate                         | 1.0 l/min   | Analog output (External Box) |  |
| Input pressure                           | 600 - 1'200 mbar abs.   |                              |  |
| Dry air use for O <sub>3</sub> generator | internally generated (no external supply gas required)                                      |                              |  |
| Power required                           | 650 VA (incl. membrane pump and ozone scrubber)   |                              |  |

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# FLOW DIAGRAM

\*Depending on filter setting  
Connectivity properties are country-specific  
ECO PHYSICS reserves the right to change these specifications without notice.



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