



# ECO PHYSICS nCLD 811 CM

## APPLICATION EXAMPLES

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

*The nCLD 811 CM is the next generation in two-channel emissions monitoring instrumentation. Unique in speed and reliability, the nCLD 811 CM is modular designed and allows the continuous analysis of NO, NO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub> and NO<sub>x</sub>-Amines in raw exhaust gasses and other samples 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>
- NH<sub>3</sub>
- NO<sub>x</sub>-Amines

### Straight from the Source

The nCLD 811 CM fulfills the high requirements of the automotive industry when it comes to generating reproducible and reliable NO<sub>x</sub> and ammonia data. Furthermore, it is also very well suited for equally difficult measurement tasks. With its heated inlet and automated pressure control, the analyzer is able to handle rough samples, such as raw exhaust gas. The nCLD 811 CM analyzer is optimized for the measurement of N-containing compounds, such as NO, NO<sub>2</sub>, NH<sub>3</sub>, NMP (N-Methyl-2-pyrrolidone) and amines. This is the result of an extended range of capabilities designed in this state of the art monitor, that is virtually maintenance free.

### User Friendliness

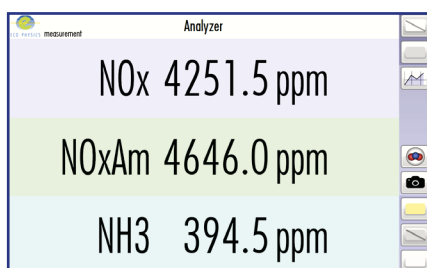
The new touch sensitive graphical user interface enables the user to individually adjust the instrument operation and data management according to his/ her needs and applications. The bright 7" monitor gives a clear overview and allows numerical and graphical display of values. Multiple digital in- and outputs guarantee a maximal connectivity for your remote operation, control and maintenance of the nCLD 811 CM, ensuring unsurpassed precision and reliability. Calibration of the unit runs quick and automatically with all necessary data available anywhere and at any time.

### Compact, Modular and Intelligent!

The nCLD 811 CM 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 for individual analyzer operation and data management



**Measurably better**

# SPECIFICATIONS

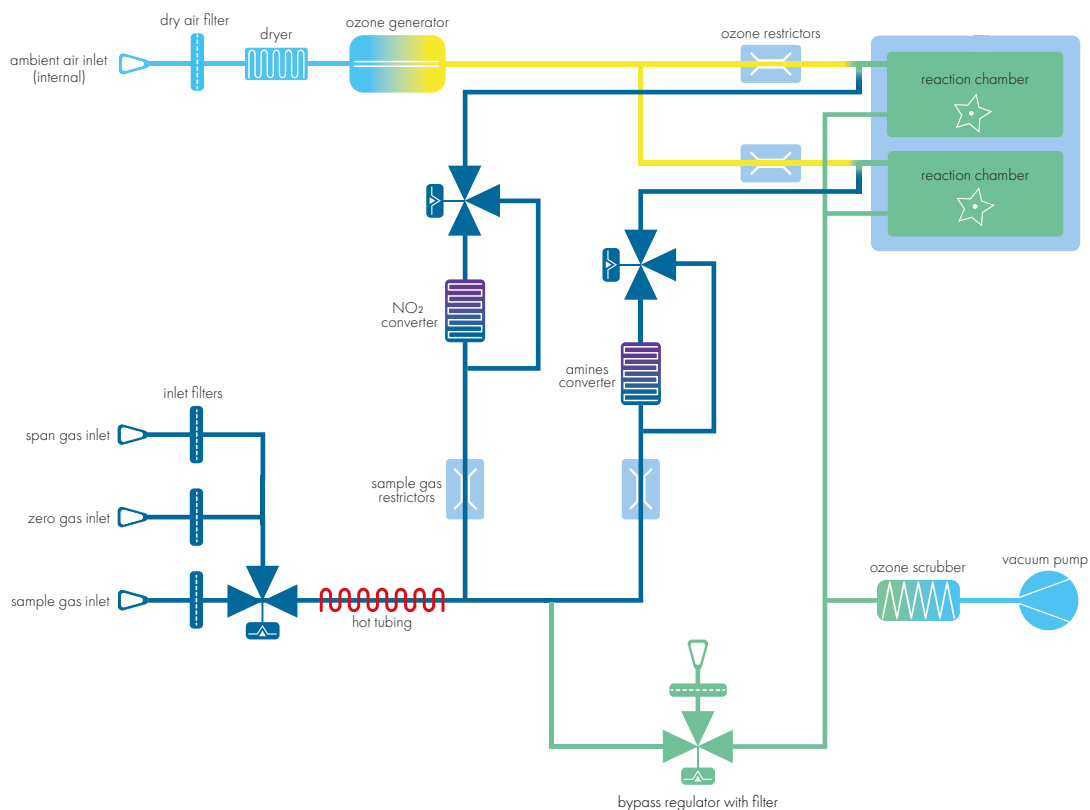
# nCLD 811 CM

<b>Analyzer type</b>	dual chamber CLD with cooled PMT for measurement of NO, NO <sub>2</sub> , NO <sub>x</sub> , NH <sub>3</sub> and NO <sub>x</sub> -Amines	<b>Supply voltage</b>	100 - 240 V/50 - 60 Hz
<b>Measuring ranges</b>	four freely selectable ranges from 1 ppm - 10'000 ppm	<b>Interface</b>	USB(3x), HDMI, Bluetooth, RS232 (w/o 9pin connector), LAN, WLAN
<b>Min. detectable concentration*</b>	1 ppb	<b>Dimensions</b>	height: 178 mm width: 450 mm with molding: 495 mm depth: 540 mm
<b>Noise at zero point (1σ)*</b>	0.5 ppb	<b>Weight</b>	48 kg
<b>Lag time</b>	<3 sec	<b>Delivery includes</b>	nCLD 811 CM analyzer, power cable, FTDI-RS232-USB cable, USB-LAN adapter, HDMI adapter
<b>Rise time (0 - 90%)</b>	<1 sec	<b>Standard</b>	nCLD 811 CM <ul style="list-style-type: none"> <li>· <b>C</b> - catalytic converter</li> <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>
<b>Temperature range</b>	5 - 40 °C	<b>Options</b>	<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>
<b>Humidity tolerance</b>	5 - 95% rel. h (non-condensing, ambient air and sample gas)	<b>Analog output (External Box)</b>	
<b>Sample flow rate</b>	1.0 l/min		
<b>Input pressure</b>	600 - 1'200 mbar abs.		
<b>Dry air use for O<sub>3</sub> generator</b>	internally generated (no external supply gas required)		
<b>Power required</b>	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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