

# ECO PHYSICS CLD 89

## Application examples



- Ambient monitoring in areas with excellent air quality
- Supervision of production processes in the chemical and hi-tech industries
- Permanent monitoring of clean room conditions in R & D labs
- Biomedical and pharmaceutical research
- Plant physiological research

The CLD 89 nitrogen oxide analyzer is unique in its precision. It allows with the PLC 860 the sequential measurement of NO and NO<sub>2</sub> concentrations even in the range of low parts per trillion!



Monitoring of ambient air quality.

### When decimals are decisive.

The CLD 89 fulfills the requirements of many research groups specializing in detecting and monitoring smallest variations of NO<sub>2</sub> concentrations in less than thirty seconds despite its total sample flow. The lagtime of less than a second makes it even more attractive. NO<sub>2</sub> measurement is accomplished by a sequential detection of NO and NO<sub>x</sub>. The pre-chamber minimizes zero

drift and cross sensitivity. This makes it ideally suited for areas with excellent air quality.

For specific measurements the photolytic converter unit PLC 860 can be replaced by the op-

tionally available Y converter .

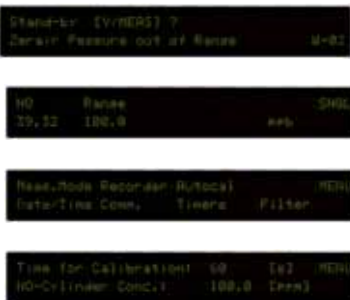
The use of first-rate components guarantees virtually service-free operation. Maintenance simply means annual replacement of filters and membranes besides the consumables required by special sampling conditions.

### Unique calibration by pressing a button!

The accuracy of chemiluminescence detection is strongly dependent on the calibration of the analyzer.

In order to assure reliability of its results the CLD 89 analyzer has optionally a calibration module for the zero level and the NO reference gas. Calibration is quickly and automatically carried out by pressing a button on the keypad. This extremely useful feature eliminates the potential risk of erroneous calibrations.

- Compact design without any additional space required
- Photolytic converter for NO<sub>2</sub> detection
- Pre-chamber to offset cross sensitivity
- Four freely selectable measurement ranges
- Operation and control via keypad or personal computer



Clearly structured and full text displays inform the user about the instrument's status, any errors and measures to return to normal operation.

### User friendliness.

The development of an ECO PHYSICS analyzer always requires full user comfort. The user can adapt the operation according to his needs by selection of predefined settings.

**Compact and modular construction.** The CLD 89 is the most compact unit of its class. Thanks to the totally modular layout and the rich variety of options this analyzer is designed for a multitude of applications.

# CLD 89

## Specifications

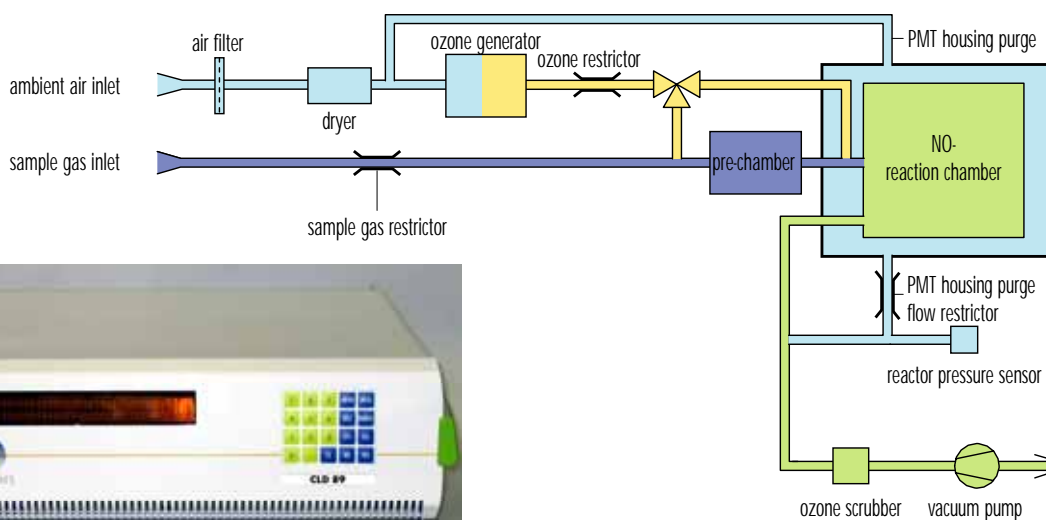
<i>Measuring ranges</i>	four freely selectable ranges from 0.5–500 ppb	<i>Analog output</i>	4–20 mA into 500 max.; 0–1 V; 0–10 V
<i>Min. detectable concentration</i>	<0.01 ppb*	<i>Dimensions</i>	height: 178 mm (7 ") width: 450 mm (19 ") with moulding: 495 mm depth: 620 mm
<i>Noise at zero point (1 σ)</i>	<0.01 ppb*	<i>Weight</i>	32 kg
<i>Lagtime</i>	<1 sec	<i>Delivery includes</i>	CLD 89 analyzer, power cable, analog signal cable, manual
<i>Rise time (0–90%)</i>	<30 sec	<i>Standard</i>	CLD 89 pre-chamber PLC 860 photolytic converter
<i>Temperature range</i>	5–40 °C		
<i>Humidity tolerance</i>	5–95% rel. h (non-condensing, ambient air and sample gas)		
<i>Sample flow rate</i>	0.7 l/min		
<i>Input pressure</i>	ambient (upto 3000 m above sea level)		
<i>Dry air use for O<sub>3</sub> generator</i>	internally generated (no external supply gas required)		
<i>Power required</i>	320 VA (incl. membrane pump and ozone scrubber)		
<i>Supply voltage</i>	100–230 V/50–60 Hz		
<i>Interface</i>	RS 232		

\* depending on filter setting

ECO PHYSICS reserves the right to change these specifications without notice.

ECO PHYSICS AG, Switzerland 2006-1/10

## Flow diagram



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