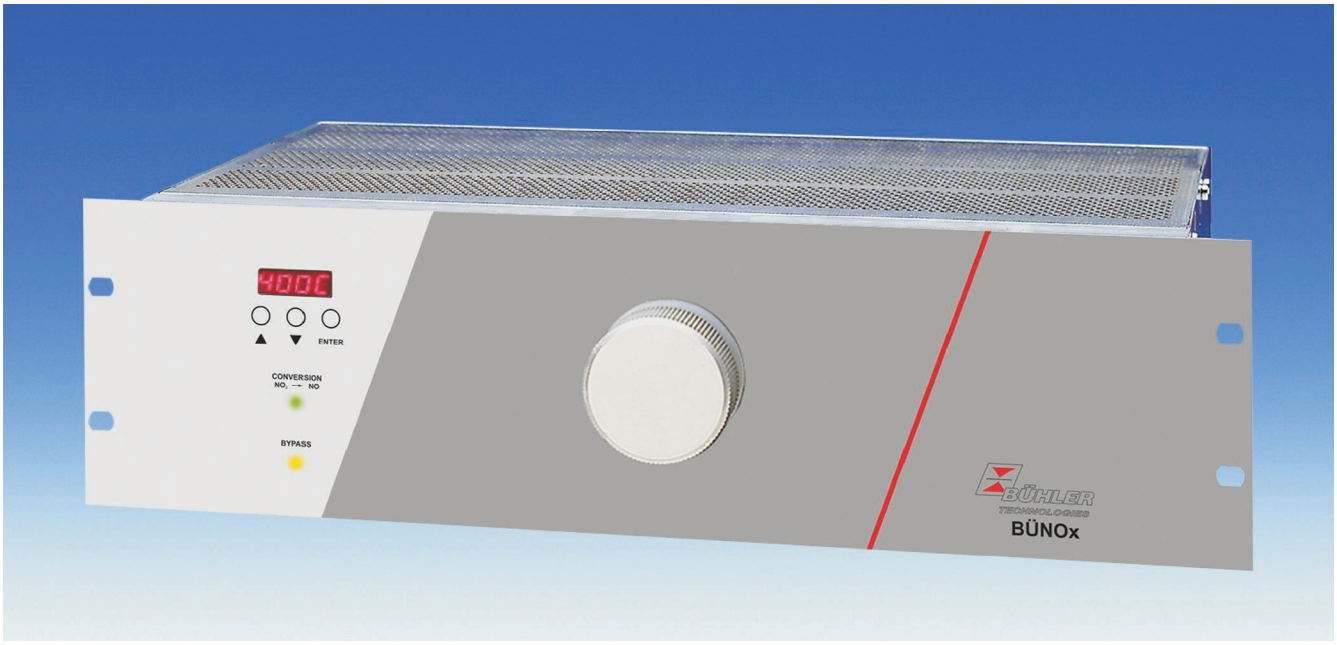
Gas-Converter ($NO_2 \Rightarrow NO$)
BÜNOx



Due to rising global industrialization, the monitoring of exhaust gas is increasingly important. The monitoring of nitrogen oxides (NOx) is particularly important due to its role in the formation of ground-level ozone and acid rain.

The BÜNOx gas converter allows easy and cost effective detection of NOx components in the flue gas (NO and NO_2).

BÜNOx converts almost 100% of the NO_2 content of a sample gas to NO by means of a replaceable reactor cartridge. The resulting NO gas is measurable by any commercially available IR-analyzer.

The BÜNOx reactor cartridge, designed in cooperation with a Research Institute, enables the conversion of high NO_2 concentrations at a comparatively low temperature. Interferences on other typical components present in the flue gases such as CO, CO_2, NO, and SO_2, are generally not observed. Moreover, a lifetime of over 12 months is possible under normal conditions. This leads to reduced maintenance costs. The maintenance effort is further minimized through the special reactor fastener on the front panel allowing rapid replacement of the cartridge without tools.

The temperature of the converter is adjustable at the front panel through an easy-to-handle micro-controller.

Of course status output signals required for process control are accessible to the user.

- **High conversion rate at low temperatur**
- **High NO_2 conversion-capability (up to 300 ppm)**
- **Long lifetime**
- **Easy replacement of converter cartridge without tools**
- **Temperature control by micro-controller**
- **Adjustable temperature**
- **Temperature alarm contact**
- **4-20 mA temperature output**
- **Status-LEDs**
- **Bypass solenoid valve (optional)**
- **19” housing**

DE 55 0014
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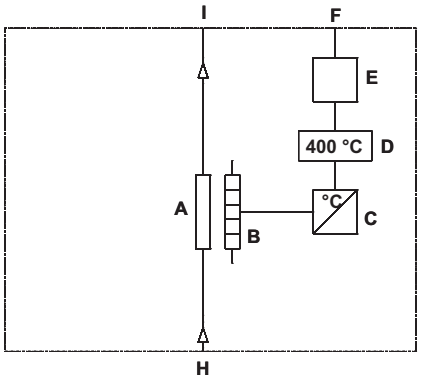
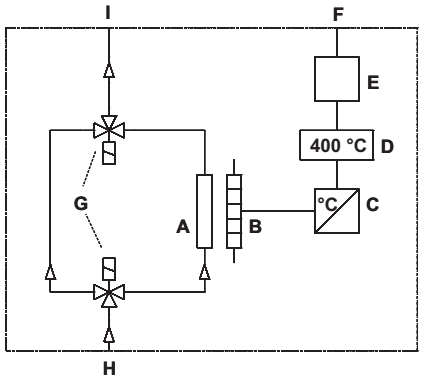
Without solenoid valves

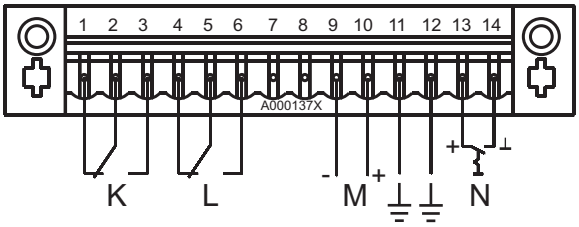


With solenoid valves



Internal assembly

- **A)** Converter cartridge
- **B)** Tubular furnace
- **C)** Temperature controller
- **D)** Temperature display
- **E)** Signal output,-input (temp. alarm, status signal, actuation solenoid valves)
- **F)** PHÖNIX connector (14 pole)
- **G)** 3/2 directional solenoid valves)
- **H)** Gas inlet
- **I)** Gas outlet



Plug arrangement (PHÖNIX, 14pol) **:**

- **K)** Status (excess-, insufficient temp.)
- **L)** Status (bypass, conversion)
- **M)** Analog output temp. (4-20mA)
- **N)** Activation solenoid valve (by an external switch)

⏚ for connection of cable shielding

Technical data

General parameters

Working temperature	400°C
Warm-up time	30 min

Gas input conditions

Sample gas pressure	up to 1.5 bar absolute
Sample gas flow	up to 120 l/h
Sample gas temperature	5 to 80 °C
Dew point	< 10°C

Pressure loss

Reactor cartridge type MC	at 70 l/h approx. 20 to 120 mbar

Ambient conditions

Permissible ambient temperature:	
- operation	+5 to +50°C
- storage and transport	-20 to +70 °C
Permissible ambient humidity	< 80% relative humidity for storage and transport

Electrical specifications

Power supply	115VAC or 230VAC 50/60 Hz, plug according to DIN 43650
Power input	approx. 650 W

Electrical input/output
(plug: 14 pol, PHÖNIX)

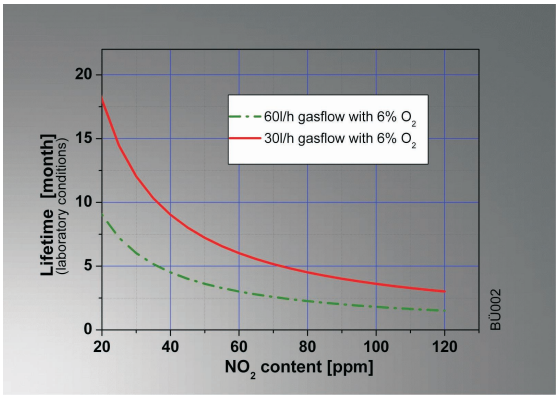
Status: *excess- insufficient temp.*	changeover contact, max. 230VAC/DC, 1A
Analog output (temperature)	4-20mA
Status: *bypass , conversion*	changeover contact, max. 230VAC/DC, 1A
Activation solenoid valves	24V, ~1mA , switchable by an external switch

Dimensions

Frame19", 3HU	133 x 483 x 285 (H x B x D)
Weight	7.5 kg*
Protection class	IP 20 (EN60529)

Conversion properties ($NO_2 \Rightarrow$ NO)

Conversion factor $NO_2 \Rightarrow$ NO	≥ 97% (new cartridge)
Lifetime cartridge	>12 months possible, depending on NO_2 content (see diagram, under laboratory conditions)
Maximum load	approx. 300ppm NO_2 at 70l/h
Conversion temperature	400°C



Ordering information

Part No.	Description	Connections
55300099	BÜNOx converter 230 VAC	gas connections ø6
55301099	BÜNOx converter MV 230 VAC	gas connections ø6
55300098	BÜNOx converter 115 VAC	gas connections ø6
55301098	BÜNOx converter MV 115 VAC	gas connections ø6
55300099I	BÜNOx converter 230 VAC, US-sized	gas connections ¼"
55301099I	BÜNOx converter MV 230 VAC, US-sized	gas connections ¼"
55300098I	BÜNOx converter 115 VAC, US-sized	gas connections ¼"
55301098I	BÜNOx converter MV 115 VAC, US-sized	gas connections ¼"
55399990	BÜNOx reactor cartridge	
553999992	Set of gaskets for reactor cartridge, 3x O-ring Viton	

We reserve the right to amend the specification