



System Overview

NO_x Transmitter NT1 Combination Probe KS2DNO_x

Sensors and Systems for Combustion Engineering



www.lamtec.de

LAMTEC measuring system NT1 with KS2DNO_x

The innovative packaged solution for simultaneous NO_x and O₂ measurement

With the NO_x Transmitter NT1, LAMTEC offers a innovative device for the simultaneous measurement of oxygen (O₂) and nitrous oxides (NO_x).

The LAMTEC NO_x Transmitter NT1 in conjunction with the LAMTEC KS2DNO_x Combination Probe is a microprocessor-based measuring device for universal use. The Combination Probe was specially developed for simultaneous measurement of O₂ concentration and nitrogen oxides (NO_x) in flue gases from combustion plants in the stoichiometric range. The measured NO_x value is the total of all nitrogen oxides.

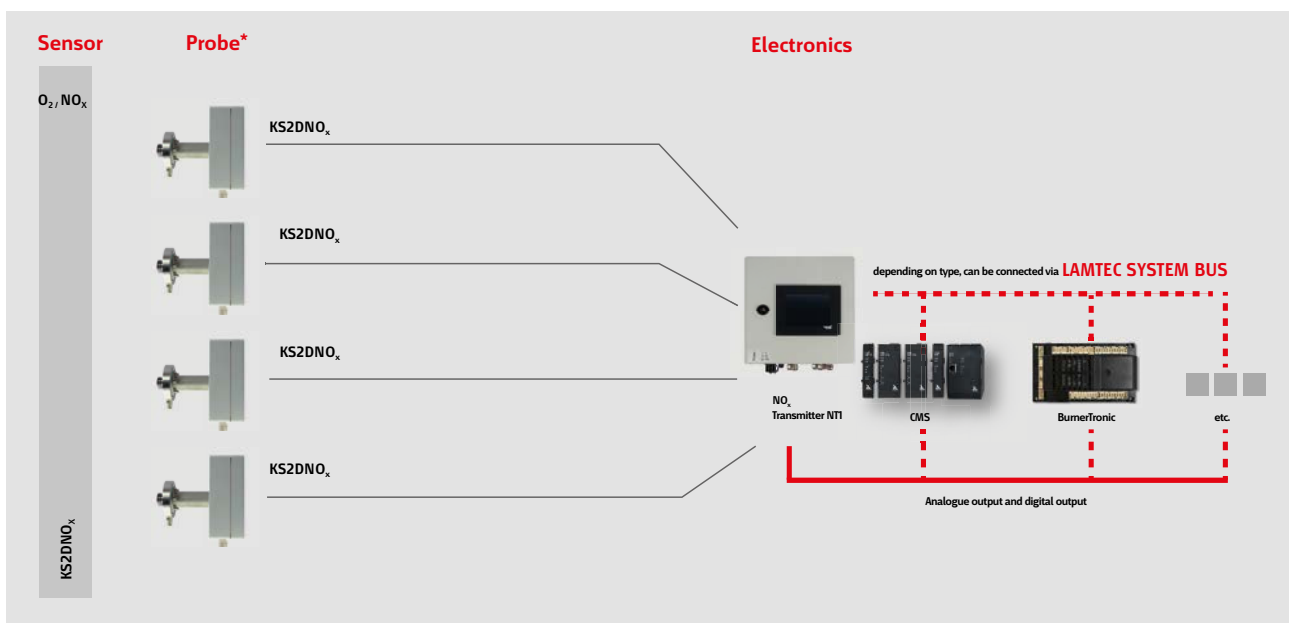


Benefits:

- O₂ range of measuring: 0 to 25 Vol. %
- NO_x range of measuring: 0-1000 ppm or 0-2000 mg/Nm³
- No gas treatment required, measurement directly in moist flue gas
- Setting time to 60 % value (T₆₀) O₂ < 10 seconds (unfiltered)
- NO_x < 10 seconds
- Simple installation - probe connection via plug/socket arrangement
- Low-maintenance

Simultaneous NO_x/O₂ measurement with the LAMTEC NT1 is thus clearly superior to O₂ measurement alone and provides first-class basic values for further control.

System Overview.



Basic system.



NT1 with touch panel

The main feature of the LAMTEC NO_x Transmitter NT1 is the modern resistive 5.7" touch screen panel on the front door, which allows intuitive operation of the transmitter. The following functions can be accessed via the panel:

- Password entry and change
- Reading of NO_x and O₂ measurement values and profiles
- Information and settings of the probe, the fuel, the warnings and faults, and the system
- Calibration of the measurement
- Modification of analogue and digital outputs
- Activation of the LSBs
- USB Logging settings



Connections NT1

Connection options to the NT1:

- Power supply voltage
- Depending on the version, up to four KS2DNO_x can be connected
- Depending on version, can be combined with other LAMTEC systems via LAMTEC SYSTEM BUS
- Connection with up to 8 analogue outputs
- Connection with up to 8 digital outputs
- USB connection directly within the panel for continuous storage of measurement data

The LAMTEC NO_x Transmitter NT1 is available in three different types:

- For connection of only one probe, including LSB
- For connection of up to two probes, without LSB
- For connection of up to four probes, without LSB

Probes.

The LAMTEC KS2DNO_x probe enables in-situ measurement of both O₂ concentration as well as NO and NO₂ concentrations, which are combined as NO_x in the flue gas of combustion plants with excess air ($\lambda > 1$).

NO_x probe KS2DNO_x without GED



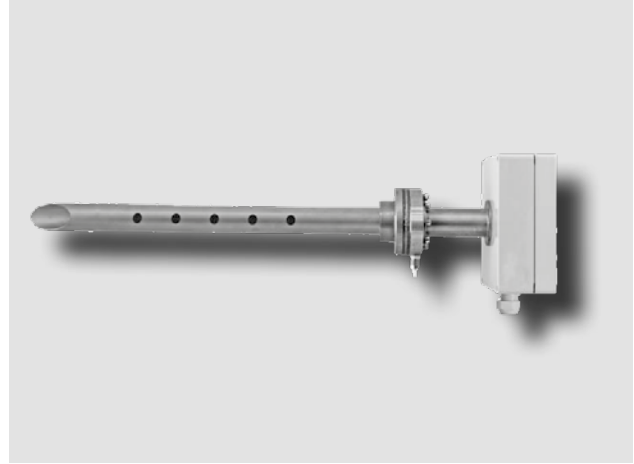
Characteristics:

- Measurements are made directly in the moist flue gas up to 450 °C/842 °F.
- Degree of protection IP65

Areas of application:

- Natural gas, light fuel oil

NO_x probe KS2DNO_x with new GED



Characteristics:

- Measurements are made directly in the moist flue gas up to 550 °C/1022 °F.
- Degree of protection IP65

Areas of application:

- Natural gas, light fuel oil

Inputs.

Outputs.

Transmission via LSB connection (Depending on version)

1 O₂ measurement value

Analogue outputs

1 Sensor 1 - O₂

2 Sensor 1 - NO_x

3 Sensor 2 - O₂

4 Sensor 2 - NO_x

5 Sensor 3 - O₂

6 Sensor 3 - NO_x

7 Sensor 4 - O₂

8 Sensor 4 - NO_x

Digital outputs

1 Sensor 1 - NO_x too high

2 Sensor 1 - O₂ too low

3 Sensor 1 - Sensor signal fault

4 Sensor 2 - NO_x too high

5 Sensor 2 - NO_x too high

6 Sensor 2 - Sensor signal fault

7 Sensor 3 - NO_x too high

8 Sensor 3 - O₂ too low

9 Sensor 3 - Sensor signal fault

10 Sensor 4 - NO_x too high

11 Sensor 4 - O₂ too low

12 Sensor 4 - Sensor signal fault

Power supply voltage
+230 V

NO_x Transmitter NT1



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