



System Overview

NT1 NO_x Transmitter
KS2DNO_x Combinatin Probe



Sensors and Systems for Combustion Engineering

www.lamtec.de

LAMTEC measuring system NT1 with KS2DNO_x

The innovative comprehensive solution for simultaneous NO_x and O₂ measurement

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

The LAMTEC NT1 NO_x Transmitter in combination with the LAMTEC KS2DNO_x Combination Probe is a microprocessor-based measuring device for universal use. The NT1 NO_x Transmitter 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.

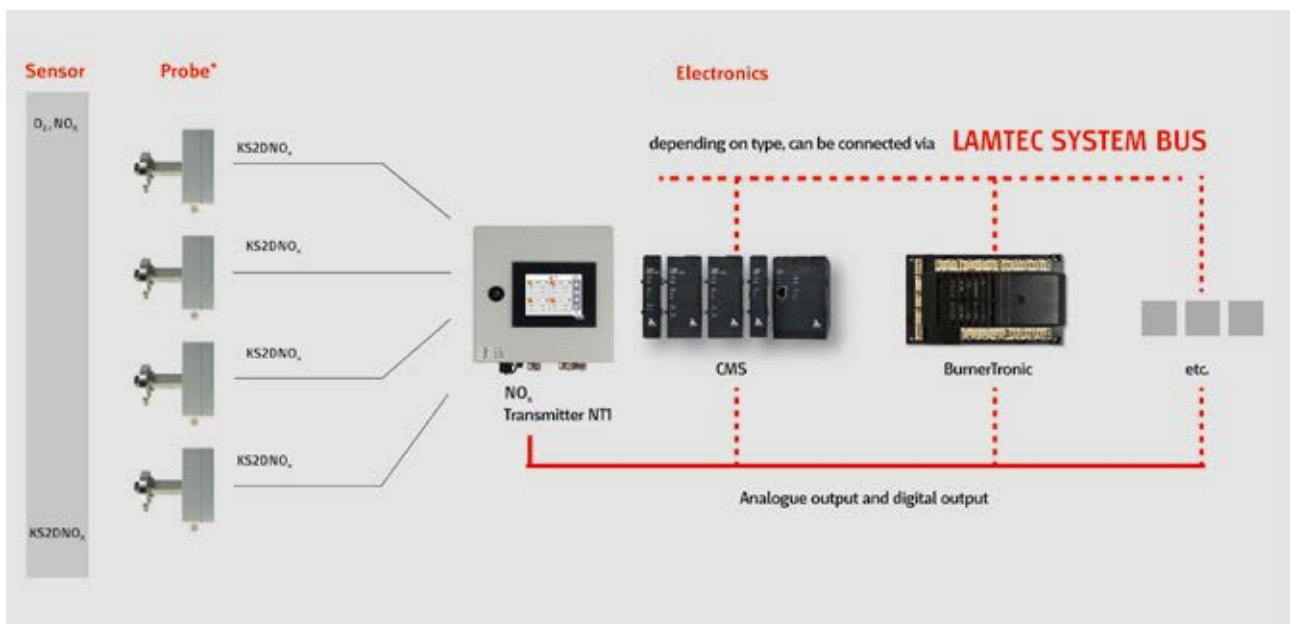


Benefits:

- 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
- Measurement accuracy: NO_x up to ± 3 ppm
O₂ up to ± 0.2 %

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 centerpiece of the LAMTEC NT1 NO_x transmitter is the modern resistive 5,7 „ touch screen panel on the front door, which allows intuitive operation of the transmitter. The following functions are available in 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
- Settings for USB logging



Connections NT1

Connection options to the NT1:

- Power supply
- Depending on the version, up to 4 KS2DNO_x can be connected
- Depending on the version, can be combined with other LAMTEC systems by LAMTEC SYSTEM BUS
- Connection with up to 8 analogue outputs
- Connection with up to 8 digital outputs
- USB connection on the the panel for continuous storage of measurement data

The LAMTEC NT1 NO_x Transmitter 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 O₂, NO and NO₂ concentrations, which are combined as NO_x in the flue gas of combustion plants with excess air ($\lambda > 1$).

KS1DNO_x probe without GED



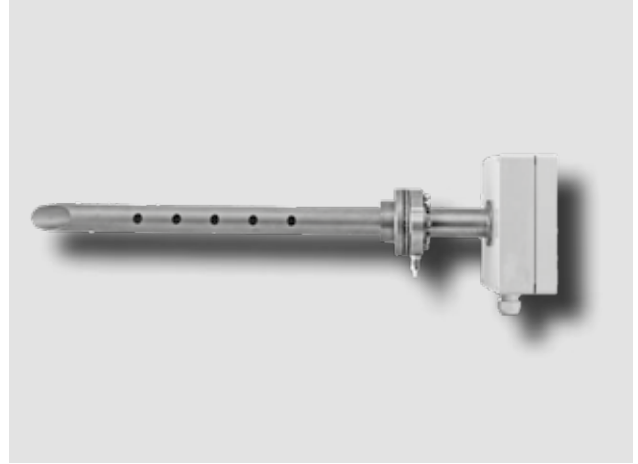
Characteristics:

- 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

KS1DNO_x probe 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 by 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

NT1 NO_x Transmitter



**LAMTEC Meß- und Regeltechnik
für Feuerungen GmbH & Co. KG**

Josef-Reiert-Straße 26
D-69190 Walldorf
Telefon: +49 (0) 6227 6052-0
Telefax: +49 (0) 6227 6052-57

info@lamtec.de

www.lamtec.de

