

Application for the Monox(MonComb)1000.SX

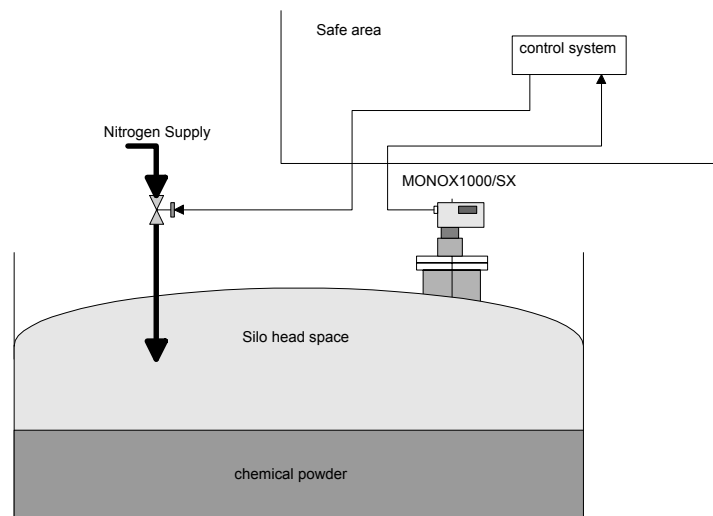
OXYGEN OR COMBUSTIBLE GAS MONITORING IN SILO'S AND BINS USED IN INERT SYSTEMS FOR f.i. CHEMICAL POWDER STORAGE AND TRANSPORT

The Mon(Comb)Ox1000.SX Monitor is designed to monitor the oxygen or combustible gas concentration in silo's and bins for chemical powders or liquids with a potential risk for dust or gas explosion.

The atmosphere in the silo or bin is inertized with N₂ with the result that due to the low oxygen concentration no explosion can occur.

To ensure that the oxygen or combustible gas concentration is maintained within the specified limits it is necessary to monitor and control the N₂-dosing process.

Since the environment is mostly very dusty it is not advisable to use a sampling system with a pump. The dust will frequently block the tubing and filters of the sampling system, causing a high level of maintenance.



The Mon(Comb)Ox1000.SX operates with the diffusion principle. The monitor is mounted on a flange which is located at the top of the silo or bin. The flange has a stainless steel filter and the monitor itself has a teflon membrane. The gas diffuses through both filters to the oxygen sensor. Since there is no positive movement of chemical powder to the sensor the gas to be measured will not be blocked by this powder. The right design and choice of components ensures a long term maintenance free operation.

The Monox1000/SX has a digital LCD for readout of the oxygen concentration. The unit is a 2-wire transducer type with 24VDC power supply. The return lead represents the 4 ... 20 mA measuring signal. This signal is normally the input for a system to control the inertisation.

The MonOx1000/SX is intrinsically safe according ATEX (see spec.details) and must be wired via safety barriers.

MODEL MONOX 1000 SX.IS FOR OXYGEN (O₂)

Part number: MONOX1000 SX.IS



Sensor is built in a rugged stainless steel housing with a teflon filter.
The transducer housing is made out of aluminium, splash waterproof and HF-protected.

The Monox1000 SX.IS is intrinsically safe according ATEX with certificate number ISSeP 03ATEX140:

- EEx ib IIC T4
- II 2 G D IP6X T 100°C

TECHNICAL SPECIFICATIONS

Range	0 .. 30% O ₂
Display	3 ½ digit LCD
Accuracy	+/- 2% F.S. at atmospheric pressure
Repeatability	+/- 2% of measuring value
zero drift	0,5 % / month
measuring principle	Electrochemical
response time (T90)	< 10 s
sensor life time	ca. 2 year
temperature range	-15 .. +40 °C
Humidity	10 .. 95 % R.H, non condensing
pressure range	+/- 100 mbar in relation to atmospheric.
interfering gases	strongly oxidizing gases, H ₂ (<-2%), CO (<-0.5%)
power supply	10-26 VDC, max. power consumption 25 mA
output signal	2-wire, 4 .. 20 mA, linear,
Dimensions	180x206x80mm (max)
Weight	2,5 kg

MODEL MONCOMB 1000.SX FOR COMBUSTIBLE GAS

Part number: MONCOMB 1000.SX

Combustible Sensor/Transmitter



The Sensor/transmitter is built in a rugged housing made out of SS316L, IP66 and HF-protected. The MonComb1000.SX is equipped with the OLCT sensor. This sensor is pre-calibrated and can be easily disconnected for calibration outside the hazardous area. The certification in accordance with EEx D II C T6

TECHNICAL SPECIFICATIONS

range	0 .. 100% LEL
accuracy	+/- 1,5% F.S. at atmospheric pressure
zero drift	1 % / month
measuring principle	Catalytic, Poison Resistant
response time (T90)	< 20 s
sensor life time	ca. 1 year, when exposed to a gas concentration not exceeding 25% LEL of the measured gas
temperature range	-20 .. +60 °C
humidity	10 .. 99 % R.H, non condensing
pressure range	+/- 100 mbar in relation to atmospheric.
power supply	24 VDC, max. power consumption 100 mA
output signal	3-wire, 4 .. 20 mA, linear, load impedance 250 Ω
dimensions	130 x dia 60mm (max)
weight	0,8 kg

2" Process Flange, SS316 with Calibration Gas Facility

