**Emission monitors gas**

**GM32 In-Situ gas analyser**

***Description***

The GM32 in-situ gas analyser measures SO2, NO, NO2 and NH3, as well as TRS components in Kraft pulp processes including pressure and temperature in the gas duct. Direct, fast and without gas sampling and transport. This means control systems are able to work with actual values in real time. Thanks to self-monitoring the measured values are reliable at any time. In case of a malfunction an early warning will be shown. For emission measurement of SO2 and NO, GM32 is tested for suitability according to European standard EN 15267. An ATEX version with comprehensive safety functions and sophisticated system technology is also available, as well as the GM32 TRS-PE (PE = Pulp Emission) for TRS measurement in Kraft pulp processes.

***Specification***

Description : Type approved in-situ gas analyser for emission monitoring and process control

Measured values: NO, NO2, NH3, SO2

Performance-tested measured: NO, SO2

Measurement principles: Differential optical absorption spectroscopy (DOAS)

Measuring ranges

NH3 0 ... 30 ppm / 0 ... 2,600 ppm

SO2 0 ... 15 ppm / 0 ... 7,000 ppm

NO 0 ... 40 ppm / 0 ... 1,900 ppm

NO2 0 ... 50 ppm / 0 ... 1,000 ppm

LowNO2 0 ... 15 ppm / 0 ... 1,000 ppm

Measuring ranges refer to 1 m measuring path

Measuring ranges depend on application and device version

Certified measuring ranges

NO 0 ... 70 mg/m³ / 0 ... 700 mg/m³

SO2 0 ... 75 mg/m³ / 0 ... 1,000 mg/m³

With an active measuring path length of 1.86 m (cross- duct) or 1.25 m (open path measuring probe)

The gas-testable measuring probe (GPP) is not TUV approved

Response time: (t90)

Open measuring probe (GMP): ≥ 5 s

Gas-testable measuring probe (GPP): ≥ 120 s

Cross-duct version: ≥ 5 s

Response time adjustable

Accuracy

NH3 ± 2 %

NO ± 2 %

NO2 ± 2 %

SO2 ± 2 %

Relative to the smallest measuring range

Ambient temperature: –20 °C ... +55 °C

Temperature change maximum ±10 °C/h

Storage temperature: –20 °C ... +55 °C

Temperature change maximum ±10 °C/h

Ambient humidity: ≤ 96 %

Relative humidity, bedewing of optical surfaces not permitted

Conformities: Approved for plants requiring approval

2001/80/EC (13. BImSchV)  
2000/76/EC (17. BImSchV)  
27.BImSchV  
TA-Luft (Prevention of Air Pollution)  
EN 15267  
EN 14181  
MCERTS  
GOST

Ex-approvals

IECEx Ex pzc op is [ia] IIC T3 Gc

ATEX II 3G Ex pzc op is [ia] IIC T3 Gc

Electrical safety CE

Enclosure rating: Standard IP65, IP69K

Ex-version IP65

Operation: Via integrated operating unit or SOPAS ET software

Test functions: Internal zero point check

Check cycle for zero and span point according to QAL3

Options:

SCU control unit (for non-hazardous areas only)

Multi range calibration (additional measuring ranges for one component)

Extended gas temperature range up to 550 °C or 650 °C

Low NO2