



## MCERTS 2007

The first CEM Solution  
to be tested against  
prEN15267-3



# Content



**Background – prEN 15267-3:2007**

**prEN 15267-3:2007 – Key Points**

**AO2000 Series – Continuous Gas Analysers**

**EL3000 Series – Easyline Continuous Gas Analysers**

**TÜV / MCerts Status**



# Content



**Background – prEN 15267-3:2007**

**prEN 15267-3:2007 – Key Points**

**AO2000 Series – Continuous Gas Analysers**

**EL3000 Series – Easyline Continuous Gas Analysers**

**TÜV / MCerts Status**



- **EN 45011:1998 – General requirements for bodies operating product certification systems**
  - Important step towards mutual recognition between certificate bodies
  - Establishes general criteria which may have to be supplemented when applied to a particular sector
  
- **prEN 15267-X, Air Quality – Certification of automated measuring systems – Parts 1-4**
  - Defines common procedures and requirements for certification of AMS
  - Minimise costs burdens on AMS manufacturers
  - Defines roles and responsibilities of manufacturers, test laboratories, certification bodies and relevant bodies
  - Combines TÜV and MCerts schemes into one European Standard

# Air Quality - Certification of Automated Measuring Systems

EN 15267-1  
(Under Approval)

Part 1: General Principles

EN 15267-2  
(Under Approval)

Part 2: Initial assessment of the manufacturer's quality management systems and post certificate surveillance for the manufacturing process

EN 15267-3  
(Under Approval)

Part 3: Performance specifications and test procedures for automated measuring systems for monitoring emissions from stationary sources

EN 15267-4  
(Under Development)

Part 4: Performance specifications and test procedures for automated measuring systems for monitoring ambient air quality



# Content



**Background – prEN 15267-3:2007**

**prEN 15267-3:2007 – Key Points**

**AO2000 Series – Continuous Gas Analysers**

**EL3000 Series – Easyline Continuous Gas Analysers**

**TÜV / MCerts Status**



# prEN 15267-3:2007 – Key Points

- Amalgamation of current TÜV, MCerts & other certification schemes
- Test institute must perform all relevant tests on two identical AMS (as per current TÜV scheme) – Universal Recognition
- Manufacturer must demonstrate/maintain a suitable quality management system (i.e. ISO9001:2000 & prEN 15267-2)
- Test of ‘repeatability at span’ is now included
- Linearity – 7 point test as opposed to 5 in UK & 10 in Germany
- Effect of ambient temperature changes – now at mid-point and extreme high/low only
- Certification only applies for measuring range(s) tested
  - Manufacturer likely to certify low and high measuring ranges
- Incorporation of EN14181 requirements
  - Certificate to state QAL1 compliance
  - Certificate to contain statement of how QAL3 can be achieved

# Content



**Background – prEN 15267-3:2007**

**prEN 15267-3:2007 – Key Points**

**AO2000 Series – Continuous Gas Analysers**

**EL3000 Series – Easyline Continuous Gas Analysers**

**TÜV / MCerts Status**



# Advance Optima Continuous Gas Analyzers

- The Advance Optima line is based on an integrated system concept
  - Standardized analyzer modules combined to a multianalyzer system
- Advance Optima offers:
  - Simple, operator-friendly analyzer systems
  - Turnkey installations for problem-free operations from the very start
  - Reliable, low-maintenance and performance tested systems
  - Comprehensive multicomponent analytical systems that meet requirements cost-effectively



# Innovative modular analyzer technology

- Highest Flexibility
  - Wall mounted model, AO2040
  - Rack mounted model, AO2020
  - Models for hazardous locations, AO2060
- Customized Combination
  - Up to 4 analyzer modules
  - Up to six measuring components
  - Designed to be tailored
- Maximum Independency
  - Distributed analyzers, connected to one central unit
  - Digital Interfaces for DCS and maintenance



# The analyzer modules

module name	type	typical
Uras14	<b>NDIR photometer</b>	<b>CO, SO<sub>2</sub>, CO<sub>2</sub></b>
Limas11 IR	NDIR photometer	CO, CO <sub>2</sub> , HCl
Limas11 UV	<b>UV photometer</b>	<b>NO, NO<sub>x</sub></b>
Magnos106	<b>Paramagnetic, dumbbell</b>	<b>O<sub>2</sub></b>
Magnos17	Heavy duty	O <sub>2</sub>
Caldos17	Fast silicon sensor, TC	H <sub>2</sub>
Caldos15	Glass coated TC	Chlorine NH <sub>3</sub> , SO <sub>2</sub>
MultiFID14	<b>Flame ionization</b>	<b>TOC</b>
MultiFID14 NMHC	Flame ionization	Non-methane HC, VOC
ZO23	Zircon dioxid	O <sub>2</sub> traces
LS25	Laser in-situ	O <sub>2</sub> , CO, NH <sub>3</sub> HCl
Oxygen cell	<b>chemical</b>	<b>O<sub>2</sub></b>



**ABB**

# Unique concept for communication and networking

## ■ Ethernet interface

- TCP/IP-protocol
- Integration into existing PC- or Maintenance networks

## ■ Profibus DP/PA

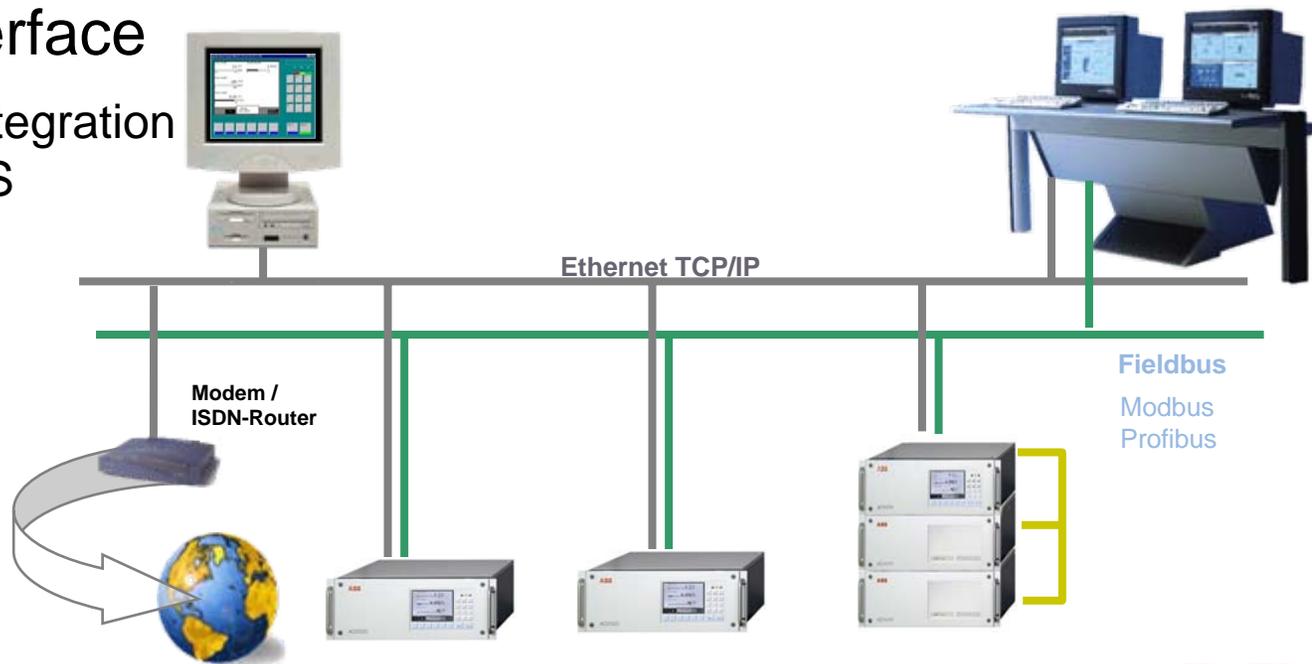
- direct fieldbus coupling

## ■ Modbus connection

- serial port

## ■ OPC-Interface

- direct integration into DCS



# Content



**Background – prEN 15267-3:2007**

**prEN 15267-3:2007 – Key Points**

**AO2000 Series – Continuous Gas Analysers**

**EL3000 Series – Easyline Continuous Gas Analysers**

**TÜV / MCerts Status**



# EasyLine Continuous Gas Analyzers

- **EasyLine** - a **powerful** and **affordable** line of instruments for the monitoring of gas concentrations in numerous applications.
- **EasyLine** - based on the **proven** and **reliable** analyzer technology of ABB for extractive continuous gas analysis.
- **EasyLine** - available in two versions, **optimized** for the various installation requirements of the respective location.



# EasyLine - solution specific configurations

## ■ Emission Monitoring

- Uras + Electrochemical cell
- Uras + Magnos  
(CO, NO, SO<sub>2</sub>, O<sub>2</sub>)



## ■ plus Emission Trading

- CO<sub>2</sub> measurement included



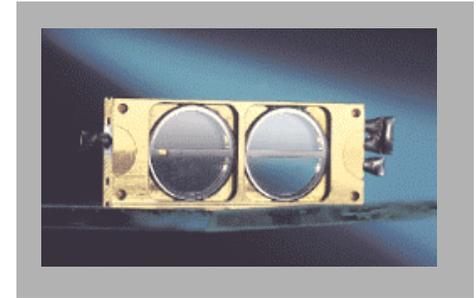
## ■ in one single gas analyzer !



# EasyLine - the analyzers

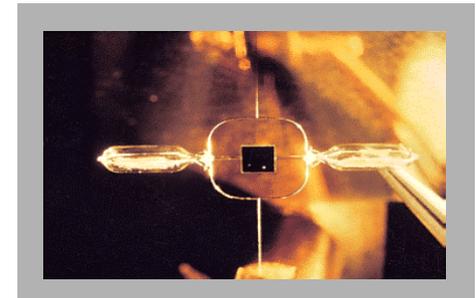
## ■ Uras26

- NDIR analyzer with optional calibration cells
- up to 4 IR components simultaneously
- components: CO, CO<sub>2</sub>, SO<sub>2</sub>, CH<sub>4</sub>, NO, N<sub>2</sub>O
- Small ranges 100ppm



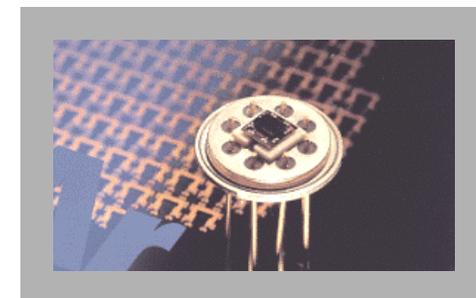
## ■ Magnos206

- paramagnetic oxygen analyzer



## ■ Caldos27

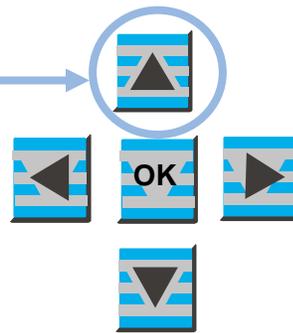
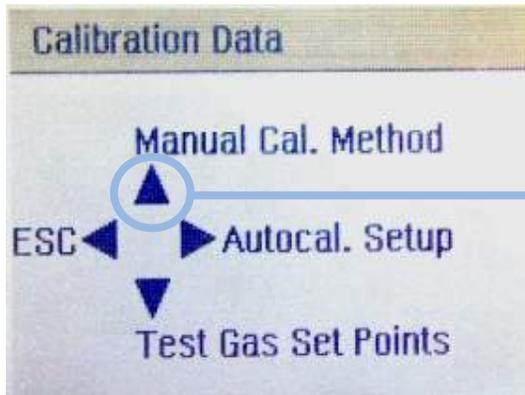
- thermal conductivity analyzer
- micromechanical sensor with short response time



## ■ O<sub>2</sub> with electrochemical cell

# Easy Operation

- Graphical display allows asian languages
- Up to five components can be displayed
- Intelligent 4-way navigation
- Flat menu structure
  - Access most likely functions using the same button
  - Password protection for expert levels



# EasyLine Interfaces and I/Os

- Modbus
- Profibus\*
- RJ45 Ethernet, service interface
- 0/4...20mA analog output
- Digital inputs and outputs with individual configuration



\* in preparation



# Content



**Background – prEN 15267-3:2007**

**prEN 15267-3:2007 – Key Points**

**AO2000 Series – Continuous Gas Analysers**

**EL3000 Series – Easyline Continuous Gas Analysers**

**TÜV / MCerts Status**



# Current TÜV/MCerts Status

	Certified Range	TUV Report No.	MCerts Certificate No.
<b>AO2000-Uras 14</b>	SO <sub>2</sub> 0...75 mg/m <sup>3</sup> NO 0...200 mg/m <sup>3</sup> NO <sub>x</sub> 0...300 mg/m <sup>3</sup> CO 0...75 mg/m <sup>3</sup> O <sub>2</sub> 0...25 Vol%	Report No. 2401 6657 Report No. 170 608	Sira MC 030018/01
<b>AO2000-Limas 11 UV</b>	SO <sub>2</sub> 0...75 mg/m <sup>3</sup> NO 0...33.5 / 200 mg/m <sup>3</sup> NO <sub>x</sub> 0...50 / 300 mg/m <sup>3</sup> CO 0...75 mg/m <sup>3</sup> O <sub>2</sub> 0...25 Vol%	Report No. 2402 3188 Report No. 170 608	Sira MC 030017/01
<b>AO2000-MultiFID 14</b>	TOC 0...15 mgC/m <sup>3</sup>	Report No. 2401 6659 Report No. 170 608	Sira MC 030015/00
<b>ACF-NT</b>	SO <sub>2</sub> 0...75 mg/m <sup>3</sup> NO 0...200 mg/m <sup>3</sup> HCl 0...15 mg/m <sup>3</sup> H <sub>2</sub> O 0...40 Vol% CO 0...75 mg/m <sup>3</sup> O <sub>2</sub> 0...25 Vol% NH <sub>3</sub> 0...15 mg/m <sup>3</sup>	Report No. 936/21204160/A	Sira MC 030016/02

# Future TÜV/MCerts Status

	<b>Certified Range</b>	<b>TUV Report No.</b>	<b>MCerts Certificate No.</b>
<b>AO2000 Series</b> - Uras 26 - Magnos 206 - Oxygen Sensor	SO <sub>2</sub> 0...75 / 3600 mg/m <sup>3</sup> NO 0...100 / 1000 mg/m <sup>3</sup> N <sub>2</sub> O 0...100 / 3000 mg/m <sup>3</sup> CO 0...75 / 750 mg/m <sup>3</sup> CO <sub>2</sub> 0...20 Vol% O <sub>2</sub> 0...10 / 25 Vol%	Report No. 821029	<b>To Follow...SOON!</b>
<b>EL3000 Series</b> - Uras 26 - Magnos 206 - Oxygen Sensor	SO <sub>2</sub> 0...300 / 3600 mg/m <sup>3</sup> NO 0...100 / 1000 mg/m <sup>3</sup> N <sub>2</sub> O 0...100 / 3000 mg/m <sup>3</sup> CO 0...150 / 750 mg/m <sup>3</sup> CO <sub>2</sub> 0...20 Vol% O <sub>2</sub> 0...10 / 25 Vol%	Report No. 691317	<b>To Follow...SOON!</b>

**TÜV tested according to the Performance Specifications of prEN15267-3:2007 and will be MCerts approved accordingly!**



**Future proof your investment...**

**...compliance with tomorrow's  
legislation today!!**



Any Questions?





**Come and visit us at  
Stands 44 & 45!!**