ADOS ®

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INSTRUMENTATION AND CONTROL

PRODUCT OVERVIEW

measuring instruments for monitoring operational performance

■ Gas Analysis ■ Gas Warning ■ Environmental Protection

Our specialists offer all over the world expert advice, first-class installation as well as a reliable service on site.

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Flex ADOS 914 LON ®

VDI 2053 SIL1

APPLICATION

The **FlexADOS 914 LON®** is a measuring, control and warning unit for gas sensors. It continuously monitors the ambient air and provides an early warning of harmful, explosive and non-flammable gases and vapours.

Together with the TOX 914 LON® gas transmitters, FlexADOS 914 LON® fulfils VDI guideline 2053: 2014 and also EN 50271:2011: and EN 50545-1: 2012.

Up to 60 TOX 914 LON® gas sensors can be connected to the device. 2 alarm levels are available directly. Further alarm levels can be added per module.

FIELDS OF APPLICATION

■ Garages and tunnels
■ Chemicals industry
■ Paint and varnish manufacturing
■ Liquid gas storage facilities
■ Laboratories
■ Refrigerated warehouses (ammonia monitoring)
■ Refineries
■ Measurement of oxygen concentration
■ Gas-powered boilers
■ Wastewater treatment plants
■ and much more

GW 399

APPLICATION

The multi-channel gas warning system **ADOS GW 399** continuously monitors the ambient air and provides an early warning of hazardous, explosive and non-combustible gases and vapours.

Suitable for measuring tasks where every sensor must have high reliability based on its own control unit as well as it's own optical and electrical output signals. In respect to explosion protected sensor installations the GW 399 system offers the optimum technical solution. A master card can supervise central alarms as well as serial data output.

FIELDS OF APPLICATION

Monitoring of:
■ Heating systems
■ Liquid gas storage rooms
■ Laboratories
■ Cold-storage houses and air conditioning plants
■ Plastic processing plants
■ Chemical industries
■ Paint manufacturing plants
■ Concentration measurement of O_2
■ and many more

Flex ADOS 914

MWS 906

MWS 903

SIL1

APPLICATION

The multi-channel gas detector system **FlexADOS 914** continuously monitors the ambient air and provides an early warning of harmful, explosive and non-flammable gases and vapours.
Together with the GTR 210 gas transmitter family, FlexADOS 914 fulfils EN 50271:2011, achieves safety integrity level SIL1 and can be used for primary explosion protection.

Up to 12 gas sensors can be connected to the device.
A maximum of 14 potential-free contacts are available.

certified according to:
EN 60079-29-1: 2008
EN 50104: 2011
EN 45544-1,2,3: 2015

FIELDS OF APPLICATION

- Explosion protection chemicals industry
- Paint and varnish manufacturing
- Liquid gas storage facilities
- Laboratories
- Refrigerated warehouses (ammonia monitoring)
- Refineries
- Measurement of oxygen concentration
- Gas-powered boilers
- Wastewater treatment plants
- and much more

APPLICATION

The multi-channel gas warning unit **ADOS MWS 906** continuously monitors the ambient air and issues an early warning of gases and vapours that are dangerous to health, or when there is a danger of explosion, for non-combustible gases and vapours.

Examples of measurable gases:

- Acetylene ■ Methane (natural gas) ■ Carbon dioxide ■ Petrol
- Ammonia ■ Hydrogen chloride ■ Carbon monoxide ■ Xylene

Alternatively, we offer you MWS 906 CP with the following features:
up to 2 alarm levels, each with 6 relays, of which, for each level:
3 average values, 1 instantaneous value, 1 horn, 1 warning banner, 1 fault relay, 1 service relay (VDI 2053 approval).

FIELDS OF APPLICATION

Monitoring of:

- Heating systems
- Garages and tunnels
- Liquid gas storage plants
- Laboratories
- Cold-storage depots
- Plastic processing workshops
- Chemical industries
- Paint varnish manufacturers
- Concentration measurement of O_2
- and many more

APPLICATION

The multi-channel gas warning equipment **ADOS MWS 903** continuously monitors the surrounding air and provides an early warning of dangerous, explosive and non-combustible gases and vapours.

Up to 8 gas sensors can be connected to the device.
A maximum of 12 potential-free contacts are available.

FIELDS OF APPLICATION

Monitoring of:

- Heating systems
- Garages and tunnels
- Liquid gas storage rooms
- Laboratories
- Cold-storage houses
- Plastic processing plants
- Chemical industries
- Paint manufacturing plants
- Concentration measurement of O_2
- and many more

Biogas 401

APPLICATION

The Biogas analyser **ADOS Biogas 401** monitors, either continuously or intermittently, gas components contained in Biogas, and optionally the surrounding air to provide an early warning of dangerous, explosive and non-combustible gases and vapours.

Typical application is the measurement of:
CH_4, O_2, CO_2 (optionally continuous)
H_2S, H_2 (only discontinuous)

measuring principles:
electro-chemical (H_2S, H_2, O_2)
infrared (CH_4, CO_2)

Monitoring of more than one measuring point possible.

FIELDS OF APPLICATION

- Monitoring of biogas components
- Warning of explosive gas mixtures
- Warning of gases that endanger health
- Warning of non-combustible gases
- Dedicated for processes with high humidity levels
- Multiple use for alarm values

Equipped with a water sensor for the detection of condensate breakthrough

Feature:
– modular construction
– using a special cabinet an outdoor installation is possible

Biogas 905

APPLICATION

The Biogas analyser **ADOS Biogas 905** monitors, either continuously or intermittently, gas components contained in Biogas, and optionally the surrounding air to provide an early warning of dangerous, explosive and non-combustible gases and vapours.

Typical application is the measurement of:
CH_4, O_2, CO_2 (optionally continuous)
H_2S, H_2 (only discontinuous)

measuring principles:
electro-chemical (H_2S, H_2, O_2)
infrared (CH_4, CO_2)

Monitoring of more than one measuring point possible.

FIELDS OF APPLICATION

- Monitoring of biogas components
- Warning of explosive gas mixtures
- Warning of gases that endanger health
- Warning of non-combustible gases

Equipped with a water sensor for the detection of condensate breakthrough

Feature:
– fixed design

ITR 504

GTR 210

TOX 914 LON®/TOX 592

Ex SIL 1

also available as stand-alone version
(GTR 210 Comfort; only for non-Ex installations)

APPLICATION

The infrared gas analyser system **ADOS ITR 504** continously measures gases that exhibit the properties of absorbing infrared energy.

Typically used for the measurement of carbon dioxyde over the range of 0–5000 ppm to 0–100 Vol. %.

APPLICATION

The gas transmitter **ADOS GTR 210** is suitable for continuous measurement of gases in normal areas and areas where there are risks of explosion. By employing 6 different types of sensor, noxious, explosive and non-combustible gases and vapours can be measured. Display of the measured gas concentration and the adjustable alarm thresholds, are shown on a multi-colour graphic display. The keyboard input is by way of a touchpad.

The type test of the explosion-protected gas transmitter, is completed by the DEKRA.

ATEX certificate: DEKRA 11ATEX0257 X
IECEx certificate: IECEx DEK 11.0090X 0/1
Type of protection: Ex d e ia mb IIC T4 Gb
SIL 1 & functional test: ATEX Certificate –> BVS 12 ATEX G 001 X

APPLICATION

The gas measuring sensor **ADOS TOX 914 LON®/TOX 592** is suitable for the continuous measurement of toxic gas concentrations in the air.

The use of various electro-chemical cells to measure various gases is possible.

Protection class IP 54.

Two sensor versions with different output signals are available:
– TOX 592 with a 2-wire system with 4-20 mA electricity output
– TOX 914 LON® with intelligent 4-wire LON® fieldbus

FIELDS OF APPLICATION

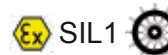**Processes, in which the moisture content in the gas can be as high as 95 % rel. humidity, for example:**

■ Monitoring composting processes in environmental technology
■ Process gas monitoring in the food and provisions industry
■ Food storage houses
■ Monitoring fermentative processes in fruit processing
■ Laboratories
■ and many more

FIELDS OF APPLICATION

Monitoring of:

■ Chemical industry
■ Manufacture of paints and varnishes
■ Plastic processing plants
■ Sewage works
■ Gas-fired boiler systems
■ Liquid gas storage houses
■ Laboratories

■ Measurement of oxygene concentration
■ Refineries
■ Cold-storage houses (Ammonia monitoring)
■ Paint spraying booths
■ and many more

NEW: Option MED
Expanded scope of application marine:
EC type test Marine Equipment Directive
IP 66 and saltwater resistance

FIELDS OF APPLICATION

■ In garages for measurement, control and warning together with FlexADOS 914 LON® fulfils VDI guideline 2053 from December 2014 and also EN 50271:2011.
■ For monitoring at working places, to control the maximum concentration value e.g. in laboratories or motor test stands
■ In private and collective shelters for monitoring the external or internal air

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KM 2000 CnHm EM

APPLICATION

The modular constructed **ADOS KM 2000 CnHm EM** equipment incorporates a microcontroller-aided measurement device for measuring solvents. All combustible gaseous ADOS KM 2000 CnHm EM compounds can be measured with the exception of chlorinated and sulphursublimed hydrocarbons.

The thermocouples used for measurements, in conjunction with applying the principle of heat reaction, offer the following advantages:

- high degree of sensitivity
- good accuracy
- negligible drift of zero point
- over-range signals have no effect

Note: tested and approved in accordance with the guidelines of TA-Luft (German Technical Instructions on Air Quality Control) from 2002, fulfils the requirements of QAL 1 according to DIN EN14181: 2004

FIELDS OF APPLICATION

Supervision of industrial processes
- KM 2000 CnHm EM:
  measuring the emission of hydrocarbons,
  according to the German clean-air regulations
- KM 2000 CnHm:
  measuring solvent saturation
  measuring the concentration of solvents

Room air (ventilation) monitoring
a warning is issued at a very low concentration of toxic gas thus preventing any danger to health.

RG 399

APPLICATION

The flue gas analyser **ADOS RG 399** is suitable for supervising exhaust and process gases that contain traces of corrosive gas and/or dust.

The gas preparation before analysing, is achieved by way of a double-filter that is self-regenerating.

Examples of measurable gases:
- Carbon dioxide
- Carbon monoxide
- Methane
- Oxygen

FIELDS OF APPLICATION

- Supervision of flue gases
- Supervision of boiler installations
- Supervision of process and exhaust gases
- and many more

Filter-Guard 206

APPLICATION

The **ADOS Filter-Guard 206** continuously monitors the clean air side of any fine dust filter installation.

A warning is initiated when a sudden increase in dust concentration is present, i.e. due to a breakdown in the filter casing or bag.

FIELDS OF APPLICATION

- Monitoring fine dust filter systems at the clean air side
- Vibrating and jet filter systems
- Air extraction installations in wood and plastic processing plants
- Air conditioning units with dust filter systems
- Paint and varnish production
- Ambient air monitoring at workplaces
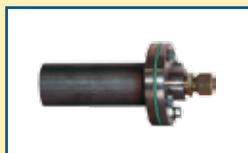- and many more

KM 2000 Accessories

Accessories

ACCESSORIES FOR HYDROCARBON MEASUREMENT

Sampled gas extraction

Mounting stubs with single flange

Pressure reducer

Heated extraction pipe

Explosion vent
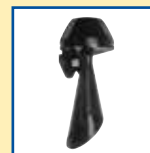
Respirable dust filter with filter cartridge

GAS WARNING SYSTEMS

Alarm horns

Warning banners

Alarm horn Ex-version
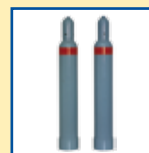
Rotating mirror lamp (also available as Ex-version)
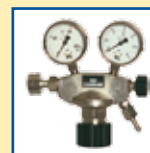
Warning flasher (also available as Ex-version)

Room probes

Mains Stand-by supply unit

Test gas bottle

Pressure reducer