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CONTINUOUS EMISSIONS MONITORING

MGA 12
Multi Gas Analyser

Product Information

The multi gas analyser MGA 12 provides the continuous measurement of pollutants in flue gas (e.g. CO, CO2, S02, NO) and the measurement of 02 as well as continuous process control.

The analyser device is suitability tested according to DIN EN 15267-3 and certified in compliance with QAL 1. As a part of the analyser system MGA 12 it is suitability tested and certified for systems after "TA Luft", 13th and 27th BImSchV according to DIN EN 15267-3.

APPLICATION

The MGA 12 provides both hot and cold extractive multi gas analysers, utilising infrared absorption technologies. These are suitable as single stand-alone systems, twin-stream systems or can be integrated with additional measurements such as dust and flow to provide a complete continuous emissions package.

Dr. Födisch
Umweltmesstechnik AG

APPLICATION EXAMPLES:

- Power plants
- Industrial boilers
- Thermal oxidisers
- CHP plants
- Regulatory emissions
- Combustion optimisation
- Process control
- Process safety

TECHNOLOGY

The MGA 12 uses a combination of technologies to provide the best possible measurement for each component: infrared absorption, electrochemical cell and a paramagnetic measuring method.

Infrared absorption is a spectroscopic method based on the absorption of non-dispersive infrared radiation. The reduction in infrared radiation, specific to each component measured, is used to calculate the measurement readings. The MGA 12 also incorporates an oxygen measuring cell. The oxygen sensor operates according to the principle of a fuel cell. The oxygen is converted at the boundary layer between the cathode and electrolyte. The resulting current is proportional to the oxygen concentration.

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Product Information

Multi Gas Analyser

TECHNICAL DATA	
Analyser:	Robust housing with compact 19" insertion 3U; 483 mm x 133 mm x 350 mm (w x h x d), weight approx. 4.6 kg
Infrared photometer:	Thermostatted
Analyser cabinet:	1100x600x600mm, 120kg
Ambient temperature:	5 ... 30 °c (with air conditioner 5 .. .45°C)
Measuring methods:	- Electrochemical cell (O_2, H_2S[1]) - Infrared photometer (CO, CO_2, SO_2, NO, NO_2[1], CH_4[1], H_2O[1]) - Paramagnetic measuring method [1](O_2)
Display/operating:	Graphic display (LCD), 240 x 128 Pixel, background-lighted; menu-driven operating; display possibility in mg/m³, ppm and vol. %; languages: German, English; membrane keyboard
Accuracy:	< 2% of the respective measuring range
Zero point correction:	Automatic
Sensitivity correction:	Manual, with test gas; optional: automatic
Air pressure correction:	Internal
Response time:	T_{90} < 180 s (depending on plant and chosen component)
Digital inputs:	8 inputs (opto-coupled)
Digital outputs:	16 outputs, potential-free, 24 V DC with max. 0.4 A (max. 10 W); amongst others: - Output signals for failure, maintenance, maintenance request, limit values, measuring range change-over, Autocal - Control of automatic probe back purging - Internal condensate annunciator for function "pump off' - Dosing control of phosphoric acid (H_3PO_4)
Analogue outputs:	5 active analogue outputs, 4 .. .20 mA, potential-free, burden max. 500 Ohm
Service interface RS232:	For remote software, compatible for all Windows operating systems (XP or higher version): - Visualisation of all data by intuitive user surface - Data storage on PC in TXT format - Loading/saving of all relevant configuration data
Power supply:	110 V AC, 230 V AC / 50-60 Hz, 40 W
Suitability test:	DIN EN 15267, QAL 1, ID: 0000039321; DIN EN 15267-3, TA Luft, 13th and 27th BImSchV (as system part)
Optional:	- Two separated gas paths - Analyser-specific PC user software for visualisation, (remote) control and recording of data via RS232 interface

[1] not part of the suitability test
Special models are possible on request.