TECHNICAL DATA SHEET

ecom-ST
STATIONARY FLUE GAS ANALYSIS

The flue gas analyser for fixed installation for autonomous, continuous emission monitoring

The ecom-ST is a modular stationary system for industrial applications where maximum precision is required. It is ideal for monitoring and optimizing large combustion plants, CHP units, industrial furnaces and process plants. The ecom-ST provides reliable data for e.g. emission monitoring or system tuning. Depending on the application, the device can be installed in a protective housing with a glass panel or embedded in a 19“ rack - it can be flexibly integrated into industrial measuring environments.

Dimensions: approx. 436 x 265 x 235 mm (W x H x D)
Weight: ca. 8,6 kg

Technical data

Measured values	Range	Resolution	Accuracy *= Higher value prevails	
√ = Standard; ● = Optional EC; ● = Optional NDIR; ● = Optional Pellistor				
Maximum number of measurable gas components				6
O_2	0...21 %	0,1 vol. %	± 0,3 vol. %	√
CO (H_2-comp.)	0...2.500 ppm (10.000 ppm)	1 ppm	± 20 ppm / 5 % of measured value*	√
CO%	0...63.000 ppm	5 ppm	± 100 ppm / 10 % of measured value*	•
CO_2	0...100 vol. %	0,01 vol. %	up to 5 % of the measuring range end value	•
NO	0...5.000 ppm	1 ppm	± 5 ppm / 5 % of measured value*	•
$NO_{ExtraLow}$	0...300 ppm	0,1 ppm	± 2 ppm / 5 % of measured value*	•
NO_2	0...1.000 ppm	1 ppm	± 5 ppm / 5 % of measured value*	•
$NO_{2\ Low}$	0...100 ppm	0,1 ppm	± 5 ppm / 5 % of measured value*	•
SO_2	0...5.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	•
$SO_{2\ Low}$	0...100 ppm	0,1 ppm	± 5 ppm / 5 % of measured value*	•
H_2	0...20.000 ppm	1 ppm	± 100 ppm / 5 % of measured value*	•
H_2S	0...1.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	•
CH_4	0...5 vol. %	0,01 vol. %	± 0,2 vol. % / 5 % of measured value*	•
CH_4	0...100 vol. %	0,1 vol. %	± 5 % of the measuring range end value	•
C_xH_y	0...4 vol. %	0,01 vol. %		•
Other measured variables	**Range**	**Resolution**	**Accuracy *= Higher value prevails**	
T-Gas	0...500 °C	1 °C	± 2 °C / 1,5 % of measured value*	√
T-Air	0...99 °C	0,1 °C	± 1 °C	√
Pressure | △P	± 100 hPa	0,01 hPa	± 0,5 hPa / 1 % of measured value*	√
Calculation values			**Range**	
CO_2			0...$CO_{2\ max}$	√
Combustion efficiency (ETA)			0...120 %	√
Excess air (Lambda)			>1	√
Losses qA			0...100 %	√
$CO_{(U)}$ undiluted			x ppm	√
Dew point			x° C	√
mg/m³			x mg/m³	√
mg/kWh			x mg/kWh	√
O_2 reference			x % O_2	√

Equipment

Gas sampling	
Unheated probe Ø 10 mm	•
NO_x tubing with PTFE inner coating	•
Heated sampling system	•
Measuring head with hot gas filter (PTFE)	•
Measurement gas preparation	
Electronic condensate monitoring	√
Automatic condensation evacuation	√
Electronic sample gas cooler	√
Combustion air temperature measurement	
T-room sensor with cable, cone and magnet	√
Operation safety	
Temperature display for stream core search	√
Automatic self-test in the calibration phase	√
CO switch-off by concentration overload	√
Fresh air purge by CO exceeding	√
Fresh air purge after measuring operation	√
Data processing	
Network connection COM module, Modbus TCP	√
RS485 for COM module protocol, Modbus RTU	√
USB interface	√
Analog outputs 8 x 4...20 mA	•
Analog inputs 2 x 4...20 mA	•
Data display / input	
TFT colour display, backlit, zoomable	√
Backlit keyboard	√
Enclosure	
Protective metal housing with glass front panel	•
Protective metal housing with glass front panel for 110V operation	•
Proof of conformity / calibration	
EMC test according to EN 61326-1	√
Certificate after climate chamber calibration	√

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