TECHNICAL DATA SHEET

ecom-EN3-F
MOBILE FLUE GAS ANALYSIS

Ideal for inspection work on industrial systems, incl. integrated soot measurement

The ecom-EN3-F is a powerful, compact flue gas analyzer in an airworthy hard-shell case for safe and precise measurements on industrial combustion systems - also suitable for use on solid fuel systems such as wood, pellet or wood chip heating systems.

With an integrated sample gas cooler and durable sensors, it is ideal for demanding applications. The intuitive operation, impact-resistant housing in a transport case and a wide range of interfaces make the device a reliable partner for servicing, commissioning and monitoring industrial systems.

Dimensions: approx. 515 x 325 x 175 mm (W x H x D)
Weight: approx. 8,5 kg with sampling system

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 (n. H_2-comp)	0...20.000 ppm	1 ppm	± 40 ppm / 10 % 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*	•
$SO_{2\ Low\ CO}$	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...2.000 ppm	1 ppm	± 10 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*	√
	0...1.100 °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	
Heated probe 350 mm, Ø 10 mm	√
3-chamber tubing 3 m	√
3-chamber NO_x tubing with PTFE inner coating	•
Heated probes Ø 10 mm in alternative lengths	•
High temperature probe Ø 10 mm	•
Measurement gas preparation	
Electronic gas cooler	√
Automatic condensation evacuation	√
Combustion air temperature measurement	
T-room sensor with cable, cone and magnet	√
Operation safety	
Pressure-equalizing gas duct plate	√
Temperature display for stream core search	√
Automatic self-test in the calibration phase	√
CO switch-off	√
Fresh air purge by CO exceeding	√
Fresh air purge after measuring operation	√
Flow meter for pump performance check	√
Pollutant filter for CO sensor	•
Data processing	
Integrated high-speed thermal printer	√
External memory via SD card	√
Wireless data interface (BLE) for connection with mobile devices	√
WiFi interface (instead of BLE)	•
Serial interface	√
USB interface	√
Data display / input	
TFT color display, backlit, zoomable	√
Backlit keyboard	√
Transport	
Airworthy hard-shell transport case	√
Proof of conformity / calibration	
EN 50379-2	√
1. BImSchV	√
Certificate after climate chamber calibration	√

ecom GmbH
Am Großen Teich 2
58640 Iserlohn
info@ecom.de

ecom® Messtechnik