TECHNICAL DATA SHEET

Ideal for inspection and adjustment work on heating systems in the lower to medium performance range

The smart all-in-one solution for flue gas analysis on oil and gas burner. Despite its compact design, it is packed with professional measurement technology - developed for daily use in the trade, for service calls or for documenting emission values. The robust housing protects a powerful sensor system, supplemented by integrated gas conditioning and simple operation via color display or app.

Whether for quick routine tests or precise emission measurements: The ecom-EN3 stands for maximum reliability, short measurement cycles and practical features - made in Germany and ready for any challenge.

Technical data

Measured values	Range	Resolution	Accuracy *= Higher value prevails	
√ = Standard; ● = Opti	ional EC; • = Optional NE	OIR; • = Optional	Pellistor	
Maximum number	of measurable gas o	components		6
02	021 %	0,1 vol. %	± 0,3 vol. %	√
CO (H ₂ -comp.)	02.500 ppm (10.000 ppm)	1 ppm	± 20 ppm / 5 % of measured value*	√
CO (n. H ₂ -comp)	020.000 ppm	1 ppm	± 40 ppm / 10 % of measured value*	
CO%	063.000 ppm	5 ppm	± 100 ppm / 10 % of measured value*	
CO ₂	0100 vol. %	0,01 vol. %	up to 5 % of the measuring range end value	
NO	05.000 ppm	1 ppm	± 5 ppm / 5 % of measured value*	
NO _{ExtraLow}	0300 ppm	0,1 ppm	± 2 ppm / 5 % of measured value*	
NO ₂	01.000 ppm	1 ppm	± 5 ppm / 5 % of measured value*	
NO _{2 Low}	0100 ppm	0,1 ppm	± 5 ppm / 5 % of measured value*	
SO ₂	05.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	
SO _{2 Low CO}	05.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	
SO _{2 Low}	0100 ppm	0,1 ppm	± 5 ppm / 5 % of measured value*	
H ₂	02.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	•
H ₂	020.000 ppm	1 ppm	± 100 ppm / 5 % of measured value*	
H ₂ S	01.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	
CH ₄	05 vol. %	0,01 vol. %	± 0,2 vol. % / 5 % of measured value*	•
CH ₄	0100 vol. %	0,1 vol. %	± 5 % of the measuring range end value	
C_xH_y	04 vol. %	0,01 vol. %		
Other measured variables	Range	Resolution	Accuracy *= Higher value prevails	
T-Gas	0500 °C	1 °C	± 2 °C / 1,5 % of measured value*	√
T-Air	099 °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			0CO _{2 max}	√
Combustion efficiency (ETA)			0120 %	√
Excess air (Lambda)			>1	√
Losses qA			0100 %	√
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	√

ECOM-EN3 MOBILE FLUE GAS ANALYSIS



Equipment

3-chamber sampling tubing 3 m 3-chamber NO _x tubing with PTFE inner coating Unheated probes Ø 10 mm in alternative lengths Measurement gas preparation Electronic condensate monitoring Electronic sample gas cooler 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 by concentration overload 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 USB	· ·				
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Unheated probes Ø 10 mm in alternative lengths Measurement gas preparation Electronic condensate monitoring Electronic sample gas cooler Combustion air temperature measurement Troom 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 by concentration overload 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 USB interface USB interface Jata display / input TFT color display, backlit, zoomable Backlit keyboard Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2 J	3-chamber sampling tubing 3 m	√			
Measurement gas preparation Electronic condensate monitoring	3-chamber NO _x tubing with PTFE inner coating				
Electronic condensate monitoring Electronic sample gas cooler 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 by concentration overload 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 USB interface USB interface Data display / input TFT color display, backlit, zoomable Backlit keyboard Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2 V	Unheated probes Ø 10 mm in alternative lengths				
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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 by concentration overload 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 USB interface USB interface Data display / input TFT color display, backlit, zoomable Backlit keyboard Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2 V	Electronic sample gas cooler				
Operation safety Pressure-equalizing gas duct plate 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 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 USB interface USB interface Data display / input TFT color display, backlit, zoomable Backlit keyboard Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2 V	Combustion air temperature measurement				
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CO switch-off by concentration overload 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 Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2 V	Temperature display for stream core search	√			
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 USB interface Data display / input TFT color display, backlit, zoomable Backlit keyboard Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2 V	Automatic self-test in the calibration phase	√			
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TFT color display, backlit, zoomable Backlit keyboard Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2	USB interface	√			
Backlit keyboard Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2	Data display / input				
Transport Aluminium framed case with carrying strap Undercase Proof of conformity / calibration EN 50379-2	TFT color display, backlit, zoomable	√			
Aluminium framed case with carrying strap Undercase • Proof of conformity / calibration EN 50379-2	Backlit keyboard	√			
Undercase Proof of conformity / calibration EN 50379-2 ✓	Transport				
Proof of conformity / calibration EN 50379-2 ✓	Aluminium framed case with carrying strap	√			
EN 50379-2 ✓	Undercase				
	Proof of conformity / calibration				
1. BlmSchV ✓	EN 50379-2	√			
	1. BlmSchV	√			
Certificate after climate chamber calibration √	Certificate after climate chamber calibration	√			



