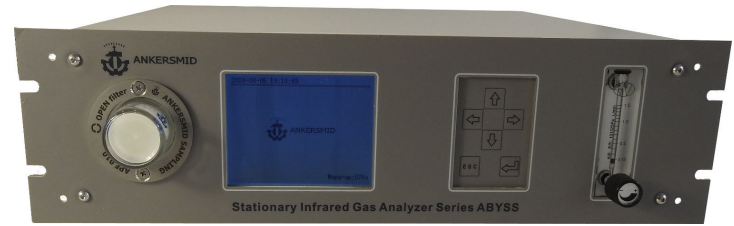


ANKERSMID Online Analyzer

ABYSS FlueGas Series 100-900



* Picture may vary

Application

The general applications are Boiler (furnace exhaust emission gas and combustion efficiency monitoring), cement production line process and security as well as continuous emission monitoring systems (CEMS) of waste gas generated from pollution sources such as fire-coal smoke-stacks, steel works, cement plants, aluminium manufacturing factories, nonferrous metallurgy plants, phosphate fertilizer factories, nitric plants, sulphuric acid factories, petrochemical works, chemical fibre plants and large industrial chimney stacks.

Description

The analyzers can be used for the measurement of the concentration of up to 5 gases such as SO₂, NO, CO₂, CO and O₂.

The measurement is based on micro-flow NDIR detectors for SO₂, NO and CO as well as dual-beam NDIR detectors for CO₂ (%-range) and an Electro-chemical detector (ECD) for O₂ (%-range). Optional O₂ (%-range) could be also measured with a paramagnetic cell.

- **Up to 5 gases measurement with combination of micro-flow NDIR, NDIR and ECD gas sensor technology**
- **Proven design with pulsable infrared source and dual-beam technology**
- **Heated gas bench for high stability**
- **320*240 LCD display**
- **Integrated flow meter with needle valve**
- **Integrated gas inlet panel fine-filter (0,1µm)**
- **Integrated pump for auto-zeroing (with air)**
- **NO₂ to NO converter for NO_x measurement (ppm range)**
- **RS232 & 4-20mA output**
- **2 free configurable alarm levels per measuring channel**

Version	Part number	Gas components
ABYSS FlueGas 100	AFG 100	CO (ppm content)
ABYSS FlueGas 200	AFG 200	CO+O ₂
ABYSS FlueGas 300	AFG 300	CO+CO ₂ +O ₂ combustion efficiency
ABYSS FlueGas 400	AFG 400	SO ₂ (NO)
ABYSS FlueGas 500	AFG 500	SO ₂ +O ₂ (NO+O ₂)
ABYSS FlueGas 600	AFG 600	SO ₂ +NO
ABYSS FlueGas 700	AFG 700	SO ₂ +NO+O ₂
ABYSS FlueGas 800	AFG 800	SO ₂ +NO+CO+O ₂
ABYSS FlueGas 900	AFG 900	SO ₂ +NO+CO+CO ₂ +O ₂



ANKERSMID Online Analyzer
ABYSS FlueGas Series 100-900

Technical data

Specifications					
Measurement		SO ₂ , NO, CO ₂ , CO and O ₂			
Gas flow		0.7 - 1.2l/min, external flow meter with needle valve, (internal flow regulator 100ml/min for paramagnetic O ₂ detector) external pump is recommended			
Pressure of gas inlet		20-500mbar			
Sampling gas requirement		Remove water vapor, dust (<1µm) and oil			
Response time T90		<20s (NDIR) <2s (PMG) <15s ECD (O ₂)			
Warm-up time		30min			
Interface		RS232, 4-20mA			
Digital		3 common relays for default, low and high gas alarms			
Gas alarm levels		2 levels (low/high) per channel, configurable by software			
Configuration/calibration		By software, via key pad on front panel 5 points factory calibration per measuring channel, stored in the memory 2 points (Zero/Span) user calibration			
Display		LCD 240*320 with back-light function Simultaneous indication of the measures and units			
Gas inlet filter		Type APF 010, filter porosity: 0,1µm			
Integrated pump		For auto-zeroing with air (pump for gas sampling optional)			
Operating temperature		0 to +50°C			
Relative humidity		5 – 85%			
Ambient air pressure		86 – 108kPa			
Power supply		115/230VAC			
Dimensions		AFG 100-700: 19"-rack enclosure 3U, 485 x 132 x 400mm (W x H x D) (1-2 Micro-flow NDIR sensors +1 Dual-beam NDIR sensor + O ₂) AFG 800/900: 19"-rack enclosure 4U, 485 x 175 x 450mm (W x H x D) (3 Micro-flow NDIR sensors +1 Dual-beam NDIR sensor + O ₂)			
Weight		± 11Kg			
Gas	Method	Range max	Display resolution	Full scale accuracy	T90
CO	NDIR (mirco-flow)	200ppm, 500ppm, 1000ppm, 2000ppm, 5000ppm, 1%, 5%	1ppm or 0,01%	±2%	<25s
CO ₂	NDIR (dual-beam)	0-5%, 10%, 25%	0,01%	±2%	<25s
NO	NDIR (mirco-flow)	200ppm, 500ppm, 1000ppm, 2000ppm, 5000ppm, 5%	1ppm	±2%	<25s
SO ₂	NDIR (mirco-flow)	200ppm, 500ppm, 1000ppm, 2000ppm, 5000ppm, 5%	1ppm or 0,01%	±2%	<25s
O ₂	Electro-chemical	0-5%, 25%	0,01%	±3%	<30s



ANKERSMID Portable Analyzer ABYSS FlueGas Series 100P-900P



Application

The general applications are Boiler (furnace exhaust emission gas and combustion efficiency monitoring), cement production line process and security as well as continuous emission monitoring systems (CEMS) of waste gas generated from pollution sources such as fire-coal smoke-stacks, steel works, cement plants, aluminium manufacturing factories, nonferrous metallurgy plants, phosphate fertilizer factories, nitric plants, sulphuric acid factories, petrochemical works, chemical fibre plants and large industrial chimney stacks.

Description

The ABYSS portable infrared FlueGas analyzer is powered by Li-Ion battery and can be used without AC power supply.

A nylon carrying bag for analyzer and accessories is included as standard.

The analyzers can be used for the measurement of the concentration of up to 5 gases such as SO₂, NO, CO₂, CO and O₂.

The measurement is based on NDIR-sensors for CO₂ (%-range) and ECD-sensors for O₂ (%-range), SO₂, CO, NO (all in ppm-ranges).

- **Up to 5 gases measurement with combination of micro-flow NDIR, NDIR and ECD gas sensor technology**
- **Proven design with pulsable infrared source and dual-beam technology**
- **Heated gas bench for high stability**
- **320*240 LCD display**
- **Integrated flow meter**
- **with needle valve**
- **Built-in pump for auto-zeroing (with air) & gas sampling**
- **RS232 interface, datalogger**

Version	Part number	Gas components
ABYSS FlueGas 100P	AFG 100p	CO (ppm content)
ABYSS FlueGas 200P	AFG 200p	CO+O ₂
ABYSS FlueGas 300P	AFG 300p	CO+CO ₂ +O ₂ combustion efficiency
ABYSS FlueGas 400P	AFG 400p	SO ₂ (NO)
ABYSS FlueGas 500P	AFG 500p	SO ₂ +O ₂ (NO+O ₂)
ABYSS FlueGas 600P	AFG 600p	SO ₂ +NO
ABYSS FlueGas 700P	AFG 700p	SO ₂ +NO+O ₂
ABYSS FlueGas 800P	AFG 800p	SO ₂ +NO+CO+O ₂
ABYSS FlueGas 900P	AFG 900p	SO ₂ +NO+CO+CO ₂ +O ₂



ANKERSMID Portable Analyzer
ABYSS FlueGas Series 100P-900P

Technical data

Specifications					
Measurement		SO ₂ , NO, CO ₂ , CO and O ₂			
Gas flow		0.7 - 1.2 l/min, external flow meter with needle valve, external pump is recommended			
Pressure of gas inlet		20-500mbar			
Sampling gas requirement		Remove water vapor, dust (<1um) and oil			
Response time T90		<60s (NDIR) <20s ECD (O ₂)			
Warm-up time		800sec.			
Interface		RS232 (real time and memory data download software available)			
Data-logging		Up to 2521 sets of data; logging rate adjustable from 3-99sec Possibility to identify 10 different sites and up to 100 measuring points			
Gas alarm levels		2 levels (low/high) per channel, configurable by software			
Configuration/calibration		By software, via key pad on front panel 5 points factory calibration per measuring channel, stored in the memory 2 points (Zero/Span) user calibration			
Display		LCD 240*320 with back-light function Simultaneous indication of the measures and units			
Integrated pump		For auto-zeroing (with air) and gas sampling			
Operating temperature		0 to +50°C			
Relative humidity		5 - 85%			
Ambient air pressure		86 – 108kPa			
Power supply		External: 115/230VAC via AC/DC-adaptor Internal: with Li-Ion battery and charger; autonomy of > 4h with pump in operation, 8h without pump			
Dimension		380mm x 380mm x 255mm (L x D x H)			
Weight		± 5Kg			
Gas	Method	Range max	Display resolution	Full scale accuracy	T90
CO ₂	NDIR	0-25%	0,01%	±2%	<20s
CO	Electro-chemical	0-4000ppm	1ppm	±3%	<25s
SO ₂	Electro-chemical	0-2000ppm	1ppm	±3%	<25s
NO	Electro-chemical	0-2000ppm	1ppm	±3%	<25s
O ₂	Electro-chemical	25%	0,01%	±3%	<30s