



BlueLine®

# BLUELYZER® ST

Flue gas analyzer



CO: EN50379-3



Management System  
ISO 9001:2015

www.tuv.com  
ID: 9105030470





Many modern central heating systems are adjusted to CO<sub>2</sub> (carbon dioxide) for optimal performance and safety. In order to do this, measuring the composition of the flue gas is essential. Besides carbon dioxide, the concentration of carbon monoxide and the resulting toxicity index are of great importance for safety and for environment considerations. The BlueLine® BLUELYZER® ST offers an accurate flue gas analysis for managing and maintaining central heating systems in an unrivalled compact form.

BLUELYZER® ST is the universal, handheld measuring instrument for measuring small and medium-sized oil and gas fired heating systems and for CO concentration checks at gas fired systems. The fully-featured HVAC all in one analyzer also provides exact calculation of the Eta value for all condensing heating systems with fuel-specific dew point calculation.

There are a variety of data interfaces, such as Bluetooth® (BLE), infrared and microSD card for communication with other devices, PC or the EUROprinter available. Alternatively, the measurement protocols can be converted to QR code and then scanned by smartphones and tablets. The protocols can also be passed to management software programs.



### Funktionalität

#### Measurement of:

- O<sub>2</sub> (oxygen)
- CO (carbon monoxide)
- Draft pressure
- T<sub>air</sub> (ambient temperature)
- T<sub>gas</sub> (flue gas temperature)

#### Calculation of:

- CO<sub>2</sub> (carbon dioxide)
- CO undiluted
- Difference in temperature
- Combustion efficiency
- Lambda (excess air)
- Flue-gas losses
- CO<sub>ref</sub> (O<sub>2ref</sub> configured)
- T<sub>au</sub> (dewpoint)

The appliance only has 5 controls, a clear menu structure and a large TFT colour display. The built-in rechargeable Li-ion battery offers an operation time of 8 hours. You can read the measured values on the display, store them or print them out.

The drop-down menu with colored icons appears immediately after activating the BLUELYZER® ST. The arrow keys can be used to choose following programs: flue gas analysis, temperature measurement, measurement of the concentration of carbon monoxide in the environment, adjustment of the instrument settings or editing the microSD memory.

## Small but powerful



Top view



Bottom view

### Extremely compact

The BlueLine® BLUELYZER® ST is very compact and therefore easy to handle and transport. However, the appliance's small size is not at the expense of quality. You can make the same high quality demands on the BLUELYZER® ST as on any other BlueLine® measuring instruments. Due to the clever design, everything is put in a convenient and logical place.

### EN50379 Part 1 and 2

The EN50379 is the European standard in which the permissible measurement techniques, for measurements of combustion appliances, are specified. The BLUELYZER® ST has EN50379 part 2 certification for measuring O<sub>2</sub>, CO<sub>2</sub> and temperature with the exception of CO (EN 50379-3).

Technical specifications	
<b>O<sub>2</sub> (oxygen)</b>	
Measuring range	0 to 21 vol.-%
Accuracy	±0.2 vol.-% RDG
Resolution	0.1 vol.-%
Response delay (t90)	< 30 seconds
<b>CO (carbon monoxide)</b>	
Measuring range	0 to 2,000 ppm (max. 6,000)
Accuracy	±5 ppm (< 50 ppm)
	±5 % RDG (> 50 ppm)
Resolution	1 ppm
Response delay (t90)	< 60 seconds
<b>CO<sub>high</sub> (carbon monoxide)</b>	
Measuring range	0 to 2.0 vol.-%
Accuracy	±10 ppm (< 200 ppm)
	±5 % RDG (> 200 ppm)
Resolution	1 ppm
Response delay (t90)	< 60 seconds
<b>Draft / pressure</b>	
Measuring range	±40 hPa (draft)
	±150 hPa (pressure)
Accuracy	±0.02 hPa (< 2 hPa)
	±1 % RDG (> 2 hPa)
Resolution	0.01 hPa (< 20 hPa)
	0.1 hPa (> 20 hPa)
Max. overload	1,350 hPa
Response delay (t90)	< 10 seconds
<b>Flue gas temperature</b>	
Measuring range	0 to 1,150 °C
Accuracy	±1 °C + 1 digit (< 300 °C)
	±1 % RDG (> 300 °C)
Resolution	0.1 °C
Response delay (t90)	< 30 seconds
<b>ambient temperature</b>	
Measuring range	-20 to 200 °C
Accuracy	±3 °C + 1 digit (-20 < 0 °C)
	±1 °C + 1 digit (0 < 200 °C)
Resolution	0.1 °C
Response delay (t90)	< 30 seconds

General specifications	
Dimensions H x W x D	143 x 66 x 37 mm
Weight	275 g
Material housing	Plastic (PA)
Display type	2.8" TFT (240 x 320 pixels)
Air pressure range	750 to 1,100 hPa
Humidity range	20 to 80 % rh
Operating temperature	0 to 40 °C
Storage temperature	-20 to 50 °C
Data interface	Bluetooth®
	QR code generator
	microSD card
Connection	Wireless IR connection with optional EUROprinter
	Gas: 1x Ø 8 mm
	Pressure: 1x Ø 7 mm
Power supply	Temperature: 2x Thermocouple socket
	Mini USB mains unit (5 V)
Battery type	rechargeable li-ion battery 3.6 V / 1,800 mAh
Memory type	optional microSD card up to 16 GB
Ingress protection rating	IP42 (EN 60529)





- **Compact**  
Flue gas analysis, pressure measurement (draft) and (differential) temperature measurement with the world's smallest, fully-featured HVAC all-rounder with TFT colour display
- **Safety**  
CO ambient measurement with two freely adjustable alarm thresholds.
- **Extensive**  
Fully-fledged temperature measurement program, differential temperatures (e.g. flow/return) can also be determined
- **Hold function**  
Display shows the measured value for a given period of time while the measurement keeps running in the background
- **Personalized**  
Measurement programs and measured values can be freely edited
- **CAPBs® enabled**
- **Memory function**  
with up to 100 measurement logs

## Maximum flexibility in data documentation

The free EuroSoft® connect App allows to transmit measured values to smartphones, tablets or PCs via QR code or Bluetooth®.

All BlueLine® measuring instruments can be used together with this app for documentation and visualisation of "live" measurement results, logs and long-term measurements. Ideal for adjustment and documentation with the optional data logger function. Measurements can be shared in multiple ways (e.g.: cloud services, email, etc.). The evaluation software can be used on iOS, Android or Windows operating systems.



## Accessories

	Article	Description	Part no.
	Flue gas probe	170 mm, Ø 8 mm, with condensate filter cartridge	500265.5
		170 mm, Ø 8 mm, with condensate filter cartridge and draft	500268.5
	Flexible flue gas probe	240 mm Ø 8 mm, with condensate filter cartridge and draft	500268.7
	Condensate filter cartridge	with filter disc	500192
	Filter package for small condensate trap	5x particle filter, 5x teflon membrane	500214
	Intermediate filter NO <sub>x</sub> /SO <sub>x</sub>	for connection Ø 8 mm, with 1 refilling	511064
	Refilling for intermediate filter	5 pieces	511066
	Temperature probe for liquid/gas	Measuring range up to 900 °C	523035
	Temperature probe surface	Measuring range up to 450 °C	523033
	Combustion air sensor	200 mm, with cone	500147
	Clamp probe for pipes	Pipe diameters from 5 to 36 mm, temperature range from -40 to 120°C	511098
	Air sensor	for ambient temperature measurement	521844
	EUROprinter BLE	Compact IR & Bluetooth® printer, with magnets	523525
	EUROprinter II	Compact infrared high speed thermal printer, with magnets	524340
	Printer paper for EUROprinter Thermo	5 rolls	523374

Accessories			
	Article	Description	Part no.
	Charging cable USB-mini	for all BlueLine® instruments, USB to USB-Mini, length: 1 m	523506
	Power supply adapter	for all BlueLine® instruments	523493
	microSD card with card reader	4 GB, for data logging	511035
	Option data logger	logging once per second during measurements, microSD card required	511010
	Database memory	Extension of memory function, customer database, customer information	511030
	Plastic case universal	light and robust, with foam inlet and document compartment	523372
	Aluminium case	small and robust, with foam inlet, document compartment and key-lock	511001

## Quality since 1987

SYSTRONIK GmbH is specialized in development and production high quality measuring instruments for flue gas analysis, testing and maintaining HVAC installations, climate and environmental technology. All SYSTRONIK products satisfy the highest standards for quality, reliability and safety.

Our facilities are certified to full operational requirements of the ISO 9001 quality standard. We are constantly striving to improve our quality assurance position with input from periodic audits by independent experts required for continued certification.





Distributor:

# SYSTRONIK

Messtechnologie

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