

BlueLine®

# MULTILYZER STx

Flue gas analyzer





MULTILYZER STx - the flue gas analyser for measuring small and medium-sized oil, gas and solid fuels fired heating systems according to the German Federal Immission Act and for CO concentration safety checks at gas fired systems. Ideal for servicing solid fuel systems (for example, wood fired systems with temporary CO peaks up to 40,000 ppm) or bivalent, modulating combined heating and power plants.

The MULTILYZER STx is a portable flue gas analyser with robust protective sleeve, integrated holding magnet and a large TFT color display, which allows to show up to 8 measured values. In addition, the MULTILYZER STx has an automatic instrument check during program start and a limit value monitoring to protect the sensors. The compact design allows the device to be equipped with any combination of up to six measuring cells ( $O_2$ ,  $CO/H_2$ ,  $CO_{HIGH}$ ,  $NO$ ,  $NO_2$ ,  $SO_2$ ). The oxygen ECO sensor has an extended lifetime and is resistant against biogenic fuels.

Calculated parameters are CO undiluted (air-free), lambda,  $CO_2$ , Eta efficiency, flue gas loss, dew point and temperature difference. The CO measuring cell is  $H_2$ -compensated for official measurements. Via the Datalogger function long-term measurements with freely definable intervals can be made. An easy and fast communication with PCs, smartphones, tablets and printers is achieved via QR codes or interfaces such as Bluetooth®, Bluetooth® Smart, infrared and USB.



### Funktionalität

#### Measurement of:

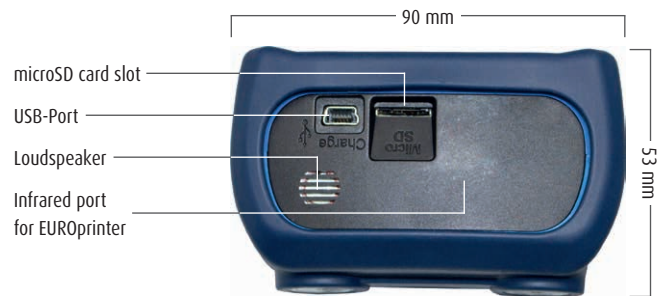
- $O_2$  (oxygen)
- $CO_{HIGH}$  (carbon monoxide)
- $CO/H_2$  ( $H_2$ -compensated)
- $NO$  (nitrogen oxide)
- $NO_2$  (nitrogen dioxide)
- $SO_2$  (sulfur dioxide)
- Differential/Draft pressure
- $T_{air}$  (ambient temperature)
- $T_{gas}$  (flue gas temperature)
- $T_{gas}$  (differential temperature measurement)
- Barometric pressure

#### Calculation of:

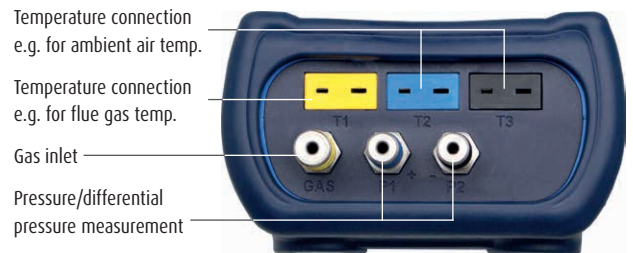
- $CO_2$  (carbon dioxide)
- CO undiluted
- Difference in temperature
- Combustion efficiency
- Lambda (excess air)
- Ratio (for UK and AU only)
- Flue-gas losses
- $CO_{ref}$  (with  $O_{2ref}$  to configure)
- $T_{au}$  (dewpoint)
- $NO_x$  ( $NO+NO_2$ )
- $NO_{ref}$
- $SO_{2ref}$

The clearly structured drop-down menu with colored icons appears immediately after activating the MULTILYZER STx. Via the intuitive navigation keys the following programs can be selected: flue gas analysis, temperature measurement, CO ambient measurement, pressure measurement, pitot measurement (option), instrument settings and memory management. When using the flue gas analysis function, the fuel type is initially selected from a list. The MULTILYZER STx allows simultaneous measurement, navigation, charging and evaluation of measurement results at the same time.

## Allrounder for all measurements



Top view



Bottom view

### Color screen

The MULTILYZER STx has a 3.5" (8.9 cm) TFT color display with a resolution of 240 x 320 pixels. The various measurement menus are each displayed in their own unique color, which simplifies navigation. The display's large viewing angle, clarity and backlight ensure that the data and measurement values displayed are clearly visible under all circumstances.

### 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 MULTILYZER STx has EN50379 part 1 and 2 certification for measuring  $O_2$ ,  $CO/H_2$ ,  $CO_{HIGH}$ ,  $NO$ , temperature and pressure.

Technical specifications	
<b>O<sub>2</sub> (oxygen)</b>	
Measuring range	0 to 21.0 vol.-%
Accuracy	±0.2 vol.-% RDG
Resolution	0.01 vol.-%
<b>CO (carbon monoxide) with H<sub>2</sub>-compensation</b>	
Measuring range	0 to 10,000 ppm
Accuracy	±5 ppm (< 50 ppm) ±5 % RDG (> 50 ppm)
Resolution	1 ppm
<b>CO<sub>2</sub> (carbon dioxide)</b>	
Measuring range	0 to CO <sub>2</sub> max (depending on fuel)
Accuracy	±0.2 vol.-%
Resolution	0.1 vol.-%
<b>Flue gas temperature</b>	
Measuring range	0 to +1,150 °C
Accuracy	± 1 °C (< +300 °C) ±1 % RDG (> +300 °C)
Resolution	0.1 °C
<b>Ambient temperature</b>	
Measuring range	-20 to +200 °C
Accuracy	±3 °C (-20 to 0.0 °C) ±1 °C (0.1 to +200 °C)
Resolution	0.1 °C
<b>Pressure</b>	
Measuring range	±150 hPa
Accuracy	±0.02 hPa (< ±2.00 hPa) ±1 % RDG (> ±2.00 hPa)
Resolution	0.01 hPa (= 1 Pa)

Options	
<b>NO</b>	
Measuring range	0 to 5,000 ppm
Accuracy	±5 ppm (< 50 ppm) ±5 % RDG (> 50 ppm)
Resolution	1 ppm
<b>NO<sub>2</sub></b>	
Measuring range	0 to 500 ppm
Accuracy	±10 ppm (< 50 ppm) ±10 % RDG (> 50 ppm)
Resolution	1 ppm
<b>SO<sub>2</sub></b>	
Measuring range	0 to 5,000 ppm
Accuracy	±10 ppm (< 200 ppm) ±5 % RDG (> 200 ppm)
Resolution	1 ppm
<b>CO<sub>high</sub></b>	
Measuring range	0 to 4.0 vol.-% (40,000 ppm)
Accuracy	±5 % RDG
Resolution	0.01 vol.-%

### Safety

Safety and security are important aspects in all BlueLine® measuring instruments. For safety of the occupants/users of the building where the central heating system is located, the MULTILYZER STx offers a special function for measuring the concentration of carbon monoxide in the surrounding air. This will enable you to recognize a malfunction in the central heating system and make repairs in time.

When starting up, the MULTILYZER STx performs a check, to ensure proper functioning of your instrument. All sensors are checked, the condition of the battery is displayed and, if the calibration date has been exceeded, a message to this effect will be displayed.

The MULTILYZER STx is fitted with a condensate cartridge. This part has been placed in the sampling line, so that the user can properly see when the cartridge needs to be emptied. A dust filter and a PTFE-filter have also been fitted in the condensate cartridge. The PTFE-filter prevents the condensate water from reaching the sensors.





### General specifications

Dimensions (H x W x D)	220 x 90 x 53 mm (including protective holster)
Weight	about 685 gramm (including protective holster)
Material housing	Polyamid (PA)
Display	Graphic color screen 3.5" (240 x 320 pixels)
Data communication	Infrared connection for optional EUROprinter Bluetooth® Smart (BLE - Bluetooth Low Energy) QR-Code
Printer	External wireless thermal printer (EUROprinter)
Memory	optional microSD/SDHC card up to 16 GB
Operating temperature	+5 to +40 °C
Storage temperature	-20 to +50 °C
Ingress Protection Rating	IP42 (EN 60529)
Battery	Lithium-ion battery 3.6 V / 2,900 mAh
Mains power supply	Mini USB (5 V)

### EuroSoft® mobile App

BlueLine® measuring instruments can be used for processing and visualisation of „live“ measurement results/logs. Ideal for long-term measurements and adjustments or for use of the optional data logger function for professional, comprehensive documentation of results for customers.

The EuroSoft® mobile software allows you to transmit measured values to smartphones, tablets or PCs. The data can then be further processed or sent via e-mail. The evaluation software is suitable for BlueLine® measuring instruments and can be used on iOS, Android or Windows operating systems.



# EUROSOFT

  
**mobile**


## Optional accessoires

### Modular probe system with interchangeable probes



Base handle for interchangeable probes



Base handle with hose and condensate filter cartridge



Interchangeable probe, 180 mm



Interchangeable probe, 300 mm



Flexible probe, 400 mm

### PTFE-filter

The MULTILYZER STx's condensate cartridge contains a PTFE-filter, which functions as an additional safeguard against condensation.



### Dust filter

The condensate cartridge also contains a dust filter that protects the flue gas analyzers against dust and soot particles.



Dust and other particles can impair the instruments if they reach the sensors. The dust filter should be replaced periodically to guarantee proper operation.



### Thermal printer EUROprinter

Compact printer with four magnets at the back for hands-free operation. Infrared interface for easy connection of all BlueLine® series measuring instruments. Documents all measured results on paper for official purposes - anywhere.

Accessories included: batteries, 1 roll printer paper and user's manual



### Printer paper for EUROprinter

5 rolls thermo printer paper





## 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 technology 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

Member of AFRISO-EURO-INDEX group

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Subject to change - v19002

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