

MRU -
over 30 years
of innovative
gas analysis

VARIOluxx

PORTABLE SYNGAS ANALYSER

for monitoring of syngases
at various industrial sites



SYNGAS MEASUREMENT

CO	... up to 100 %
CO ₂	... up to 100 %
CH ₄	... up to 100 %
H ₂	... up to 100 %
O ₂	... up to 25 %
N ₂	... calculated
MJ/m ³	... calculated
MJ/kg	... calculated

Suitable for semi-continuous measurements of "syngas" from:

- Steel industry: coke oven gas, blast furnace gas
- Biomass or coal catalytic oxidation (gasification)
- Waste gasification process, plasma gasification process
- Steam reforming of liquid hydrocarbons (refinery gas etc)
- Flare gases, research ... and others

Main features & configuration of instrument:

- Integrated, electrical gas cooler (Peltier) and automatic condensate draining pump
- Strong sample gas pump and external accessible particulate Teflon filter
- Automatic zeroing by means of 3-way solenoid valve, user programmable
- Internal sample flow monitoring with display and alarm
- Use of long-life EC cell for O₂, NDIR for CO/CO₂/CH₄ and TCD for H₂ measurement
- Linux OS and large baklit 840 x 480 colour display, with touch and swipe technique
- Data transfer to PC over LAN, WLAN, USB
- With universal analog input (AUX socket) for external transmitter connection
- Data memory for approx. 10.000 measurements, optional USB Stick for additional data storage
- Automatic interval measurement program
- Data-visualization and evaluation software MRU4win
- Universal power supply: mains 90-265 Vac /105 W
- Internal Li-Ion battery for 1 hours mains free operation
- Automatic selftest and control of soft- and hardware functions

VARIOluxx

Technical data

Gas measurement	Method	Meas. range (0...min / max)	Resolution	Accuracy **
O ₂ - oxygen (Long-life)	ECS	0 ... 25,00 %	0,01 %	0,2 %
O ₂ - oxygen	PM	0 ... 25,00 %	0,01 %	0,1 %
CO - carbon monoxide	NDIR	0 ... 10,00 % / 100,00 %	0,01 %	± 0,1 % or 2 % reading
CO ₂ - carbon dioxide	NDIR	0 ... 10,00 % / 100,00 %	0,01 %	± 0,3 % or 2 % reading
CH ₄ - methane	NDIR	0 ... 10,00 % / 100,00 %	0,01 %	± 0,2 % or 2 % reading
H ₂ - hydrogen	TCD	0 ... 10,00 % / 100,00 %	0,01 %	± 0,1 % or 2 % reading
H ₂ S - hydrogen sulphide	ECS	0 ... 2.000 ppm / 5.000 ppm	1 ppm	± 5 ppm or 5 % reading

CALCULATED COMPONENTS

Calorific value	0 ... 50 MJ/m ³ or MJ/kg
N ₂ balance	difference to 100 %

GENERAL TECHNICAL DATA

Operating system	LINUX
Display, operation	7" TFT (800 x 480 px) colour display, backlit, with touch and swipe operation
Data storage type	10.000 data sets internal and external USB-Stick
Interface to PC / Notebook	Ethernet, WLAN, RS485
Data transfer over cable / wireless	RS485, RJ45 (Ethernet), WLAN
Analog output 4 ... 20 mA	8 channel, user free configurable
Analog input 4 ... 20 mA	4 channel, user free configurable
Universal analog input - AUX -	0 ... 10 Vdc / 4 ... 20 mA / K-type / RS485
Mains free operation	Li-Ion , 48 Wh, for appr. 1 hr „stand-by“ (optional additional battery, 48 Wh Li-Ion)
Operating data	+5 ... +45 °C ; RH up to 95 % not condensing
Storage temperature	-20 ... +50 °C
Power supply	86 ... 265 Vac / 47 ... 63 Hz / 105 W (up to 600 W with heated sampling line)
Protection class	IP20 (or IP42 inside transport case)
Dimensions	(W x H x D) 430 x 290 x 150 mm
Weight	appr. 7,5 kg, for minimal configuration

** which ever is larger

Data subject to change without notice.

Options

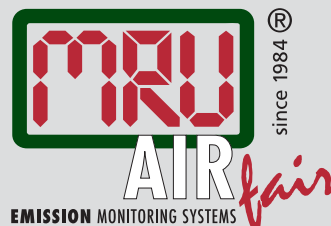


- Portable SYNGAS washing device



- Gas sampling probe with heated filter and heated gas sampling line for use at raw (dirty) syngas with heavy hydrocarbons or tar

MRU representative:



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