

- Analysis of O₂, CO, CO₂, CH₄, H₂
- NDIR technology for CO, CO₂ and CH₄
- TCD for H₂
- Arm Processor
- Touch Screen monitor
- Ethernet, Wi-fi and USB Remoting
- Low cost ownership
- Modbus, Profibus, Ethernet (optional)
- Data downloadable on USB Pen Drive
- Continuous Calculation Calorific value
- Automatic Autozero free selectable

The **MCA 100 SYN series** of gas analyzers by ETG it's the ideal solution for biogas measurement and industrial combustion applications because of their accuracy, stability, reliability, broad measurement range, and the variety of available form factors.

Unlike other analyzers, ETG MCA 100 non-dispersive infrared (NDIR) gas analyzers measure multiple gases in an instrument with a single optical path platform.

Single-gas analyzers are inadequate when using methane as a biofuel because the gas often contains large amounts of CO as a contaminant. ETG analyzers have the ability to measure CO₂, CO, and O₂ in addition to methane and therefore provide the optimal combination of gases for combustion optimization.

The enhanced optics and electronics of our NDIR analyzers have virtually eliminated zero drift after the initial warm up period. The temperature and pressure compensation eliminates the major causes of span drift in many NDIR instruments.

MCA 100 SYN MULTICOMPONENT ANALYZER FOR SYNGAS

Measurement Method	Gas	Resolution	Range	Accuracy	Precision	Time
NDIR (Non-Dispersive Infrared)	Methane (CH₄)	0.01%	0-100%	+/- 1% F.S.	+/- 0.8%	T ₉₀ & T ₁₀ <10 seconds
			201ppm-40%	+/- 1% rel		
			40-80%	+/- 1% rel		
NDIR (Non-Dispersive Infrared)	Carbon Dioxide (CO₂)	0.01%	0-50/0-100%	+/- 0.8 F.S.	+/- 0.7%	T ₉₀ & T ₁₀ <10 seconds
			0.00-16.00%	+/- 0.3% abs or		
				+/- 1.0% rel		
	Carbon Monoxide (CO)	0.01%	0.01-20.00%	+/- 1% rel	+/- 0.1% abs or +/- 1.0% rel	< 40 seconds from ambient to 0.15 O ₂
			40/100%			
Electro-chemical sensor	Oxygen (O₂)	0.01%	1.01-25.00%	+/- 0.1% abs or +/- 1.0% rel	+/- 0.1% abs or +/- 1.0% rel	< 40 seconds from ambient to 0.15 O ₂
Thermoconductibility	Hydrogen (H₂)	0.01%	0-10 %	+/- 0.5% abs or	+/- 0.5 abs or +/- 1.0% rel	T ₉₀ & T ₁₀ <20 seconds
			0-20 %	+/- 1.0% rel		
			0-50 %			
			0-100 %			

MCA 100 SYN MULTICOMPONENT ANALYZER FOR SYNGAS

SOFTWARE

ETG Biogas Rev 1.0.1.4

Measuring Display Instrument Status

Control Calibration

STATUS: OK

ETG Biogas - Measuring Display - Display - All Components

H2S
O2
CO2
CH4

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

CH4 0.00 % H2S 0.00 ppm
CO2 0.00 %
O2 21.42 %

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STATUS: OK

ETG Biogas - Measuring Display - Recorder - O2

21.425
21.42
21.415
21.41
21.405
21.4
21.395
21.39

10:05 AM 10:06 AM 10:07 AM 10:08 AM 10:09 AM 10:10 AM 10:11 AM

Status: M
O2: 21.410%

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STATUS: OK

ETG Biogas - Instrument Status - Meas. Value Outputs - CH4

Meas value outputs
CH4 Unit. Meas.: %

4 - 20 mA outputs

Set Range Start: 0
Set Range End: 100

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STATUS: OK

ETG Biogas - Calibration Settings - Concentration - Span 1

Gas	Date Last Calibration	Cylinder Value	Enable
CH4	1/18/2013 5:02:25 PM	59.970 %	Set ON Switch
CO2	1/18/2013 5:02:25 PM	40.030 %	Set ON Switch
O2	-	1.000 %	Set OFF Switch
H2S	-	100.000 ppm	Set OFF Switch

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STATUS: OK

ETG Biogas - Calibration - Manual - Zero 1

Read Value	Zero Value
CH4 0.001 %	0.000 %
CO2 0.000 %	0.000 %
O2 21.510 %	20.950 %
H2S 2.000 ppm	0.000 ppm

Zero Running...

Zero Calibration <<< Back

STATUS: OK

*software could be different for gas name and measurement range

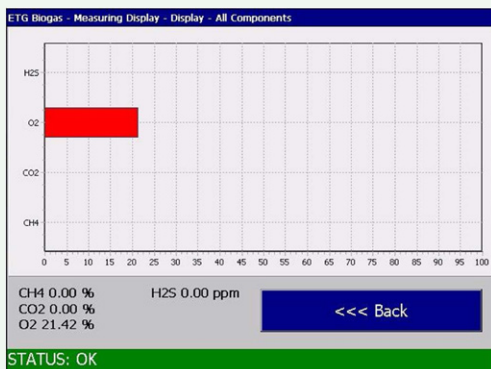
MCA 100 SYN MULTICOMPONENT ANALYZER FOR SYNGAS

SPECIFICATIONS

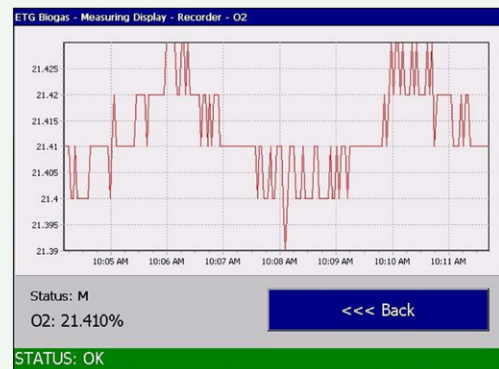
Response Time	Response times are specified at a sample flow rate of a 1 liter per minute through the MCA 100 sample cell
Data Refresh Rate	1 second
Warm-up Time	30 seconds ready, 3 minutes useable, 30 minutes to full performance
Operating Temperature	0 ° to 70 °C (32 ° to 158 °F)
Operating Humidity	To 95% RH (Non-condensing)
Operating Altitude	-300 to 3.000 m (-1.000 to 10.000 ft)
Communications	USB port (standard)
Case Protection	IP20
Monitor	Touch Screen 5.7" Resistive type
Calibration	Zero & span user selectable. Automatic calibration (optional)
External Electrical supply	from 100 to 240 Vac 47-63 Hz
Pneumatic connection	Rapid fittings 6.0 OD 4.0 ID
Mechanical dimensions	19" x 3HE x 50 cm
Weight	10 kg

USER INTERFACE OVERVIEW

Bargraph and digital value



Trend and digital value



All the ETG MCA 100 and 6500 series for Syngas have Remote Support and Remote Access

- File transfer
- Data monitoring by your PC, tablet and smartphone
- Software update

OTHER VERSION OF GAS ANALYZERS

- Wall mounting Biogas analyzer version model 6500
- 19" Rack Mounting Biogas analyzer model MCA 100 Bio
- Multisampling system for Biogas analysis

ETG RISORSE E TECNOLOGIA
Made in ITALY

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