## **CO / CO**2

# *Multi-gas Infra-red GFC analyzer Model MIR 2M*

Combustion Control & Engine Gas Emissions

### 2M Series Technology

SMD electronics Compactness Performance Low maintenance



Environnement s.A

- Engine exhaust gas monitoring (raw and CVS)
- Electro-filters
- Combustion plants
- Pre & post catalyst
- Research & Development
- Quality Assurance
- .....



ConTACT software for remote maintenance

### **Exclusive features:**

- Non Dispersive Infra Red Gas Correlation Filter (IR GFC) principle
- Short response time: < 2 seconds
- Simultaneous 2-channel monitoring (option)
- Graphic Liquid Crystal Display (LCD)
- Interactive menu driven software with enhanced speed display
- Real time calibration graph
- User adjustable response time and averaging time
- Built-in storage of 2 months 1/4 h average data (up to 1 year with the optional memory extension)
- Built-in double serial interface (RS 232/RS 422) for remote control
- Ethernet connection

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# **CO / CO**2

### Mutli-gas Infra Red GFC Analyzer - Model MIR 2M

### **Specifications:**

- Measurement ranges:
  - CO: 500 to 50,000 ppm
  - CO2: 100 to 250,000 ppm
  - O2: 0 to 25%v
- Zero drift: <1% full scale (F.S.) / 24 h
- Span drift: <1% F.S. / 24 h
- Linearity: <1% of reading from 20 to 100% F.S
- Response time (T10-90) : 2 sec
- Pre-heating time: < 15 min
- Weight: 8 kg (17 lbs)
- Dimensions: 545x483x133 mm (WxDxH)
- Housing: rack 19" / 3U
- Power supply: 80-230 VAC/50H-60Hz
- Power consumption: 60 W
- Operating temperature: +15°C to + 40°C
- Communication: RS 232 & TCP/IP, AK protocol

#### **Options & accessories:**

- CO UL version for low concentrations (0-50 ppm)
- Additional measured compounds:
  - O2 (paramagnetic cell)
  - SO2 (NDIR GFC)
  - N2O (NDIR GFC)
- Additional optical module for measurement on 2 streams simultaneously
- Solenoid valves block for calibration control from an external source
- Internal Zero air filter
- Internal pump
- 24V DC power supply
- ESTEL electronic board (1 or 2) with :
  - 4 independent analog inputs
  - 4 independent analog outputs
  - 4 remote control inputs
  - 6 dry contacts outputs
- Special version without LCD screen for use in engine gas cabinet

#### **Principle of operation:**

New CO/CO<sub>2</sub>/O<sub>2</sub> and EGR (CO<sub>2</sub>) MIR 2M analyzer with very short response time has been designed to match the needs for combustion plants or engine gas exhaust monitoring. It uses the universally well known Infra Red Gas Filter Correlation principle, mastered by Environnement S.A for nearly 30 years and incorporates the latest SMD electronics developments, for the highest metrological quality.

Thanks to a extremely modular design, the analyzer features enhanced ease of operation and maintenance. The new architecture of the double path optical bench, in association with a LINUX-based on-board management software, allow drastic reduction of response time.

Incidentally, it is no longer necessary to change the EPROM to get new software releases, since upgrades can be made remotely by Ethernet connection.

MIR 2M version with 2 measurement modules, used for simultaneous monitoring of 2 streams, is the ideal tool for the follow up of transient phenomena.





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