



# sensor-e®

## Gas Filter Correlation CO Analyzer (TML30M)

**0-5 ppm to 0-5000 ppm, user selectable**

**Gas Filter Wheel for CO specific measurement**

**2.5 meter path length for sensitivity**

**Microprocessor controlled for versatility**

**Multi-tasking software allows viewing test variables while operating**

**Continuous self checking with warning alarms**

**Ethernet and RS232 ports for remote operation**

**Digital status outputs provide instrument condition**

**Adaptive signal filtering optimizes response time**

**GFC wheel guaranteed against leaks for 5 years**

**Temperature and Pressure compensation**

**Internal data logging with 1 minute to 365 day multiple averages**

**Sensor-e.com remote operation software**



The sensor-e® CO (TML30M) measures carbon monoxide by comparing infrared energy absorbed by a sample to that absorbed by a reference gas according to the Beer-Lambert law. This is accomplished with a Gas Filter wheel which alternately allows a high energy light source to pass through a CO filled chamber and a chamber with no CO present. The light path then travels through the sample cell, which has a folded path sample cell.

The energy loss through the sample cell is compared with the zero reference signal provided by the gas filter to produce a signal proportional to concentration, with little effect from interfering gases within the sample. This design produces excellent zero and span stability and a high signal to noise ratio allowing extreme sensitivity. Multi-tasking software gives real time indication of numerous operating parameters and provides automatic alarms if diagnostic limits are exceeded.

Built-in-data acquisition and internal memory allows logging multiple parameters including average and instantaneous values, calibration data and operating parameters. Stored data can be retrieved via the Ethernet port or from the front panel.

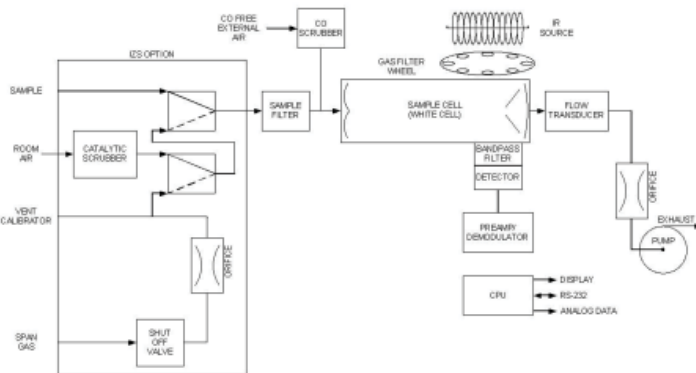
The sensor-e® CO features rugged construction and is designed to perform with minimum attention. In the event maintenance is required, modular construction makes service a simple operation.



**TELEDYNE INSTRUMENTS**  
*Monitor Labs*  
 A Teledyne Technologies Company

**sensor-e®**

**Gas Filter Correlation CO Analyzer (TML30M)**



**SPECIFICATIONS**

Model:	TML-30M
Ranges:	0-5 ppm to 0-5,000 ppm full scale, user selectable
Units:	Dual ranges and autoranging supported ppm, mg/m <sup>3</sup>
Zero Noise:	<0.1 ppm (RMS)
Span Noise:	<0.1 ppm (RMS)
Lower Detectable Limit (LDL):	0.2 ppm
Zero Drift:	<0.5 ppm/24 hours, <1ppm/7 days
Span Drift:	<0.5% of reading/24 hours, 1% reading/7 days
Lag Time:	10 seconds
Rise and Fall Time:	<60 seconds to 95%
Linearity:	1% of full scale
Precision:	1.0% of reading
Sample Flow Rate:	800 cc/min ± 10%
Operating Temperature Range:	5 - 40°C

Dimensions (HxWxD):	7" (178 mm) x 17" (432mm) x 23.5" (597 mm)
Weight:	40 lbs
Power:	100V, 115V, 200-240V, 50/60Hz
Analog Outputs:	Bi-polar, 10V, 5V, 1V, 100 mV, selectable
Recorder Offset:	±10%
Serial Port 1:	RS-232, DB-9M/RS485 optional
Serial Port 2:	Ethernet
Status (Digital):	8 outputs and 6 inputs (opto-isolated)
Current Output:	Optional 4-20 mA isolated outputs (select up to 3 channels)

NOTE: The values expressed above are in accordance with EPA definitions. All error specifications are based on constant conditions.

**sensor-e® CO Analyzers include:**

- \* Internal pump
- \* Auto ranging and dual ranges
- \* 5 micron filter
- \* 8 isolated digital status outputs
- \* 6 isolated digital inputs
- \* Multi-drop RS-232 connection
- \* Ethernet Port
- \* Sensor-e.com software

**Supported voltages:**

- 100V
- 220V - 240V
- 115V

**Supported frequencies:**

- 50Hz
- 60Hz

**Selectable output voltage:**

- 10V
- 5V
- 1V
- 100mV

**Additional Option:**

- RS-485 communications
- 4-20mA isolated outputs (specify up to three channels)
- O<sub>2</sub> sensor (0-25%)
- NDIR CO<sub>2</sub> sensor (0-20%)

(Note: Either O<sub>2</sub> or CO<sub>2</sub> can be added; select one)

**Accessories:**

- RS-232 Cable
- Expendables Kit
- Spare Parts Kit
- Rack Mount Slides



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