



TELEDYNE INSTRUMENTS
Monitor Labs
A Teledyne Technologies Company



sensor-e®

Gas Filter Correlation CO Analyzer (TML30U)

0-100 ppb to 0-100 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 (TML30U) Trace Level Carbon Monoxide analyzer has been designed specifically to address the challenges of background, low level CO monitoring. Using a Gas Filter Correlation Wheel, a high energy IR source alternately passes 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 measurement path of 14 meters. The energy loss through the sample cell is compared with the zero reference provided by the gas filter to produce a signal proportional to concentration.

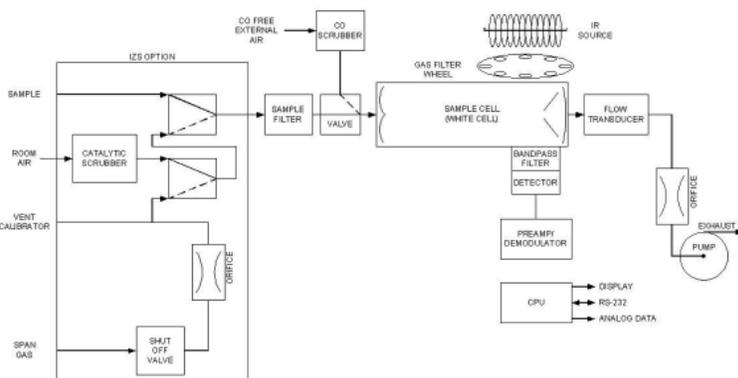
Based on our proven Model TML30, there are significant enhancements to optimize trace level CO measurement. The objective and field mirrors in the sample cell are gold plated to maximize the signal to noise performance of the Model 30U. The optical bench is enclosed in a temperature-controlled, convection heated oven which dramatically reduces instrument noise and temperature related drift. Additionally, the analyzer periodically monitors and corrects its baseline by routing from an external air source through a heated platinum CO scrubber and into the optical bench. This function called Auto Reference helps to correct instrument drift and eliminate any CO₂ interferences. Auto Reference is user-programmable to occur from once per hour to once per day as deemed necessary for sampling conditions.

Built-in data acquisition and internal memory allow logging multiple parameters including average and instantaneous values, calibration data and operating diagnostics. Stored data is easily retrieved through the serial port or optional Ethernet port via APIcom software or from the instrument front panel. The operator can then perform predictive maintenance and enhanced data analysis by tracking parameter trends.



sensor-e®

Gas Filter Correlation CO Analyzer (TML30U)



SPECIFICATIONS

Model:	TML-30U
Ranges:	0-100 ppb to 0-100 ppm full scale, user selectable
Units:	Dual ranges and autoranging supported ppb, ppm, $\mu\text{g}/\text{m}^3$, mg/m^3
Zero Noise:	<0.01 ppm (RMS)
Span Noise:	<0.5% of reading above 5 ppm (RMS)
Lower Detectable Limit (LDL):	0.02 ppm
Zero Drift:	<10 ppb/24 hours, 20 ppb/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:	1800 cc/min \pm 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:	\pm 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)
Approvals:	CE
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
- * 47 mm diameter particulate 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)

Accessories:

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



35 Inverness Drive East Englewood, CO 80112
 Phone: 303-792-3300 Fax: 303-799-4853
 tml_sales@teledyne.com www.teledyne-ml.com

Teledyne Monitor Labs, Inc. reserves the right to make changes in construction, design, specifications and/or prices without prior notice.