

The TunnelTech 500 is an advanced technology analyzer which gives complete flexibility in the choice of measurement options while delivering superb accuracy and reliability at a very competitive price.

The **TunnelTech 500** Air Quality Monitor, is an essential part of any road or rail tunnel safety system. Firstly, it monitors the atmosphere within the tunnel and ensures that the tunnel ventilation system provides sufficient clean air to protect tunnel user's health and for drivers to clearly see the road ahead.

The **TunnelTech 500** analyzer uses electrochemical cell technology to determine CO, NO & NO₂ concentrations. As there are no moving parts, reliability is high and maintenance requirements are low. Data is connected via a RS485 serial port delivering a bi-directional Modbus interface to a tunnel SCADA system or optional CODEL TunnelTech 710 remote display panel. Optional 4-20mA and contact outputs in the sensor head or the remote display panel provide flexibility of installation and reduced cabling costs. In addition, IP65 rated enclosures are constructed to resist attack from aggressive gases, road salt and the effects of heat.

Features

- > Measure CO, NO & NO₂ in one compact sensor
- > Advanced electrochemical cell technology
- > High resolution measurement
- > Minimal maintenance requirements
- > Available in 316 Stainless Steel



APPLICATIONS:

- > Road Tunnels
- > Rail Tunnels

MONITORING SOLUTIONS

Complete source for all your Continuous Emissions Monitoring (CEMS) needs:

- > Both Dilution and Extraction CEMS systems
- > Data Acquisition Systems (DAS)
- > Flow Monitoring
- > Opacity Monitoring
- > Oxygen Monitoring Systems
- > Particulate (PM) Monitoring
- > Process Monitoring Systems

TunnelTech Software is supplied with all CODEL Tunnel Sensor's as standard for the purpose of commissioning and maintenance of the sensors. With simple installation and set-up routine to any Windows based laptop PC, the program takes only minutes to load and configure and comes with a comprehensive on-board help feature.

Description

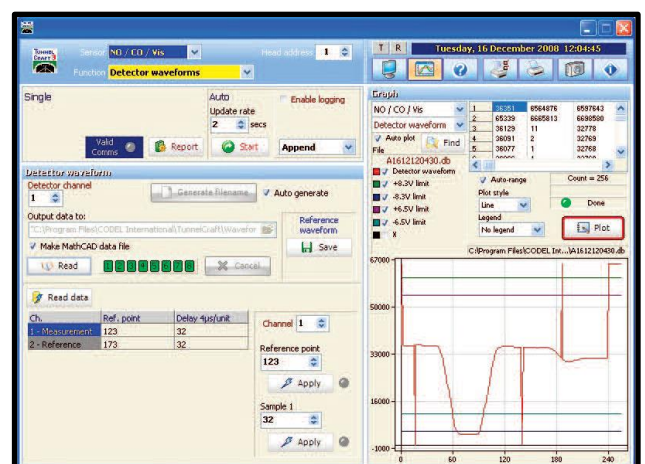
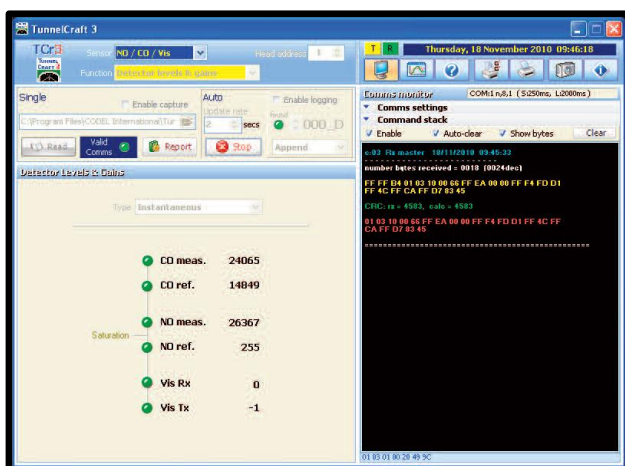
TunnelTech Software enables the sensor's complete data and control functions to be accessed via a laptop from the Station Control unit (SCU) using an RS485 cable supplied with the sensor.

Zero calibrations and span checking (using a CODEL sealed Check Cell or Flow Through Check Cell) can be initiated via the software after commissioning or a maintenance period. Altering the initial factory-set current and relay output configuration can be carried out with ease.

For maintenance, the software includes short-term logging and trending of diagnostic data for fault analysis.

Features

- > Easy installation and set-up
- > Will operate on any windows based operating system
- > User friendly alignment Mode to aid initial set-up and optical alignment
- > Allows sensor configuration settings to be adjusted
- > Fault diagnostic logging for sensor troubleshooting



Sensor Unit

Gas Species Options	Single or multi-gas measurements available: CO, NO ₂ & NO
Measuring units	ppm for CO & NO, ppb for NO ₂
Calibration	Automatic zero calibration - manual span check
Measurement Technique	Electrochemical Cell
Measurement range (typical)	0 – 300 ppm
Accuracy	+/- 2 ppm or 2% span
Resolution	+/- 1 ppm
Response Time	30 Seconds
Ambient Temperature	-4°F to 122°F
Power supply	24V DC, 30 VA from separate power supply
Construction	Corrosion resistant epoxy coated aluminum housing sealed to IP66 (Optional 316 Stainless Steel and 316 Stainless Steel TI for heads & Brackets)

Customer Interface

Serial Data	Bi-directional RS485 MODBUS Protocol
Display	32 Character alpha-numeric back-lit LCD
Keypad	4-key soft-touch entry

Optional Items

Power Supply	90/264V AC, 47-63Hz, (24V DC @ 2.5A)
Tunnel Display Unit	For local display of sensors outputs
Analog Outputs	2 or 4 x 4-20mA current outputs as standard, isolated, 500Ω load max, fully configurable
Relay Outputs	2 or 4 volt-free SPCO contacts, 50V, 1A max, configurable as alarm contacts
Span Check	NO, NO ₂ , CO span check using bottled audit gases

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