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Product Brochure

TunnelTech 900 Series
Visibilty, CO, NO, NO2, SO2 and Temp monitor

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TunnelTech 900

A low cost precision road & rail tunnel monitor using proven technology to provide accurate and rapid results.

ISO 9001:2015
Quality Certification

ISO 14001:2015
Environmental Certification

Monitoring Solutions

TunnelTech

www.codel.co.uk

Designed exclusively for road and rail tunnel applications building on years of experience and proven technology.

Uses the latest Electrochemical Cell Technology for the measurement of CO, NO, NO2, SO2 and backscatter technology for visibility.

The TunnelTech 900 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 users health and for drivers to clearly see the road ahead.

The TunnelTech 900 analyser electrochemical cell technology determines CO, NO, NO2, and SO2 concentrations, utilising backscatter technology for visibility measurements. Reliability levels are extremely high and maintenance requirements are very low.

Designed for its accuracy and ease of use the TunnelTech 900 single cell gas analyser is the perfect replacement for existing current multi-cell analysers. It's adaptable fitting feature allows the analyser to replace any type of existing multi-cell analyser with an easy installation process requiring minimal wiring.

Multi-cell gas analyser in a compact tunnel sensor

Class leading accuracy, repeatability and resolution using advanced electrochemical cell and backscatter technology.

Adaptable fitting feature allows for replacement of any type of existing multi-cell analyser.

Easy, quick release mounting arrangement for simple installation.

▶ No fog interference with heater as standard

▶ Visibility, smoke detection compact analyser

▶ Advanced electrochemical cell technology

▶ Easy installation with minimal wiring required

▶ Minimal maintenance requirements

▶ Integral temperature measurement

Technical Specification

Sensor Unit

Gas Species Options	Visibility (standard), CO, NO, NO2 & SO2 (optional)
Measuring units	m-1 (K factor) for visibility, ppm for CO, NO, NO2, SO2, °C for Temperature
Calibration	Factory calibrated, manual span check function.

Measurement	Visibility	CO	NO	NO2	SO2	Temp
Measurement Principal	Backscatter	EC	EC	EC	EC	EC
Measurement Range	0 to 0.080 m-1	0 to 500 ppm	0 do 30 ppm	0 to 20 ppm	0 to 50 ppm	-20 to +65 °C
Output Range	0 to 0.015 m-1	0 to 300 ppm	0 to 30 ppm	0 to 5 ppm	0 to 20 ppm	-20 to +65 °C
Detection Limit	0.0001 m-1	0.5 ppm	0.5 ppm	0.05 ppm	0.5 ppm	0.01 °C
Response Time	30 seconds	30 seconds	30 seconds	30 seconds	30 seconds	Min 1 Sec
Zero Drift	<+/- 0.001 m-1	<+/- 100 ppb	<+/- 50 ppb	<+/- 20 ppb	<+/- 20 ppb	-
Measurement Drift	< 10% Per Year	< 10% Per Year	< 20% Per Year	< 20% Per Year	< 15% Per Year	-
Accuracy	0.0001 m-1	0.5 ppm	0.5 ppm	0.05 ppm	0.5 ppm	+/- 0.01 °C
Resolution	0.0001 m-1	0.1 ppm	0.1 ppm	0.001 ppm	0.1 ppm	+/- 0.01 °C
Power supply	24V DC					
Ambient Conditions	-20°C to +60°C					
Construction	SS316L (Standard) Silver Brushed Metal, SS316Ti (Optional Brackets)					

Compliances

EMC	Designed to EN50270:2015
IK Code	IK07
Enclosure IP	Designed to IP69K
Tunnel Regulations Guideline	RABT 2006, RVS 09.02.22 2007 and EN50545

Customer Interface

Display	Monochrome LCD Display & Keypad
LED	Tricolour Status LED

Customer Interface

Analogue Outputs (Optional)	RS485 ModBUS RTU
Span Check	NO, NO2, CO, SO2 via calibration tool (Optional)
Serial Communication Port	RS485 ModBUS RTU
Screen Protector	Optional

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