

# CODEL

A Forbes Marshall Company

## Product Brochure

**TunnelTech 400 - Single gas monitor**  
CO, NO, NO2, SO2 & O2 Air Quality Monitor



A road & rail tunnel monitor using well-proven technology to provide accurate and rapid results.

ISO 9001:2015

Quality Certification

ISO 14001:2015

Environmental Certification

Monitoring Solutions



[www.codel.co.uk](http://www.codel.co.uk)

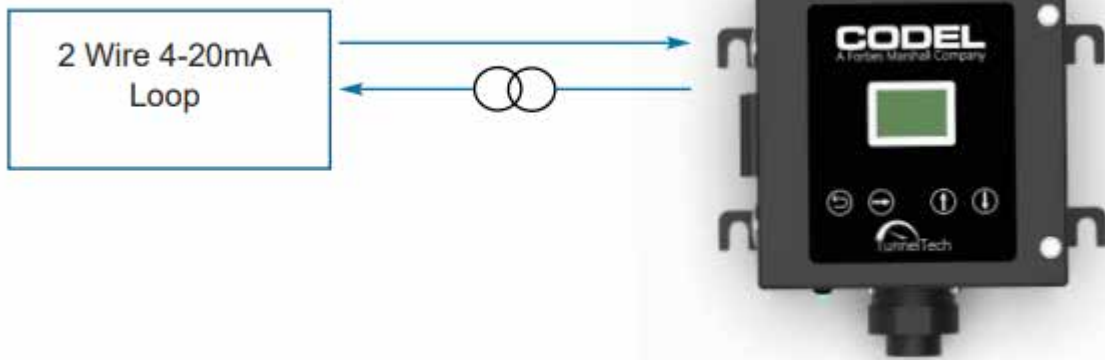
The TunnelTech 400 Air Quality Monitor, is an essential part of any road or rail tunnel safety system. Firstly, it monitors the atmosphere within the tunnel and ensures that the tunnel ventilation system provides sufficient clean air to protect tunnel users health and for drivers to clearly see the road ahead.

The TunnelTech 400 analyser electrochemical cell technology determines CO, NO NO<sub>2</sub>, SO<sub>2</sub> or O<sub>2</sub> concentrations. With no moving parts, reliability levels are extremely high and maintenance requirements are very low.

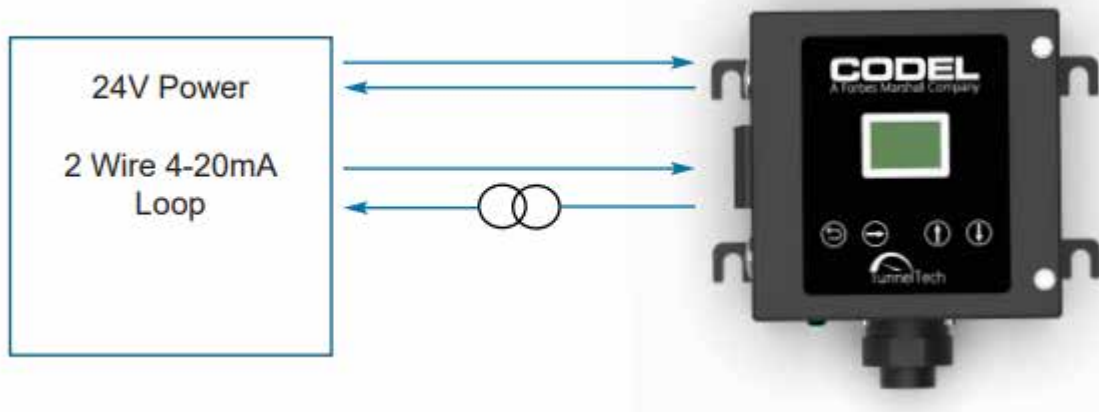
Designed for its accuracy and ease of use the TunnelTech 400 single cell gas analyser is the perfect replacement for existing current single cell analysers.

Its adaptable fitting feature allows the analyser to replace any type of existing single cell analyser with an easy installation process requiring minimal wiring.

## 2 Wire Variant



## 4 Wire Variant



- ▶ Fully configurable 4-20mA - Passive Output
- ▶ Advanced electrochemical cell technology
- ▶ Single species gas analyser housed in a compact stainless steel sensor

- ▶ Two and four wire versions available
- ▶ Easy installation with minimal wiring required
- ▶ Minimal maintenance requirements

## Technical Specification

### Sensor Unit

Gas Species Options      Single CO, NO, NO<sub>2</sub>, SO<sub>2</sub> & O<sub>2</sub>

Measuring units            ppm for CO, NO, NO<sub>2</sub>, SO<sub>2</sub> & % for O<sub>2</sub>

Averaging Time            0.5 to 30 Minutes

Measurement	<b>Carbon Monoxide (CO)</b>	<b>Nitric Oxide (NO)</b>	<b>Nitric Dioxide (NO<sub>2</sub>)</b>	<b>SO<sub>2</sub></b>	<b>O<sub>2</sub></b>
Measurement Technique	EC	EC	EC	EC	EC
Measurement Range (typical)	0 - 300ppm	0 - 30ppm	0 to 5 ppm	0 to 20 ppm	0 to 25%
Accuracy	0.5 ppm	0.5 ppm	0.1 ppm	0.5 ppm	+/- 0.1%
Resolution	< 1 Minute	< 1 Minute	0.001 ppm	0.1 ppm	+/- 0.1%
Response Time	30 seconds				
Detection Limit	0.5 ppm	0.5 ppm	0.1 ppm	0.5 ppm	0.1 %
Zero Drift	< +/- 100 ppb	< +/- 50 ppb	< +/- 20 ppb	< +/- 20ppb	< +/-0.1%
Measurement Drift	< 5% per year	< 10% per year	< 10% per year	< 8% Per Year	< 4% Per Year

Calibration Flowrate      11L/m

Power Supply                24V DC

Operating Temperature    -20oC to +60oC

Construction                SS316L (Standard) Silver / Brushed Metal ABS Plastic (Optional) Black Mat

### Compliances

EMC                            Designed to EN50270:2015

IK Code                        IK07 (SS316) and IK05 (ABS)

Enclosure IP                 Designed to IP66 (IP6K9 Optional)

### Customer Interface

Display                        Monochrome LCD Display & Keypad Membrane

LED                             Tricolour LED enabled on 4 wires version

Serial Communication Port    RS485 Serial Communication with configurable protocols (ModBUS RTU)

# CODEL

A Forbes Marshall Company

CODEL International LTD  
Unit 4  
Station Road  
Bakewell, Derbyshire  
DE45 1GE

Tel : +44 (0)1629 814351  
Fax : +44 (0)1629 566307  
Web : [www.codel.co.uk](http://www.codel.co.uk)  
email : [Sales@codel.co.uk](mailto:Sales@codel.co.uk)



Distributor

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