

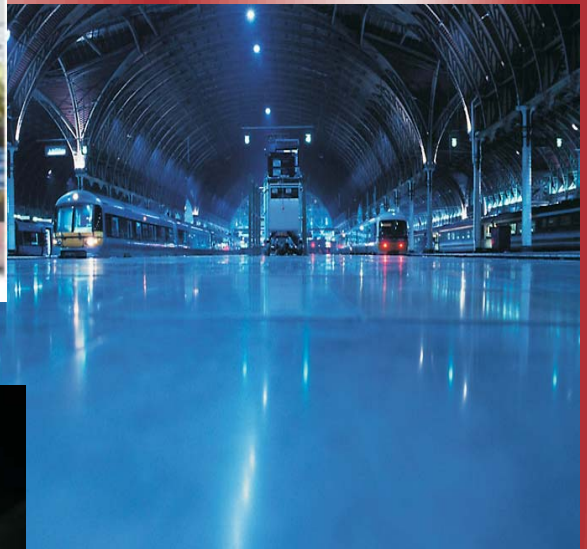


TUNNEL SENSORS



VCOM

Visibility and Carbon Monoxide Monitor



VCOM

Tunnel Air Quality Monitor



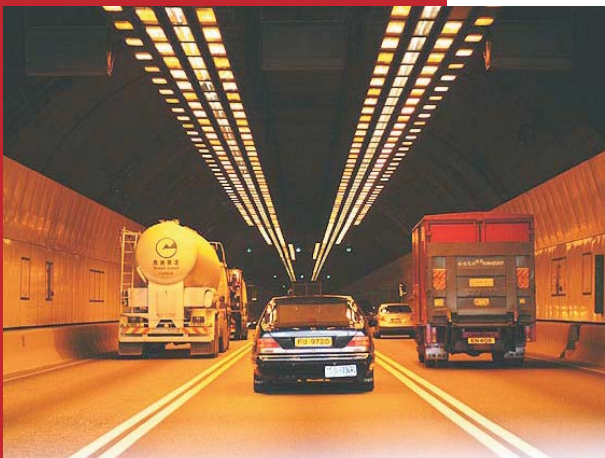
The VCOM, Visibility and Tunnel monitor, is the latest addition to the Tunnel Sensors range. Designed to be used in road tunnels to measure Visibility and Carbon Monoxide (CO), the VCOM represents the very latest generation of Tunnel Atmosphere monitor.



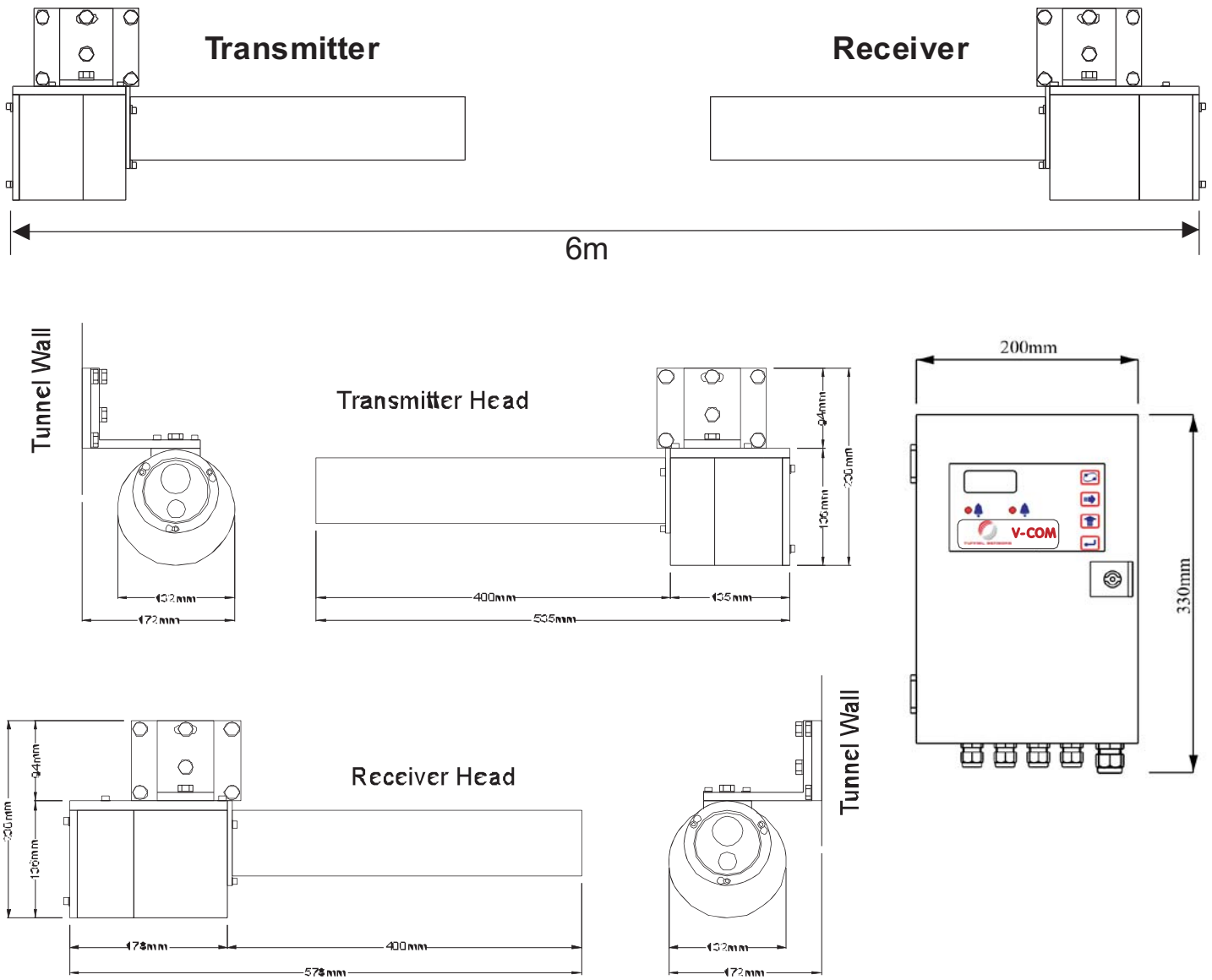
The analyser consists of a Transmitter and a Receiver unit mounted six metres apart; the Transmitter projects a red beam for monitoring visibility and an infra-red beam for CO. The two beams are processed by different optical benches within the Receiver, one for each measurement. All the signal processing is performed in the Receiver unit and then exported via an RS485 signal either to an optional control unit or analogue converter unit to create an analogue signal for re-transmission.

The VCOM may be set up and commissioned using a laptop PC thus removing the requirement for a control unit. Furthermore, detailed tests have shown that by retaining all the heat of the light sources in the Transmitter unit, the Receiver, where all the heat sensitive components reside, VCOM performs to a much higher standard with a much better signal strength and very low signal to noise ratio.

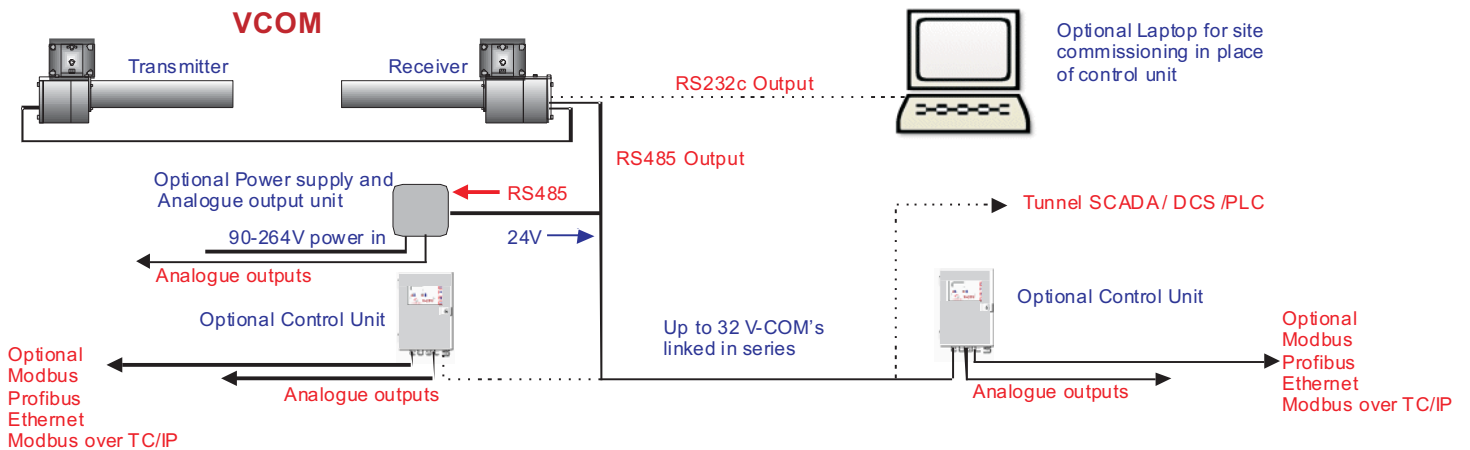
VCOM has been engineered to meet the requirements of tunnel operators; it has a low cost of ownership, minimal maintenance requirements and superb levels of accuracy. Because tunnels throughout the world have diverse requirements in terms of data presentation, VCOM has a very flexible output system that enables it to be configured for all tunnel requirements.



Drawings



System Options



VCOM Specifications



Carbon Monoxide: 0 - 300 ppm
Visibility: K Factor - $0.15 \times 10^{-3} \text{ m}^{-1}$
Meteorological Optical Range: 0 - 1500m
Opacity: 0 - 100%
Serial output : RS485
Optional serial output: **Modbus**
(from optional control **Modbus over TCP/IP unit**)
Ethernet
Profibus
Devicenet

Measurement path: 6 metres
Temperature range: -20°C to +40°C
Outputs: 4-20mA / 0 - 10V
(via psu or control unit)

Alarms: **High Visibility**
High CO
Maintenance

Power supply: 24Vdc
Response Time (t_{90}): 0 - 999 secs (programmable) **Weather protection:** **Sensors - IP65/NEMA 4X**
Control Unit - IP 55 / NEMA 4X

Display: 12.7mm 4 digit LCD
Keypad: 4 key push button

Tunnel Sensors was formed to produce instrumentation specifically for the tunnel market. Based at our factory near Brackley in the UK, we design, manufacture and carry out extensive research and development on a range of tunnel sensors.

Our corporate mission is simple, to provide high quality instrumentation coupled with excellent levels of customer care.

We market our products world-wide through a network of Distributors who are experienced in the tunnel market place and understand the unique requirements of tunnel operators.

Our product range includes the following:

- Visibility sensor
- Combined Visibility and Carbon Monoxide sensors
- Nitric Oxide sensor
- Airflow sensor



TUNNEL SENSORS

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Tunnels Sensors Ltd reserves the right to change the design and specification of any product without giving notice.