CODEL
A Forbes Marshall Company

Product Brochure

EnergyTech 202 - CO Sensor

Minimal maintenance requirements - cost-effective ownership

ISO 9001:2015
Quality Certification

ISO 14001:2015
Environmental Certification

Monitoring Solutions EnergyTech

www.codel.co.uk

The early detection of coal fires in coal handling systems on coal fired power stations is essential to prevent catastrophic damage to expensive plant and serious injury to personnel. The most reliable and accurate method of detecting coal fires or smouldering is to monitor the carbon monoxide levels within the coal handling plant areas such as silos and mills and to detect rapid increases in concentration.

The CODEL system samples the gas from the critical area through a steel sintered filter mounted in the wall of the chamber.

This removes the need for intrusive sampling probes which are prone to wear and are expensive to replace. The filter is back flushed with compressed air at regular intervals to ensure an uninterrupted flow of sample gas and to minimise maintenance.

The sampled gas requires no further pre-conditioning and is carried via a sample line and pump to the measurement chamber which is equipped with a compact gas analyser. The measurement chamber is temperature controlled to avoid a build-up of corrosive condensation.

The analyser can re-calibrate automatically to minimise drift and ensure on-going high performance. The system also includes the facility to be checked manually against bottled audit gases.

Features and Benefits

- Automated self cleaning filter design
- Automated blockage check
- Automated back-flushing of probe filter
- Automated sample flow rate check & blockage check
- Temperature controlled Measurement Cell for maximum accuracy and long life
- Compact powerful diaphragm pump for constant reliable sampling

Typical Applications

- Coal Silos
- Coal Bunkers
- Grinding Plants
- Coal Conveyers
- Coal Mills
- Woodworking and Sawmills
- Coal Bag Houses
- Construction Sites

Rugged & robust design developed or easy installation and maintenance

Rapid & accurate results

Technical Specification

Sensor Unit	
Operating Principle	Infrared Absorption
Span	Fully selectable in the range 0-10,000ppm
Response Time	30 Secs to T90
Gas Species	Carbon Monoxide (CO)
Accuracy	± 10ppm or ± - 2% of span, whichever is greatest
Resolution	5ppm
Zero and Span drift	± 10ppm or 2% of span
Linearity	± 10ppm or ± -2% of span whichever is greater
Repeatability	± 10ppm or ± -2% of span whichever is greater
Ambient Temperature	-20°C to +50°C
Construction	RAL7035 Structure powder coated mild steel sealed to IP66
Dimensions (mm)	H800 x W600 x D300
Compliances	
EMC	89/336/EEC directive compliant
Low Voltage	73/23/EEC directive compliant)
Customer Interface	
Analogue Outputs	2 x 4-20mA current outputs as standard, isolated, 500Ω load max, fully configurable from keypad (additional outputs available, see optional items below)
Contact Outputs	1 x volt-free SPCO contact, 50V, 1A max, for data valid signal)
Diagnostic Data	RS485 port for Codel diagnostic use
Display	32 Character alpha-numeric back-lit LCD
Keypad	4-key soft-touch entry
Services	
Power	110 - 240V AC @ Min 500W
Compressed Air	5-7 bar oil free clean compressed air – dry to -20°C Only required during filter back flush

CODEL

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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
email : Sales@codel.co.uk

Distributor

Monitoring Solutions

EnergyTech

www.codel.co.uk

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