

## Product Data Sheet

# Model V-CEM5000 Gas Velocity Monitor

### Non-Contact Gas Velocity Measurement

The V-CEM5000 provides non-contact measurement of gas velocity using a time-delay correlation of flue gas infrared emissions received by two detectors spaced a fixed distance apart.

Gas velocities ranging from 1m/sec to 50m/sec can be measured. The technique is suitable for all combustion gases including hot gases and gases with a high dust burden.

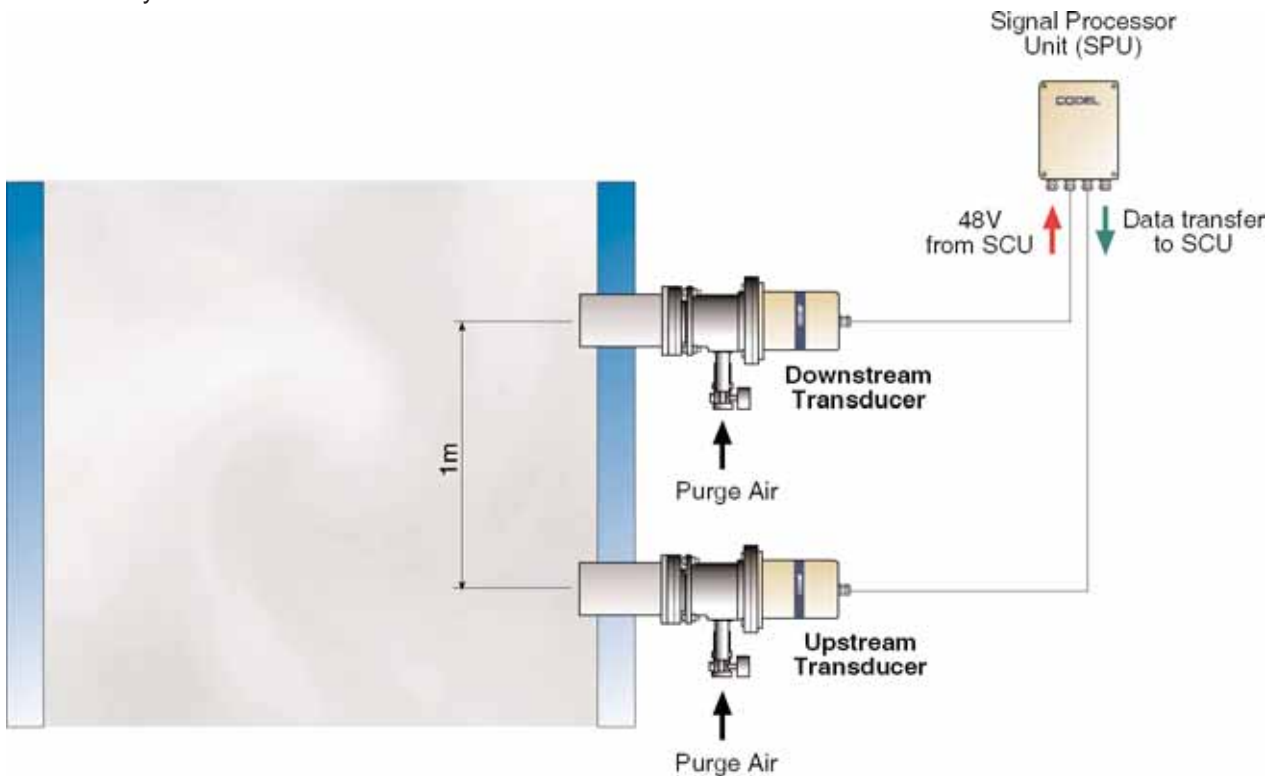
The monitor incorporates integral automatic procedures for span checking and interfaces directly with the SmartCEM Station local data bus so that all diagnostic and measurement data may be accessed by the SmartCEM Control Unit.

- non-contact measurement
- continuous real-time measurement
- suitable for hot & dirty gases
- no moving components
- auto low & high span check

### Measurements

Gas velocity in m/sec

Gas flow in m<sup>3</sup>/sec

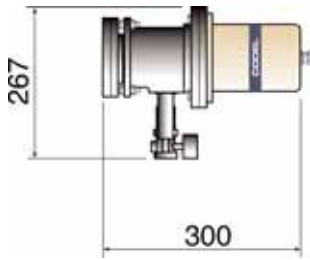


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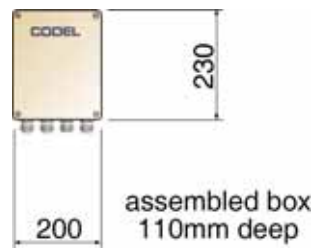
SmartCem



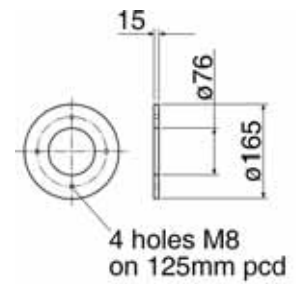
## Overall Unit Dimensions



**Transducer**  
(wt. 5kg)



**SPU**  
(wt. 4kg)



**Site Flange**

## Specification

Measurement - velocity - m/sec  
Units - flow - m<sup>3</sup>/sec

Detector - lithium tantalate pyroelectric

Span - fully selectable from 0 - 1  
up to 0 - 50m/sec

Averaging - selectable in the range  
10 secs to 1 hour

Accuracy - <2% of measurement (zero  
uncertainty)  
- <1% of measurement (linearity)

Flue Gas - 850°C max. 100°C min.  
Temperature

### General

Construction - epoxy-coated aluminium to IP67

Ambient - -20°C to +60°C  
Temperature

Power - 48V DC, 10VA from SCU

Air Purge - compressed air, 1 litre/sec @ 1bar

### Compliances

EMC - 89/336/EEC directive compliant

Low Voltage - 73/23/EEC directive compliant

SmartCem

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