

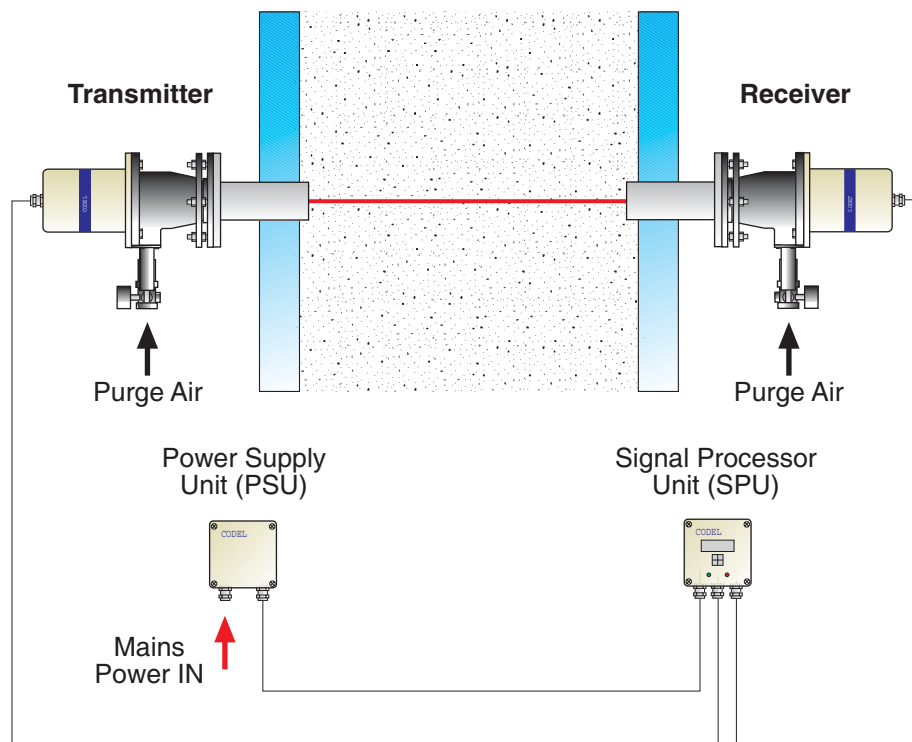
# Model D-CEM1000/1001 Opacity Monitor

## Single Pass Transmissometer

The D-CEM1000/1001 Opacity Monitors consist of a visible light transmitter and receiver arrangement with digital data processing in a local display unit. The monitors can display data in either opacity, extinction or dust density in  $\text{mg}/\text{m}^3$  or normalised dust density in  $\text{mg}/\text{Nm}^3$ .

The D-CEM1001 possesses four analogue inputs for normalisation data; temperature, oxygen, pressure and water vapour.

- simple installation - high reliability - very low maintenance
- proven technology meets legislative requirements
- data in % opacity,  $\text{mg}/\text{m}^3$ ,  $\text{mg}/\text{Nm}^3$  dust
- lens contamination minimised by high-efficiency air purges

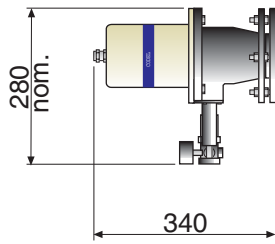


Total Solutions - Total Confidence

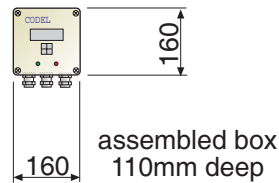
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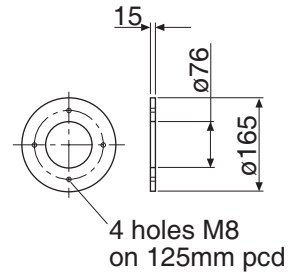
## Overall Unit Dimensions



**Transceiver**  
(wt. 5.5kg)



**SPU/PSU**  
(wt. 3kg)



**Site Flange**

## Specification

### Measurements

Operating Principle	- single pass transmissometer
Light Source	- modulated high-intensity LED @ 637nm wavelength
Span	- fully selectable in % opacity, extinction, mg/m <sup>3</sup> & mg/Nm <sup>3</sup>
Averaging	- 4 rolling averages selectable from 10 secs to 30 days
Accuracy	- ±0.2% opacity
Drift	- <1% opacity per month
Resolution	- 0.1% opacity
Optical Path Length	- 0.5 - 15m

### Compliances

EMC	- 89/336/EEC directive compliant
Low Voltage	- 73/23/EEC directive compliant

### Input & Outputs

Analogue Outputs	- 2 x 4-20mA current outputs, isolated, 500Ω load max., fully configurable from keypad
Logic Outputs	- 2 x volt-free SPCO contacts, 50V, 1A max., configurable as alarm contacts - 1 x volt-free SPCO contact, 50V, 1A max. for data valid
Inputs (D-CEM1001 only)	- 4 x 4-20mA inputs for normalisation data - temperature, oxygen, pressure & water vapour

### General

Display	- 32-character alpha-numeric back-lit LCD
Keypad	- 4-key soft-touch entry
Construction	- epoxy-coated aluminium to IP67
Ambient Temperature	- -20°C to +70°C
Power	- 76V to 265V AC @ 50/60Hz, 20VA
Air Purge	- compressed air, 1 litre/sec @ 1bar
Options	- heated flanges to prevent condensation on lenses

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