

**In-situ, low cost, low maintenance analyzer for continuous process and emissions monitoring providing accurate and reliable measurements.**

The **GCEM40** series is the latest generation of in-situ monitors. Extensive development, knowledge and practical experience have been utilized to produce this advanced technology gas analyzer which gives complete flexibility of use on process applications while delivering superb accuracy and repeatability at a very competitive price. The analyzer uses a field-proven in-situ 316 stainless steel probe designed for the harshest stack conditions to measure directly in the flue stream. The design of the probe enables accurate measurements to be made even in very high dust level processes exceeding several grams/m<sup>3</sup>.

The **GCEM40** Series can be configured with different probe sizes to suit difficult applications. All models are fitted with a probe mounted temperature sensor. Pressure, CO<sub>2</sub> and H<sub>2</sub>O can be measured as an additional option to provide fully normalized data. Designed for use primarily on combustion processes, the GCEM40 series measures key pollutants such as CO, NO, NO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CH<sub>4</sub>, CO<sub>2</sub> and H<sub>2</sub>O using infra-red spectroscopy to ensure that there is no cross sensitivity from other contaminants in the gas stream.

#### Features and Benefits:

Single or Multi-species infrared absorption analyzer  
SCR NO<sub>x</sub> feedback  
In-situ stainless steel probe measurement  
Gas temperature and pressure sensors, on-board normalization  
Analog and serial outputs



#### APPLICATIONS

- > All Combustion Processes
- > Process Monitoring for CO, CO<sub>2</sub>, CH<sub>4</sub>, H<sub>2</sub>O, HCl, NO, NO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>
- > SO<sub>2</sub> and HCl inlet monitoring on dry FGD's
- > SCR NO<sub>x</sub> Feedback

#### MONITORING SOLUTIONS

Complete source for all your Continuous Emissions Monitoring (CEMS) needs:

- > Both Dilution and Extraction CEMS systems
- > Data Acquisition Systems (DAS)
- > Flow Monitoring
- > Opacity Monitoring
- > Oxygen Monitoring Systems
- > Particulate (PM) Monitoring
- > Process Monitoring Systems

### Sensor Unit

<b>Operating Principle</b>	NDIR gas filter correlation
<b>Span</b>	0 to 3000 ppm (CO, NO, SO <sub>2</sub> ) 0 to 25% (CO <sub>2</sub> , H <sub>2</sub> O)
<b>Certified Ranges</b>	0-500 ppm, 0-1000 ppm for CO, NO & SO <sub>2</sub>
<b>Response Time</b>	<200 secs
<b>Accuracy</b>	+/-2 ppm or +/-2% of span
<b>Resolution</b>	1 ppm
<b>Calibration</b>	Zero - automatic every 24 hours span - manually on demand
<b>Probe Length</b>	1m , 2m and 2.2m (NEW low weight 1m)
<b>Low Voltage</b>	61010-1 (Edition 3)
<b>Analogue Output</b>	5 x 4 to 20mA isolated, 500Ω load, fully configurable from keypad.
<b>Logic Output</b>	5 x volt-free SPCO contacts, 50V, 1A max, configurable as alarms - 1 x volt-free
<b>Serial Output</b>	RS485 Modbus configured
<b>DDU Display</b>	32-character alpha-numeric back lit LCD
<b>Keypad</b>	4-key soft-touch entry
<b>Construction</b>	Probe - 316L stainless steel; Head & DDU - Powder coated aluminum (IP66)
<b>Ambient Temperature</b>	-4 to 122°F Certified -4 to 131°F On request
<b>Flue Gas Temperature</b>	Up to 572°F (standard probe). Up to 752°F (high-temperature probe)
<b>Power Requirements</b>	24 V DC @ 15 A
<b>Compressed Air Requirements</b>	Dry & Oil free, 20 liter/min @ 4 bar for calibration and purging; 2 liter/min @ 4 bar normal operation

### Options

<b>Dust Shield</b>	For applications with over 400 mg of constant dust Loading
<b>Power Supply</b>	110/220 VAC, 50 Hz +/- 10%, 400 VA to 24 V DC @ 15 A

### OFFICES

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