

Passionate about Particulate



## PCME STACK 710

OPACITY

INSIDE

Opacity

Measurement

System

PS-1 US EPA  
compliant CEM



- Meets or exceeds US EPA requirements for 40CFR60 Sections 13, 17 and App. B PS-1
- Outstanding reliability with no continuously moving parts
- Unique measurement technology incorporating “no drift” zero check
- Automatic in-situ zero and span checking with built-in calibration audit



Certificate No: 9389



# product features

## Advanced Features and Benefits

### Easy Auditing

Periodic performance verification could not be simpler. The built-in audit jig accepts standard optical filters, and the zero alignment can be confirmed without removing the instrument from the stack.

### Icon Driven Set-up

The instrument can be set-up and configured via the integral control panel. Using an icon driven menu system assists a language-free and intuitive user interface.

### Dust Density

Dust density monitors must be calibrated by comparison with an Isokinetic sample test, as in PS-11.

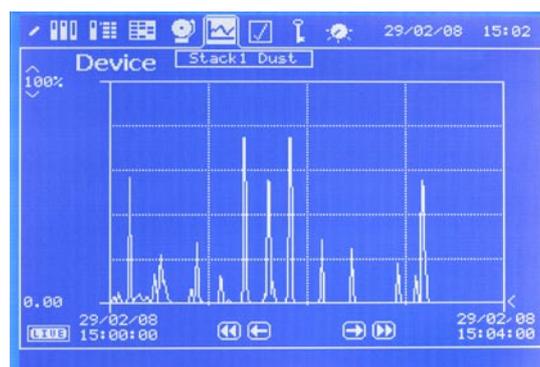
### Automatic Self-checks

The **PCME STACK 710** has fully automatic zero and drift compensation system. An automatic span check mechanism confirms the instrument calibration at user-defined intervals.



## System Layout

- Displays instantaneous and average emissions (bargraph, text and on line graph).
- Customisable 'channel grouping' screen for displaying related data e.g. dust, velocity, O<sub>2</sub>.
- Icon and multilingual user interface.
- Monitors data from external sensors for normalisation and centralised analysis e.g. velocity, O<sub>2</sub>, Temp etc.
- Status screen for concise display of alarm conditions.
- Controls up to 16 PCME sensors provided suitable power supplied (MultiController option only).
- Dual alarm levels with alarm delays.
- Full on instrument review of three simultaneous memories (Long Term, Short Term and Pulse).
- Alarm log for instrument and emission alarms.
- Windows compatible software to download to PC for reporting (option).
- Multiple calibration factors.
- Large back-lit graphical display (320 x 240 pixels) for easy interpretation of graphical data.
- Multi-channel bargraph shows emissions relative to alarms.
- Permits easy comparison between emission sources.
- Password protected.



Screen showing EP rapping

## Optical Specifications

Measuring	Specification
Technique	Double pass transmissometry
Operating Wavelength	525 +/- 20nm
Light Source	Pulsed High Intensity LED
Range	Opacity 0-10% to 0-100% Optical Density 0-0.1 to 0-3.0
Accuracy	+/- 2% Opacity
Drift (long term)	<0.3% opacity/month
Thermal Stability	<0.3% opacity/22°C ambient change
Angle of Projection	<2°
Angle of View	<2°
Response Time	≤10s to 95%
Averaging	Selectable from 10s to 24hr (1s increment)
Pathlength	1 to 10m (must be specified at time of ordering)
Calibration	Automatic zero and upscale check (Selectable period 1 to 24hr in 1hr increments)
Zero Correction	Automatic correction for zero drift
Fail Safe Shutter	Optional assembly

# specifications

## Dimensions

	Transceiver/Retro-reflector Sensor	Interface Module (optional) Single Channel	MultiController (optional) MultiChannel
Number of Channels		1	1-16
Display	128 x 64 pixel reflective backlit LCD	Backlit LCD providing graphical and text display	Backlit LCD providing graphical and text display
User Screens	Set-up/results	Set-up/Trends/Memory/Alarm Log/Bargraph	Set-up/Trends/Memory/Alarm Log/ Multiple Bargraph/System Overview
Keypad	4 keys for data input	Menu driven 5 keypad	Menu driven 5 keypad
Indicators	Power, System OK, Alarm, Calibration	Power, system status, alarms plus graphical backlit display	Power, system status, alarms plus graphical backlit display
Enclosure	Cast Aluminium, epoxy paint coated	Cast Aluminium, epoxy paint coated	Cast Aluminium, epoxy paint coated
Operating Temperature	-20 to +55°C (-4 to +131°F)	-20 to +55°C (-4 to +131°F)	-20 to +55°C (-4 to +131°F)
Maximum Flue Gas Temperature	600°C/1000°F	n/a	n/a
Maximum Flange Temperature	200°C/400°F	n/a	n/a
Compliance	EN 61010-2	EN 61010-2	EN 61010-2
EMC	EN50 081 & EN50 082	EN50 081 & EN50 082	EN50 081 & EN50 082
Sealing	IP65/NEMA4X	IP65	IP65
Modbus Interface	RS485, Opacity, Optical Density and Status information available	1 x RS232/485 Modbus	1 x RS232/485 Modbus, Ethernet ready
Outputs	Isolated 4 to 20mA Configurable as Opacity, Optical Density 3 x Relay: System OK Calibration Alarm	1 x Isolated 4 to 20mA Configurable as Opacity, Optical Density 2 x Relay RS232/485 (Modbus)	4 x Isolated 4 to 20mA Configurable as Opacity, Optical Density 4 x Relay RS232/485 (Modbus)
Relay Rating	1A @ 24Vdc	1A @ 30Vdc	1A @ 30Vdc
Electrical: Power Supply Current Consumption	24Vdc nominal (18 to 30Vdc) 0.3A nominal (3A start-up)	90-260 VAC (50/60 Hz) 0.25A	90-260 VAC (50/60 Hz) 0.25A
Dimensions (mm): Transceiver Retro-reflector	191 W x 201 H x 413 D 191 W x 201 H x 237 D	123 W x 220 H x 80 D	160 W x 260 H x 90 D
Weight: Transceiver Retro-reflector	6kg 3kg	1.6kg	3.0kg
Stack Connection	1 1/2" 150 lb ANSI	n/a	n/a
Air Purge Blower	Required for correct operation. Consult PCME	n/a	n/a
Calibration Filters	Optional	n/a	n/a

## About PCME Ltd

As a progressive environmental Company, PCME specialises in particulate measurement for industrial processes. With a worldwide reputation for reliability, innovation and technological excellence, the Company produces equipment for concentration and mass monitoring for regulatory, environmental and process control requirements. A dedicated team of qualified application and sales engineers is always on hand and should be consulted in the selection and usage of the most suitable equipment for any particulate application.

[www.pcme.co.uk](http://www.pcme.co.uk)

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