



**SCINTILLA SC600
DYNAMIC OPACITY
DUST EMISSIONS MONITORING SYSTEM**



SC600 DYNAMIC OPACITY SCINTILLATION DUST MONITOR



Offering significant reliability in overcoming lens fouling, it is suitable for environmental monitoring and process control.

A microprocessor based data logger is equipped with.

EFFECTIVE FOULING LENS AND RELIABILITY

ENVIRONMENTAL MONITORING AND PROCESS CONTROL APPLICATIONS

MICROPROCESSOR-BASED DATA LOGGER



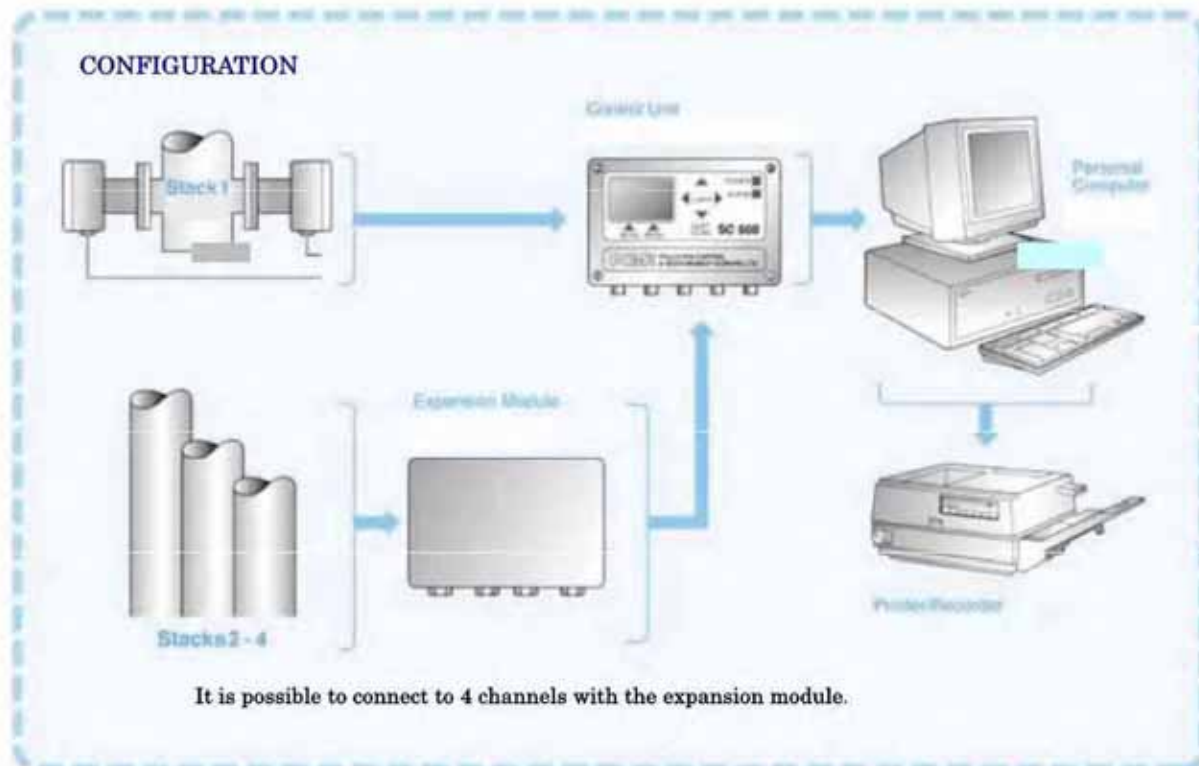


SCINTILLA SC600 DUST EMISSIONS MONITORING SYSTEM

SC600 is suitable for continuous monitoring (to read in mg/m^3) of particulate emissions from ducts in a large diameter and flue stacks. An advanced dynamic sensing technique is employed to offer significant reliability and resolution advantages over traditional Opacity monitors.

SC600 conforms to the strict standards of British environmental laws (EPA1990).

In applying an optional software, you can process information of inbuilt data-logger.



■ STANDARD SPECIFICATION

Power	: 100/200VAC (switchable) 50/60Hz 10VA	Displayed units	: mg/m^3 , g/m^3 , mg/Nm^3 , user defining units
Output	: DC4-20mA (isolated, max 250 Ω) Serial RS-232	Enclosure	: Control unit IP65 ADC (epoxy coating) Expansion module IP65 ADC (epoxy coating)
Input	: Digital Plant running signal Digital Bag cleaning reference pulse External Devices 0-10V or DC4-20mA Temp.(option) Linear 4-20mA (0-1000°C) Normalization for Temperature O ₂ input(option) Linear 4-20mA (0-25% O ₂) Normalization for Oxygen	Sensor	: IP65 ADC (epoxy coating)
Detection point	: Max 4 points (expand up to 3 with expansion module)	Display	: LCD
Resolution	: 0.2 mg/m^3	Light source	: LED
Dust concentration	: 2.0 – 1000 mg/m^3	Temperature range	: Control -25 – 55°C Sensor -25 – 250°C (standard) -25 – 400°C (medium/high temperature) -25 – 800°C (high temperature)
Response time	: below 10seconds (selectable) Min. 2 seconds	Duct diameter	: 0.3 – 10m
Self checks	: Automatic zero, span and lights checks	Sensor Head material	: SUS304/ SUS316
Average memory	: EPA memory 16000 data points (600days at 1 hour store rate) 24 hour memory at 30 second store rate	Flange sizes	: JIS 10K50A FF (option)
		Air purge	: Airline connection 1/4" BSP Air consumption up to 0.5 litres/second per head
		Cable	: 8-core screened 10 metres standard 150 metres max

The SC600 can be used for an extended period of time with simple maintenance. In addition to the intrinsic benefits of Dynamic Opacity technology, advanced techniques are used to reduce or eliminate zero and span drift and stray light.

■ FEATURES

- 1) Unaffected by lens fouling or misalignment.
- 2) Its high resolution ($0.2\text{mg}/\text{m}^3$) ensures the high concentration measurement.
- 2) The compensation of Zero and Span Drift secures the stable output.
- 4) Unaffected by change in gasflow.
- 5) It offers significant reliability with inbuilt self-checks.
- 6) Any maintenance is scarcely required.

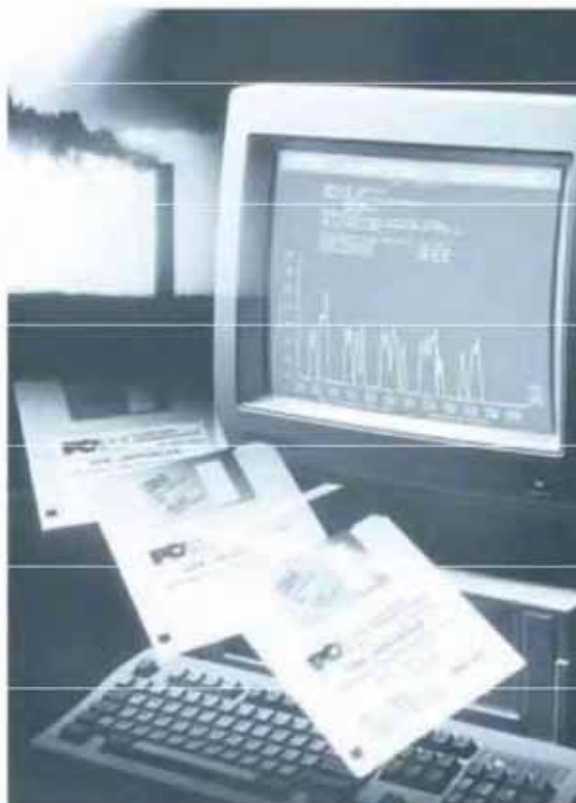
ZERO AND SPAN DRIFT

The ratio of the signal scintillation to absolute light intensity is measured which compensates for any effects of lens build-up, misalignment or light source ageing. Measurement in scintillation mode is unaffected until lens fouling is greater than 90%. If the light intensity is reduced by a contaminant coating on the lenses, the variation in intensity is affected in the same proportion, giving no net effect.

STRAY LIGHT

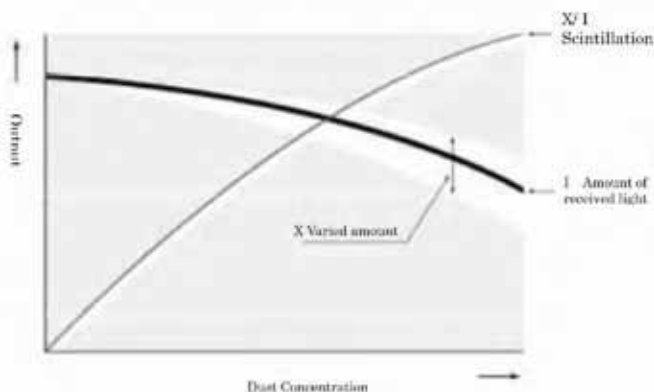
A modulated light beam enables the detector to eliminate stray and ambient light effects.

The SC600 monitors the variation in the amount of received light from the light beam transmitted across the stack. It works on the principle of optical scintillation on which it calculates the dynamic response (ratio of light variation to light intensity or obscuration). It has the added benefit that the measurement is unaffected by lens contamination in that when the lens fouling decreases the amount of received light, scintillation also decreases proportionally to the varied light amount. In calibrating the discrete values and actual measurements through sampling, it may read in mg/m^3 . If necessary, you can also use this in the conventional Opacity mode as an option.



▲ Software for Data processing (Option, DOS/V)

Lens condition	Light intensity	Validation	Scintillation
100% transmission	1	X	X/I
90% transmission	$0.9I$	$0.9X$	$0.9X / 0.9I = X / I$
50% transmission	$0.5I$	$0.5X$	$0.5X / 0.5I = X / I$



APPLICATIONS

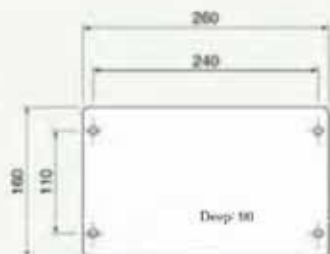
LOCATION	APPLICATION	INDUSTRY
STACK	Air Pollution Prevention	Chemical, Plastic
DUCT	Environmental compliance	Petrochemical, Paper
BAGFILTER	Filter Maintenance	Pharmaceutical
CYCLONE	Bag Diagnostics	Ceramic
COMBUSTION FURNACE CUPOLA	Process Control	Foundry, Water & Sewerage
	Raise combustion efficiency	Iron Making, Waste Disposal
	Detect operational failure	Nonferrous Metal
		Tobacco
		Mining, Electronic Parts
		Power, Food
		Gas, Feedstuff

PRODUCTS TO BE MEASURED

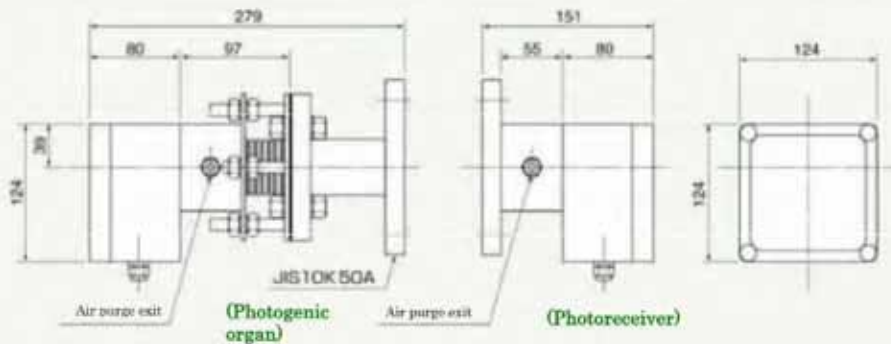
Zinc Grinding Dust	Granule Dust	Chocolate Dust
Aluminum Dust of Blast Furnace	Lime Dust	Beet Dust
Fume of Iron Blast Furnace	Gypsum Powder	Sand-blast Dust
White Zinc Powder	Titanium Dioxide	Cement Dust
Aluminum Oxide Dust	Shotblast Dust	Nickel Dust
Tobacco Dust	Cosmetic Powder	Inorganic Compound
Cornflakes Dust	Powder Soap	Alkaline Resin
Boiler Flue Gas	Agrichemical Dust	Colorant Dust
Organic Compound Dust	Fertilizer	Asphalt Dust
Carbon Black Dust	Enzymic Powder	Asbestos Dust
Oil Combustion Gas	Grain Dust	Powder Milk
Crushed-stone Dust	Phosphoric Dust	Carbon Powder
	Sugar	Coke Powder
	Powder Salt	Feedstuff

DRAWING OF OUTLINE DIMENSIONS

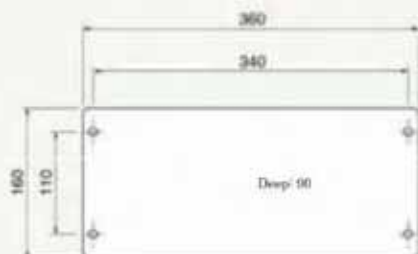
SC600 Control Unit



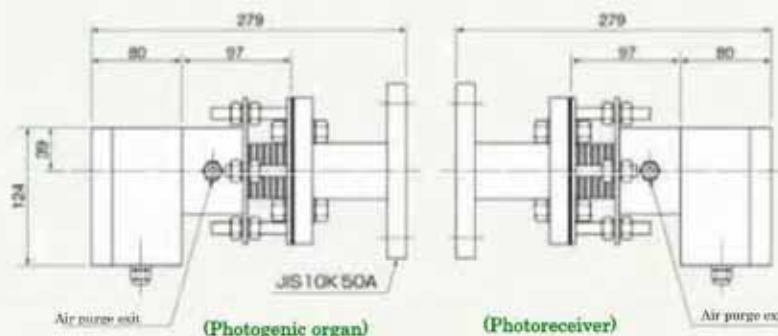
Standard Temperature Sensor



Expansion Module



High Temperature Sensor



Specifications and drawings of this catalog are subject to change without notice for improvement.

製造元

PCME Ltd. UK

PCME products are the subject of worldwide patents

■営業品目 HANDLING ITEMS

- | | |
|------------------|----------------|
| ① 回転式レベルスイッチ | ⑫ フロースイッチ |
| ② 振動式レベルスイッチ | ⑬ 電極式レベルスイッチ |
| ③ 音波式レベルスイッチ | ⑭ フロートスイッチ |
| ④ 静電容量式レベルスイッチ | ⑮ フロート式レベルメータ |
| ⑤ 静電容量式近接センサ | ⑯ 超音波式レベルメータ |
| ⑥ 静電容量式レベルメータ | ⑰ コンベア周辺機器 |
| ⑦ ダイアフラム式レベルスイッチ | ⑱ ダストモニタ |
| ⑧ チルトスイッチ | ⑲ レーザ式レベルメータ |
| ⑨ リーク式レベルスイッチ | ⑳ 電波式レベルメータ |
| ⑩ マイクロウェーブスイッチ | ㉑ 液体分析オンラインセンサ |
| ⑪ サウンディング式レベルメータ | ㉒ 液体超音波流量計 |

ご使用に際しては取扱説明書を必ずお読み下さい。

Please surely read the instruction manual when you operate instruments.

Nuclear Power Generation to Rice Milling

All-round Manufacturer of Level Controllers for Powder, Granules and Liquid

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