



**DUST ALERT 50
ELECTRODYNAMIC
DUST EMISSIONS MONITOR**



DA 50 CE MARKING



**INNOVATIVE MICROPROCESSOR BUILT-IN,
A WORLD LEADER IN CONTINUOUS DUST MONITORS
INTELLIGENT FILTER PERFORMANCE MONITOR FOR
DUST ARRESTMENT PLANT**

**UNIQUE ELECTRODYNAMIC MEASUREMENT PRINCIPLE COMBINED WITH
INNOVATIVE MICROPROCESSOR-BASED OPERATION
LEADING THE WORLD IN CONTINUOUS PARTICLE EMISSIONS MONITORING
INTELLIGENT FILTER PERFORMANCE MONITOR FOR DUST ARRESTMENT PLANT**





DA 50

ELECTRODYNAMIC DUST EMISSIONS MONITOR

Dustalert 50 continuously monitors and displays the relative emissions from Baghouses and other arrestment plant.

DA50 has many features which enable it to be specifically tailored to each customer's arrestment plan, taking into account different filter cleaning mechanisms and different processes. The sensing probe is connected by a standard multi-core cable to the control unit where the user interface is by a clear and simple touch pad control. All instrument parameters can be viewed on a digital display and the relative dust level is continuously displayed by a scalable bargraph as well as the digital display.

The microprocessor technology within the DA50 ensures reliable and flexible operation with internal electronic fault conditions quickly brought to the attention of the user.

DUSTALEART50 (DA50) SINGLE CHANNEL



ADVANTAGE OF TriboACE

It utilizes the unique measurement principle as opposed to the general Tribo ACE.

It may not be affected by dust build up on sensor.

Covered probe(option) provides reliable operation in humid and wet applications.

It may not be affected by velocity changes in Baghouses.

Lower detection level of $0.02\text{mg} / \text{m}^3$ has been proved.

'Quick-set' for baghouse, cyclones and dryers.

■ PRINCIPLES OF OPERATION

The DA50 utilises the unique 'TriboACE' measurement principle. When the sensing probe is installed in a duct or stack, particles in the air stream interact with it and induce charge movement in the probe. Distributions in the particle stream result in an a.c. response which is specifically measured to create a signal directly proportional to the concentrations of particles.

Unlike d.c. Triboelectric systems, the measurement principles relies mainly on induction which occurs when particles pass the probe. This has the added advantage that the instrument is not affected by particle buildup on the probe or changes in velocity. The TriboACE measurement system also enables the use of insulated probes especially needed for very humid and wet applications, surpassing performance of other Triboelectric systems in terms of extremely low dust concentrations.

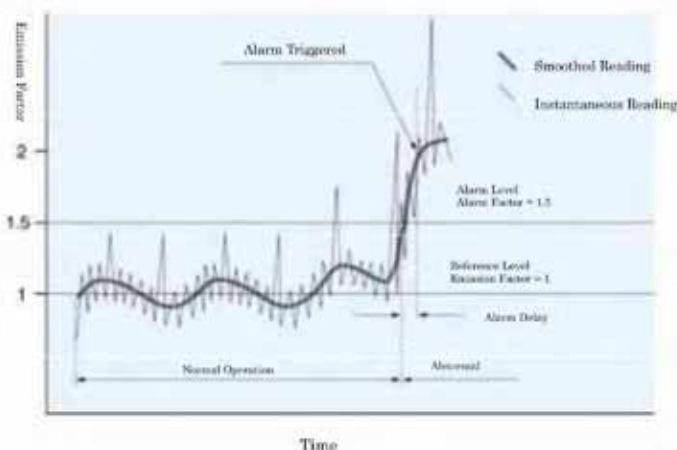


■ FEATURES

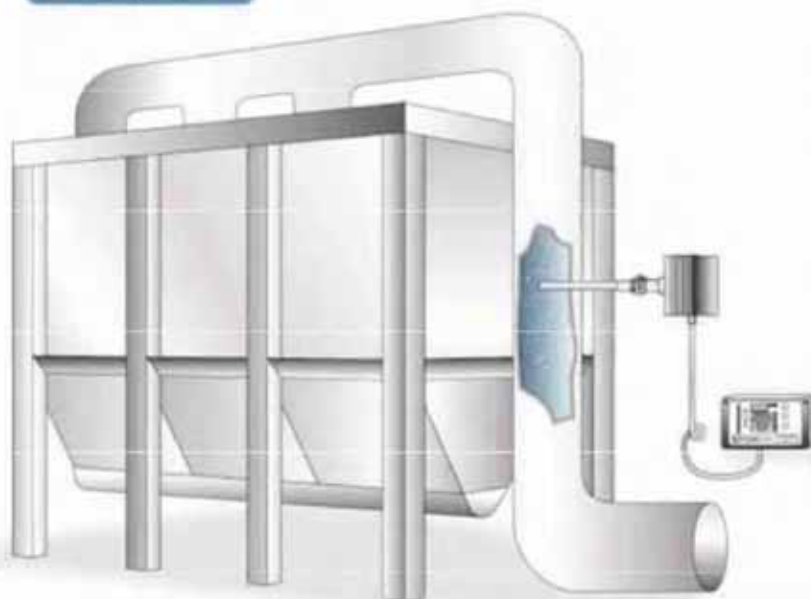
- Virtually maintenance-free.
- Unaffected by dust accumulation on sensor.
- Extremely sensitive – detects dust concentrations from below $0.02\text{mg} / \text{m}^3$ to over $1000\text{mg} / \text{m}^3$.
- Can be installed in ducts with diameters from 50mm to over 6 meters.
- Detects particles as small as $0.1 \mu\text{m}$.
- Intelligent probe's digital communication eliminates interference caused by plant noise.
- 4-20mA output proportional to dust emission level.
- Self-testing ensures reliable operation and valid results.
- Password protection prevents unauthorized access.
- Easy identification of alarms using error message display.
- Alarms can be initiated by even small increases in concentration.
- Simple installation and easy set-up procedures using microprocessor keypad —Features 'Quickset'.

MODE OF OPERATION

The trend analysis on the right shows emissions at the duct exit of a baghouse. DA50 builds in 24-hour memory, and in such a condition that the baghouse operates normally it averages the past data to set the average to '1'. In the normal operation, therefore, the controller's indication is on/around '1'. On the contrary, when the emission concentration increases due to unusual operation of the baghouse, the indication rises accordingly. To accommodate to the system or the size of the baghouse, you can choose Data smoothing settings, Alarm factor settings, or Alarm delay settings.



APPLICATIONS



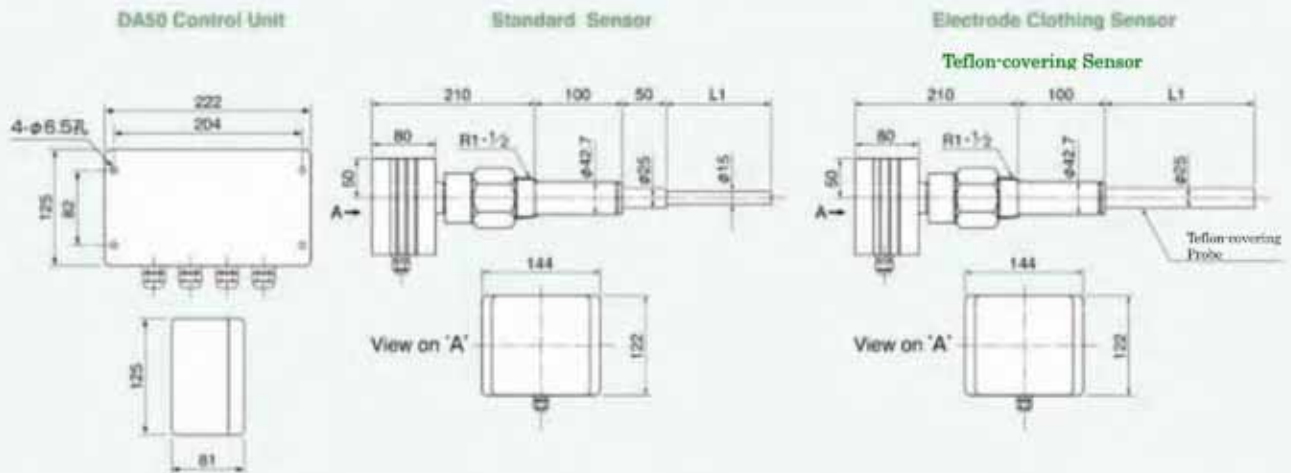
TYPICAL APPLICATIONS

- Animal-feed compounding
- Cement Manufacture
- Chemical processing
- Ferrous metals Industry
- Foundry/ Shotblasting
- Galvanizing
- Non-ferrous metals Industry
- Pharmaceutical manufacturing /Agrichemical
- Stone-crushing/ Mineral-drying
- Asphalt/ Ceramic
- Rubber Compounding/ Carbon Mixing-process
- Timber-processing
- Tobacco-processing

■ SENSOR. CABLE

CONNECTION			R1・1/2 (Option : Flange mounting)
ENCLOSURE	Standard		IP65, NEMA4X
	Dimension・Material		144 x 122 x 80mm, ADC (Epoxy coating)
	Weight		1.8kg
SENSOR	Heat Resist-ance	Standard	—25 ~ +25℃
		Med/High Temp.	— 25 ~ +400℃
		High Temp	— 25 ~ +800℃
	Material	Standard	SUS316 non-insulated
		Covering	Teflon-covering (Option)
		Special	Special Material (Option: Consult with us)
	Length	Standard	100, 200, 300, 400, 500, 600, 800, 1000mm, up to 6m available on application
	Air Purge		Option
CABLE	Type	8-core screened cable (digital data link & power supply to sensor)	
	Length	10m (standard) max. x 300m	

DRAWING OF OUTLINE DIMENSIONS



■ CONTROL UNIT

Reference	Standard	IP65 NEMA4X
	Dimension・material	225 x 125 x 81mm ADC (Epoxy coating)
	Weight	1.8kg
	Power	100/ 200VAC 50/60Hz ± 10% 20VA
	Fuse	100mA
	Display	LED, bargraph
	Temperature	-20 ~ +55℃

■ FUNCTION

Emission/fault alarm relay	Volt free contact SPDT 230VAC 3A
Alarm factor settings	1.0 - 99.9 selectable (steps of 0.1)
Alarm delay settings	0, 3, 10, 30, 60, 300, 600 (Second)
Data smoothing settings	0, 0.1, 0.3, 1, 3, 5, 10, 30, 60 (min)
Reference Period settings	0, 0.1, 0.3, 1, 3, 5, 10, 30, 60 (min)
4-20mA range settings	5, 10, 50, 100
Relative dust emissions	Scalable 4-20mA isolated max 500Ω

* Refer to Installation and Operation Manual for details.

予告なく仕様変更することがありますので予めご了承下さい。

Specifications and drawings of this model 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 KANSAI-NO ITEM

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|------------------|----------------|
| 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 直立式レベルスイッチ | 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 電流式レベルメータ |
| 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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