

# Particulate Monitoring Systems

Advanced Filter Failure Detector  
for Dust Arrestment Plant

Dustsense 10 Series

Electrodynamic®

Particulate Monitors

For Filter Failure



Certificate No: 9389



- Dual alarms (early warning and failure)
- Alarm status and system check LED
- Unique patented Electrodynamic® technology (increased reliability over triboelectric systems)
- Digital averaging avoids false alarms from baghouse cleaning pulses

## System Description

The DustSense 10 series of advanced continuous particulate monitors are based on PCME's unique patented Electrodynamic<sup>®</sup> technology, giving added reliability and sensitivity over standard Triboelectric systems.

The DustSense 10's alarm levels can be set as a factor or percentage of the background level of particulate. The user has the ability to set the alarms to instantaneous or average levels above the background or normal level of emissions to indicate early warning of filter failure or gross failure detection. Alarm delay and data averaging are user selectable.

Commissioning is simple and requires no tools or specialised equipment. The DustSense 10 series complies with the UK's PPC filter failure detection requirements for Part A1 and A2, Part B processes under LAPPC and European regulations for filter failure monitoring.

Two versions are available - an "a" version, which comprises a separate sensor and control unit connected by a cable, and a "c" version, which is a combined sensor and control unit that is mounted in the stack or duct. Two separate alarm relay outputs are available within each mode.

## User Controls and Functions

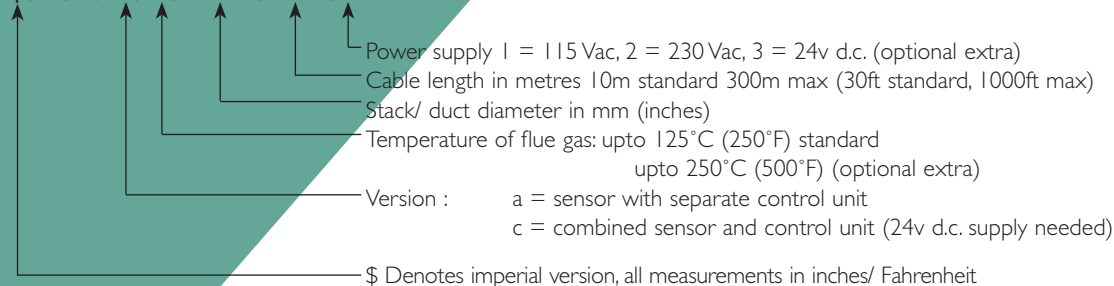
Reference period	User defined from 30 seconds to 120 minutes
Alarm level 1	Adjustable 2 - 10,000 units
Alarm level 2	50% of alarm level 1 (fixed setting)
Data smoothing	1 minute data averaging
Alarm delay	Up to 1 minute or 2 minutes
Relay outputs	2 separate relays, voltage free contacts

## Specifications

	DS10a		DS10c
	Control unit	Sensor	Combined unit
Enclosure rating	IP 65	IP 65	IP 65
Enclosure size (mm)	176l x 80h x 58d	80l x 76h x 57d	80l x 76h x 57d
Enclosure weight	700gms (1½lbs)	500gms (1lbs)	500gms (1lbs)
Power supply	1 115/230Vac 50/60Hz	24v via Control Unit	24v dc@40mA (option)
Relay contacts	2 x 0.5 amps @ 24V	N/A	2 x 0.5 amps @ 24V
Ambient temperature	-20°C to +50°C (-65°F to +125°F)	-20°C to +50°C (-65°F to +125°F)	-20°C to +50°C (-65°F to +125°F)
Display	Tri-state LED (alarm 1, 2 & status)	N/A	Tri-state LED (alarm 1, 2 & status)
Cable lengths	N/A	10 to 300m (10m std)(30-100ft)	N/A
Cable to control unit	N/A	8 core screened	N/A
Stack/duct connection	N/A	½" BSP (female)	
Sensor lengths	N/A	100, 250, 500, 750 mm (4, 10, 20, 30 inches nominal)	
Sensor material	N/A	316 stainless steel, PTFE insulator	
Stack gas temperature	N/A	Standard: -20°C to +125°C (-65°F to +250°F) Optional: up to 250°C (500°F) Enclosure size: 120l x 120h x 80d For higher temperatures please consult PCME Ltd	

## Product Ordering Codes

\$ / DS 10 X / X / XXXX / XXX / X



## 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.



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PCME products are the subject of worldwide patents. Due to the continuing product development programme, PCME reserves the right to change any specifications without prior notice.