

Particulate Monitoring Systems by PCME

Advanced Dust Monitors For Arrestment Plant Performance

DUSTSENSE 20 RANGE

MICRO TriboAce

PARTICULATE

MONITORS



- Isolated 4-20mA output
- Dual Alarms (early warning & failure)
- Tri-state LED indicator (alarm1, alarm2 status)
- Digital averaging minimises false alarms from pulsing baghouses
- Unique patented Micro TriboACE technology (increased reliability over DC Triboelectric systems)
- Combined sensor & control unit (b version) or separate sensor and control unit (a version)

DS20 Data Sheet

System Description

PCME's advanced design particulate monitors can be used in a variety of manufacturing processes and after a wide selection of arrestment plant to monitor and control dust emissions for environmental and process control purposes.

The Dustsense 20 series is based on the unique MicroTriboACE technology making it more reliable than many less sophisticated analogue D.C. Triboelectric dust monitors. Once installed in the emission stack or exhaust duct the average background level of particulate can be defined. The alarm levels can then be set to a percentage or factor above this background reference level (complies with U.K. EPA 1990 & 1996 review). The 4-20mA output is scaled 0-200% of the alarm level, allowing the operator to determine how the dust level is compared to a predetermined limit or warning level.

The two alarm levels can be set to both warning and emission limit levels to assist operators in potential failures from their arrestment plant. Alarm delay and data averaging are user selectable.

User Controls and Functions

Reference period	User defined from 1 minute to 60 minutes
Alarm level 1	Adjustable 1- 10,000 units
Alarm level 2	50% of alarm level 1 (fixed setting)
Data smoothing	1 minute data averaging
Alarm Delay	1 minute or 2 minutes
4-20 mA output	Fixed scaling @ 0 - 200% of alarm level 1 setting
4-20 mA smoothing	2 seconds or 5 seconds
Relay outputs	2 separate relays, voltage free contacts. Rated 2Amps @ 250Vac

Specification

	DS20a		DS20b
	Control unit	Sensor	Combined unit
Enclosure rating	IP 65	IP 65	IP 65
Enclosure size (mm)	81w x 57d x 177 l	75ø x 75 l	81w x 57d x 250 l
Enclosure weight	700gms	600gms	1 Kg
Power supply	115/230 Vac 50/60Hz	N/A	115/230 Vac 50/60Hz
Ambient temperature	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Display	Tri-state LED (alarm 1,2 or status)	N/A	Tri-state LED (alarm 1,2 or status)
Cable lengths	N/A	10 to 300m (10m std)	N/A
Cable to control unit	N/A	8 core screened	N/A
Stack/duct connection	N/A		1/2" BSP (female)
Stack gas temperature	N/A		Upto + 125 C
Sensor lengths (mm)	N/A		100,250,500,750 or 1000
Sensor material	N/A		316 stainless steel, PTFE insulator
Stack gas temperature	N/A		-20°C to +125°C
Air purge (optional)	N/A		1/4" BSP @ 0.5 litre/min

Product Ordering Codes

DS20 X / X / XXXX / XX

— Cable length in metres (10m standard 300m max)

— Stack/duct diameter in mm

— Power supply: 1= 115Vac

2= 230Vac

— Version: a = sensor with separate control unit

b = combined sensor and control unit

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