PARTICULATE MONITORING SYSTEMS

Advanced Design Electrodynamic© Particulate Monitoring for Hazardous Areas

DA50X/DA60X DT990

CATEGORY 1/2 ATEX

DUST EMISSIONS

MONITORING

SYSTEMS

The above image illustrates the DA60X

- Certified for ATEX Dust Zones 20, 21 and 22
- Approved to Category 1/2 by notified body DMT, Germany
- Certification Number: EXII 1/2 D IP64 T-20- +40˚C
- Enhanced measurement through unique Electrodynamic© Technology

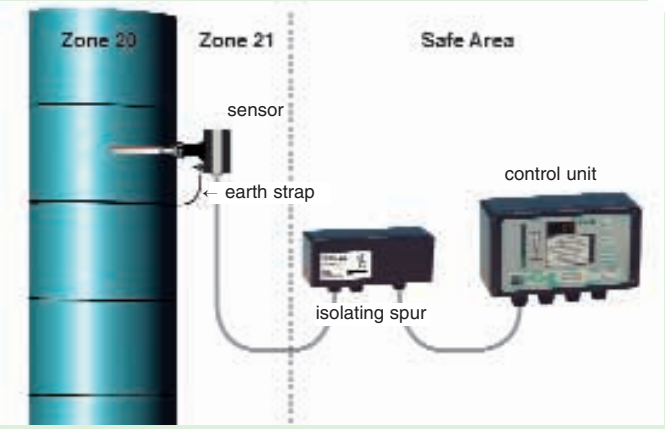
Certificate No: 9389

ATEX Directives

The ATEX "Use" Directive (1999/92/EC) covers health and safety of workers potentially at risk from exposure to explosive atmospheres. This Directive calls for classification of endangered areas into Zones (20, 21 or 22) for dust and ensures that only ATEX certified electrical, mechanical and safety related systems are installed in these areas. The ATEX "Product" Directive (94/9/EC) covers all equipment and protective systems for hazardous areas. Products are required to be categorised by the level of protection that they offer against the risk of them becoming a potential source of ignition in an explosive atmosphere. The equipment conformity categories are 1,2 & 3 and subject to possible modification following the risk assessment, the Directive directly relates Zones and Categories.

System Description and Product Range

The DA50X/DA60X and DT990X are approved as category 1/2 devices according to ATEX Directive (94/9/EC) for use in Dust Zones 20, 21, 22.



Product	ATEX Category	Capability
DA50X	1/2 & 3	Filter Failure Monitor
DA60X	1/2 & 3	BImSchV 27 Dust Monitor
DT990X	1/2 & 3	mg/m³ multichannel Dust Monitor

See individual datasheet for full details

Applications

These systems can be used in a variety of applications, typically after arrestment plants such as Bagfilters, Cyclones, Cartridge Filters and in industries such as Chemical Processing, Pharmaceutical Manufacturing and Food.

Principle of Measurement

The DA50X/DA60X and DT990X utilise PCME's unique Electrodynamic measurement principle. When the sensing probe is installed in the duct or stack, particles in the air stream interact with the sensing rod and a charge induction effect is analysed from the probe. Distributions in the particle stream result in a frequency charge induction response which is directly proportional to the concentration of particulate. Unlike Triboelectric systems, the measurement is not affected by build-up on the probe which can cause zero and calibration drift. Very low dust concentrations can also be measured due to this unique Electrodynamic technique.

Specifications

Isolating Spur	DA50X/DA60X/DT990X
Enclosure Size (mm)	80w x 60d x 174l
Enclosure Rating	IP65
Enclosure Material	Die-cast Aluminium
Ambient Temperature	-25˚C to +55˚C

Control Unit	DA50X/DA60X	DT990X
Enclosure Size (mm)	222w x 125h x 81d	260w x 160h x 90d
Enclosure Rating	IP65	IP65
Enclosure Material	Die-cast Aluminium	Die-cast Aluminium
Power Supply	115/230VAC, 50/60Hz ±10%, 20VA	90-260VAC (50/60Hz)
Ambient Temperature	-25˚C to +55˚C	-25˚C to +55˚C

Sensor	DA50X/DA60X	DT990X
Temperature	Up to 250˚C	Up to 250˚C
Connection on Duct	1½" BSP	1½" BSP
Sensor Rod Material	316SS, PTFE Insulator	316SS, PTFE Insulator
Sensor Length	Up to 1.5 m	Up to 1.5 m
Cable	8-core screened	4-core screened
Cable Length	10m Standard, 250m max	10m Standard, 500m max
Earth Strap Cable Length (sensor to stack)	2m	2m

For specific installation requirements (see DA-X and DT-X manuals)

About PCME

PCME is a world leader in particulate measurement. The company produces equipment for emissions monitoring, process control and solids flow monitoring. 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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