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220°C triboelectric probe kit and reading module

- Sectors Plant Components,
- Applications Fix
- Issues Fumes

COD: KITMONITORPOLHT

Kit consisting of STPB220 triboelectric probe and reading module with IP65 enclosure.

MADE IN ITALY

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Insight

When mounted downstream of cartridge, bag, or other filters, the triboelectric probe kit allows you to be alerted in case of their malfunction (e.g., cartridge rupture).
This kit can be retrofitted to any chimney and is complete with everything needed to display the dust concentration data and customize various parameters, including alarm thresholds.

KIT COMPOSITION

- n.1 triboelectric dust concentration reading probe (T MAX 220°C)
- n.1 microprocessor control module to manage the triboelectric probe and display the detected data.
- n.1 polycarbonate container, IP65, to house the module complete with module fixing flange Dimensions: 160 x 166 x 105mm
- installation, operation and maintenance instructions
- wiring diagrams and certifications ATEX (probe) + CE (all components)

HOW IT WORKS

The dust concentration reading probe exploits the principle of transferring electrical charges carried by dust immersed in gaseous fluid, thanks to an electrode connected to a specific electronic circuitry capable of amplifying the signal. The amount of charge induced on the electrode is proportional to the amount of powder in the gaseous fluid. An increase in the concentration of the powders therefore results in a proportional increase in the signal reaching the microprocessor. By applying mathematical algorithms, the dust particles are counted individually so that their exact concentration in mg/mc can be calculated. The processed values can be stored internally for future processing, or sent via RS485 serial transmission to an external control unit for further analysis or visualization.
The microprocessor-based triboelectric probe comes pre-calibrated, complete with No. 2 optically isolated open-collector digital outputs, No. 1 RS485 serial output for configuring and/or downloading data, and a set of LEDs for operating mode indications.

INSTALLATION TIPS AND NOTES

- Sensor length: the probe comes standard with a 250mm long electrode. However, the electrode should be almost as long as the diameter of the chimney to be monitored [about 20mm shorter]. The electrode extension kit, to be purchased separately, can be cut on site.
- When installing the triboelectric probe in chimneys with a diameter greater than 800mm and an air velocity greater than 12m/s, we recommend installing, on the opposite side of the probe, an insulated support to which the rod can be attached.
- The probe should be installed with a downward tilt of 2° to avoid moisture and/or water stagnation on the insulation.

READING MODULE

The readout module allows display of the dust datum and customization of parameters, including triboelectric probe alarm thresholds.
Included in the kit is an IP65 polycarbonate case to house the module using a flange.

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Power supply: 90 to 260Vac or 24Vdc
Outputs: 2 relays + 2 analogue
Graphic display: 128 x 64 dots
Software language: Italian and English
Non-resettable hour counter: YES

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Technical Data

Code	Power supply Vdc	Measuring principle	Sensitivity mg/mc	Minimum air velocity m/s	Max air ° C	Measuring range	Electrode length mm	Electrode material	Electrode diameter mm	Outputs	Interface	ATEX protection	Alarm threshold mg/mc
KITMONITORPOLHT	24	Charge displacement	0.1	Greater than 6	220	0 mg/mc to 10mg/mc or 0 mg/mc to 50mg/mc	250 (extensions available)	Stainless steel	8	No. 02 open collector	No. 01 RS 485 serial (ON REQUEST No. 01 4-20mA)	II 3D EEx IP65 T85°C - Zone 22D	1st 5mg/mc - 2nd 10mg/mc

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Related accessories

Extension for triboelectric probe electrode

PROTRIBOELET000

The length of the electrode should be almost equal to the diameter of the chimney to be monitored, considering about 20mm less.
The electrode can be cut on site.

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Related Products

Triboelectric chimney emission dust detection probe

TRIBOPOLVCAMINO

ATEX II 3D EEx IP65 T85°C certified probe - zone 22D
Reading the **concentration of dust being emitted from an industrial chimney** is of fundamental importance to be sure of being within legal limits. Moreover, in the presence of filtration systems it allows to be alerted in case of their malfunction.
Thanks to the certified triboelectric probe, it is possible to monitor the dust in emission and take concentration readings in mg/mc.

140°C triboelectric probe kit and readout module

KITMONITORPOLV0

Kit consisting of STPB140 triboelectric probe and reading module with IP65 enclosure.

Triboelectric chimney emission dust detection probe for humid and/or aggressive environments

TRIBOPOLVCAMIAU

ATEX II 3D EEx IP65 T85°C certified probe - zone 22D
Reading the **concentration of dust being emitted from an industrial chimney** is of fundamental importance to be sure of being within legal limits. Moreover, in the presence of filtration systems it allows to be alerted in case of their malfunction.
Thanks to the certified triboelectric probe, it is possible to monitor the dust in emission and take concentration readings in mg/mc.

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