

ETG TRIBO DUST MINI 485



- Triboelectric Dust monitor for baghouse filter , stack , duct etc..
- Easy to install and calibrate
- Selectable probes by length and temperature
- Very fast response
- Digital processing signal
- Auto-learn function
- ModBus, RS485 , Analog out, Digital out
- Permanent Span calibration

PRINCIPLE OF OPERATION.

The measurement is based on particles interacting with an isolated sensor connected to the channel or stack. When particles move in the gas stream and pass nearby the sensor, they will create an induction based AC signal that can be seen in certain frequency bands. Since dust affects the signal only for certain frequencies, the frequencies unrelated to dust measurement can be then filtered out before signal processing. Standard triboelectric technology is based on the DC signal, which is caused by particles making contact with the sensor to transfer charges. Compared to DC based measurements, the AC based technology is much more sensitive and mitigates the influence of sensor contamination which is huge benefit for industrial applications. By using AC based Inductive Electricity Technology it is possible to reach dust concentration measurement thresholds as low as 0.01 mg/m³.

The ETG Tribo DUST MINI 485 it's complaint to the IEC EN 60079-15:2005

The Basic Triboelectric ETG Tribo Dust Mini 485 it's composed by :

- A probe with electrode. The communication between the probe and the Main board it's performed by a couple twisted wires by a digital communication. The Electrical pwr to the probe it's supplied by the Main board with the twisted wires.
- Welded base Stainless Steel
- Screen wires cable to be connected from probe to Main board
- Main board. The microprocessor by the digital display to manage to several functions as : Warm up, Last software release, Test Probe , Programmable Start Delay , Istantaneous value , Average value , Remaining time to the last average , Minimum & Maximum value , Threshold alarm on Istantaneous or average value, Analogic full scale value , Internal diagnostic, Calibration procedure.

Main Applications:

- Bag Filter Management - Wood Industry
- Cement Manufacturing
- Dumo Metallurgical
- Dumo Sulfur Plant
- Dust Control System - Smelter Industry
- Emission Monitoring - Bioethanol Industry
- Emission Monitoring - Chemical Industry
- Emission Monitoring - Power Industry
- ESPY Coal Fired Power Plant
- Process Monitoring - Chemical Industry
- Process Monitoring - ESPY Steel Industry
- Process Monitoring - Pharmaceutical Industry
- RF Network - Paper Machinery
- Steel Manufacturing Process



Baghouse operation and maintenance costs are largely a factor of the unit's design.

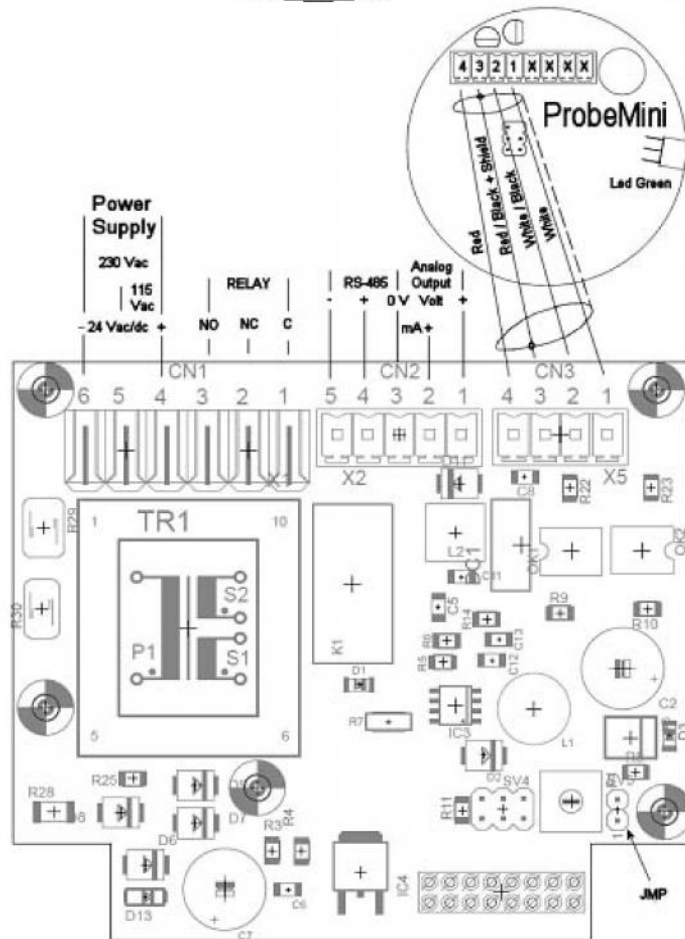
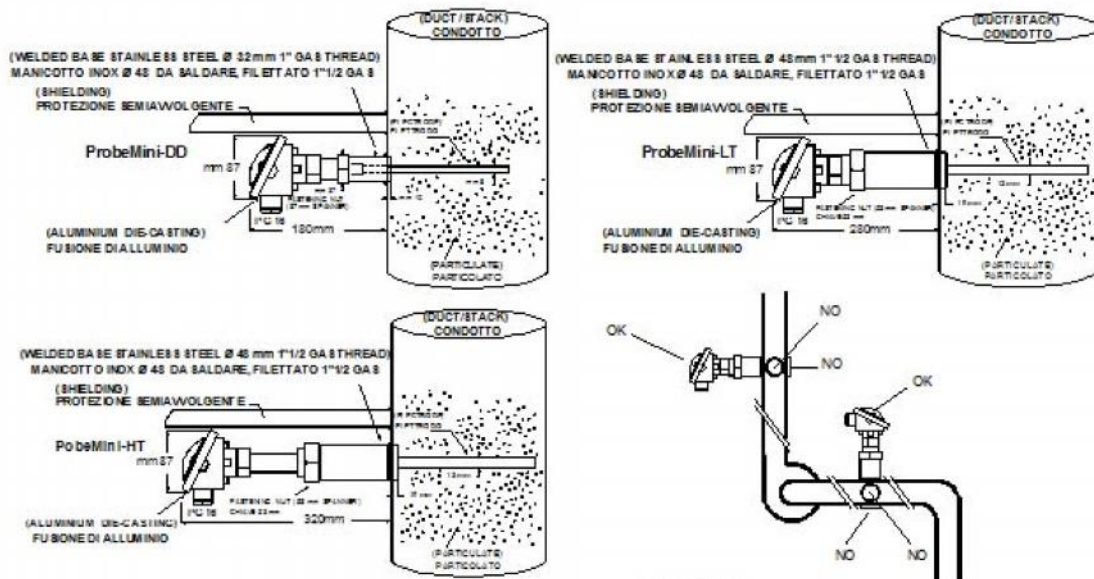
TECHNICAL FEATURES

Electrical Supply Main Control Board	: 115/230Vac 2VA on request 24Vac, o 24Vdc +/-10%
Electrical Supply Probe	: 12 Vdc 0,5 W (supplied by the Main Board Mini-485)
Check of the Electrical Supply	: Green LED (internal view on the gray enclosure)
Probe length on DustMini,/DD	: 27 mm (protrusion from the socket mounting standard)
Probe length on DustMini/LT/HT	: up to 1000 mm.
Range of detectable value	: 0,01 ÷ 5000 mg/m ³
Minimum dust velocity	: >= 5 m/s
TIME OF RESPONSE:	
Instantaneous value	: 1sec (programmable by RS-485)
Average value	: from 1 minute to 480 minutes)
Digital out probe	: ETG Protocol
Digital out Main Board	: RS-485 modbus RTU
Analog out Main Board	: 4-20 mA or 0-20 mA or 0-10 Vdc
Analog output max concentration value	: 800 mg/Nmc (20 mg/Nmc default)
Set-point Relay	: 6000,0 mg/Nmc (10 mg/Nmc default)
Status relay	; Normally active or no active (active default)
Power contacts relays	: 30 Vac/dc max. 200 mA (no inductive load)
Main Board temperature	: -20 + 50°C (-4°F +122°F)
Ambient temperature probe	: -20 + 70°C (-4°F +140°F)
Process temperature probe model /DD/LT	: -20 + 70°C (-4°F +284°F)
Process temperature probe model /HT	: -20 + 400°C (-4°F +752°F)
Process R.H.	: 75% non condensating
Pressure to probe	: 1 BAR (100 Kpa)
Probe enclosure material and Enviro Protection	: Cast Aluminum, IP 66
Main Board enclosure material and Enviro Protection	: ABS, 95 x 95 x 60 mm, IP 65

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