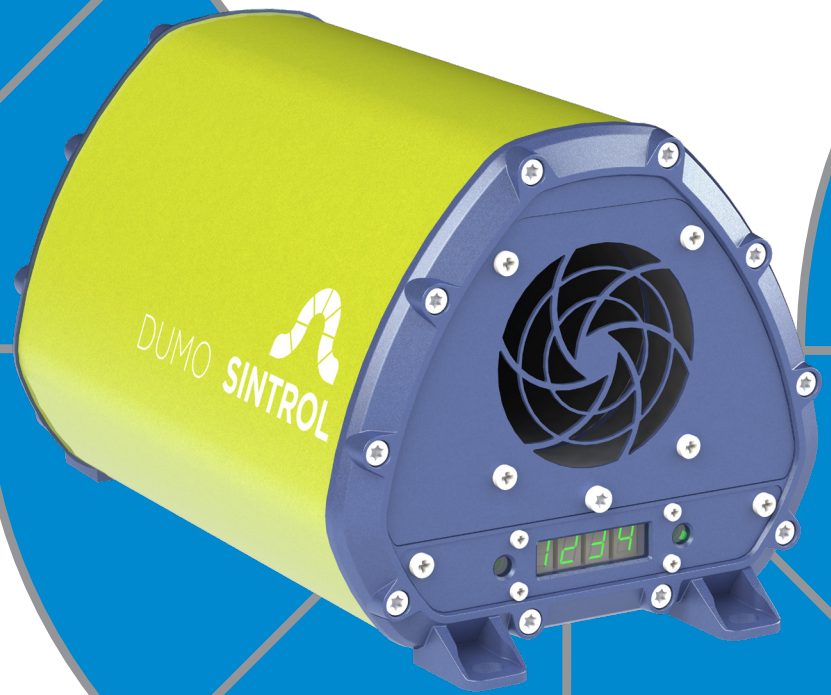


PRODUCT BROCHURE

DumoPro

Continuous Ambient Air Dust Monitor



Low maintenance real-time monitoring of total suspended particles in industrial environments

Designed to industrial standards with built in failsafe features to increase reliability

* Pending



Benefits:

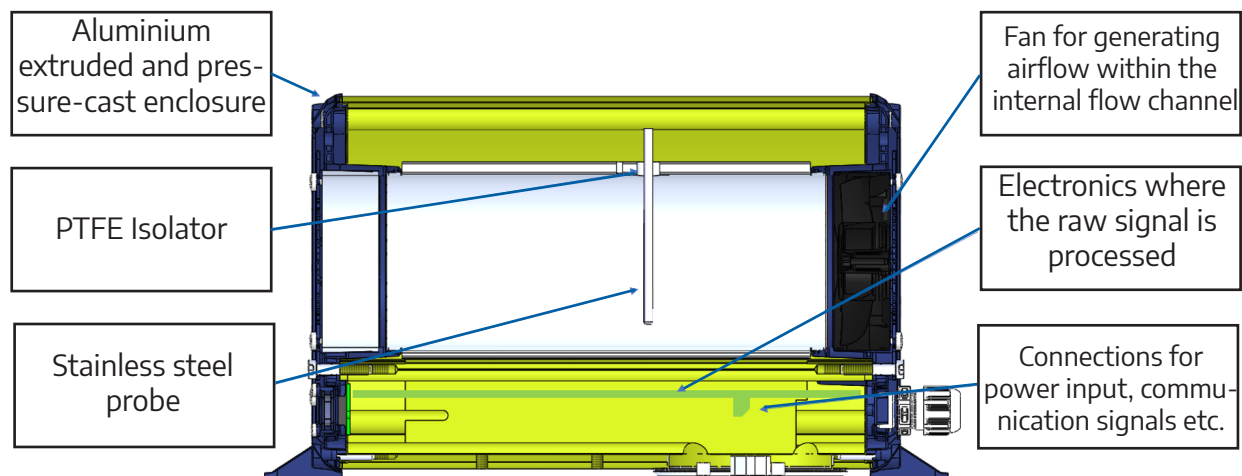
- Low maintenance and robust
- Easy start-up and commissioning
- Wide measurement range
- Internal self-monitoring for failsafe operation
- Fast response time
- No sample handling required
- Product loss prevention

Because of its high sensitivity to total suspended particles, the Sintrol DumoPro is a powerful tool for measuring dust concentration in industrial environments. The field proven state-of-the-art measurement technology is tolerant to sensor contamination making it reliable to a wide variety of dust detection applications. The DumoPro utilizes the Sintrol Inductive Electrification technology providing a wide measuring range.

Applications:

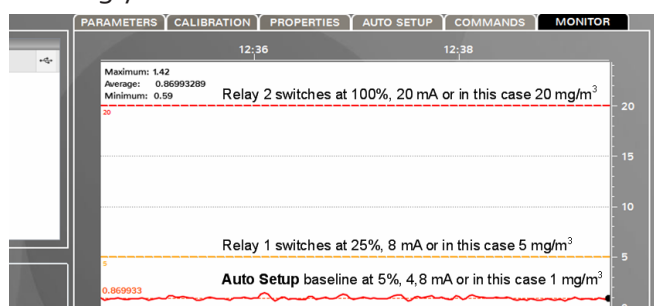
- Early detection of dust leaks
- Workplace dust monitoring
- Equipment and worker protection
- Supports good housekeeping practice
- Hazardous location supervision
- Helps mitigate the risk of dust explosion

The robustness of the DumoPro makes it a safe choice for dust monitoring in rugged industrial environments. Common industries are flour and sugar mills, mining, wood products, grain handling, chemical, power plants or any bulk and powder handling facility. Some common applications include: health & hygiene, equipment safety, good house-keeping, help mitigate the risk of dust explosions, HazLoc monitoring and the detection of unwanted events.



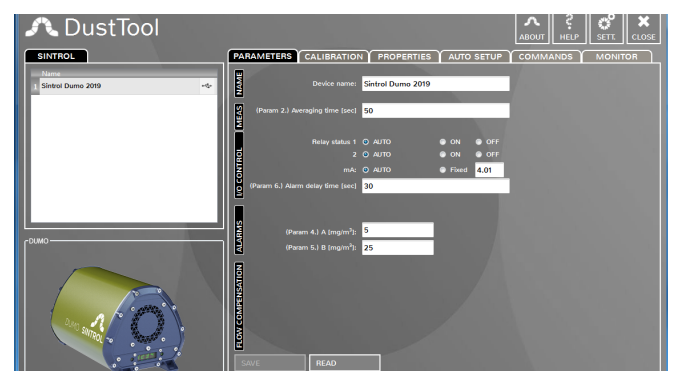
Sintrol's Unique Auto Setup Function

The Auto Setup function is a unique Sintrol Dust Monitor feature which allows for a simple user friendly setup. During the auto setup procedure, which is done in normal process conditions, the dust monitor will automatically adapt to the present conditions and set the measuring range and alarms accordingly.



Dust Tool

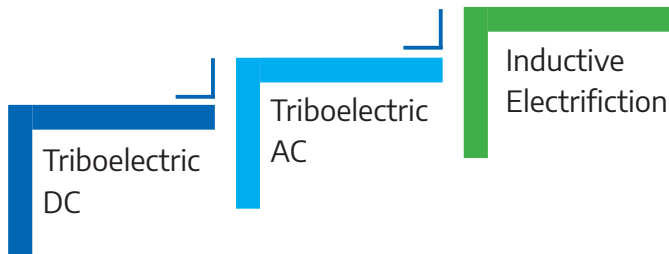
DumoPro can be managed and parameterized with the DustTool PC Software. This offers a convenient platform to view the measurement results, to initiate the Auto Setup and adjust the parameters of the monitor.



Inductive Electrification Technology

Since 1993, Sintrol has become a globally recognized dust monitor supplier with over 17 000 installations in more than 50 countries. The measuring principle has evolved into a proven standard for dust monitoring needs.

Inductive Electrification Technology

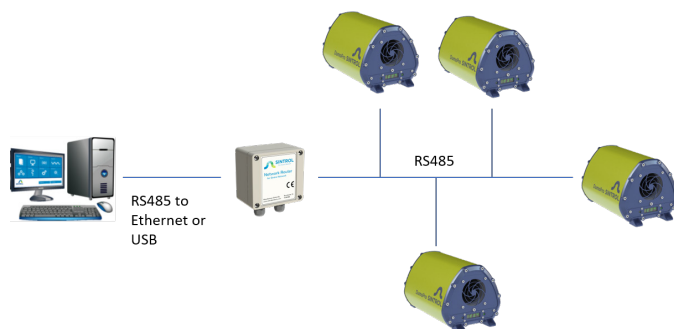


Ambient air is drawn through the measurement chamber producing a steady constant flow.

Particulate matter flowing through the chamber will interact with the sensor rod causing small electrical charge to pass between the particulate and sensor. These small electrical charges provide the signal monitored by the electronics. The generated signal is proportionate to the ambient dust levels.

Sintrol Network and DustLog Software

Sintrol devices can be networked via a RS-485 network. By using the a Sintrol network, it is easier to connect, track, manage and control a network of dust monitors. DustTool software enables the operator to see and control all monitors in the network, providing access to change parameters, adjust the alarms and dial in the measurement data. Once all the instruments are measuring as desired, DustLog10 can be utilized to log the data and give operators an overview of the plants dust levels. DustLog10 features include comprehensive real-time monitor views of all dust levels, data storage, reporting and off-site data storage.

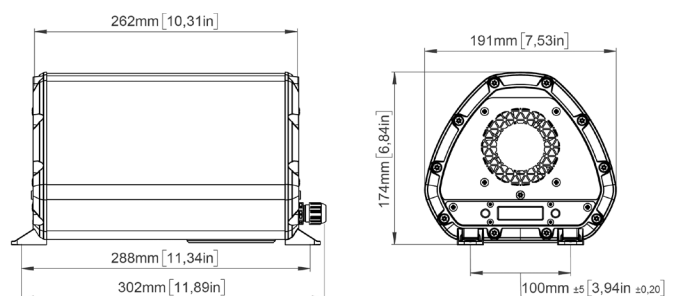


Reliable and user friendly

In reference to multiple international safety codes, Dumo is equipped with the below safety features:

- All instruments are 100 % tested, normalized and linearized during production.
- Malfunctions are indicated in the way that relays will relax, the mA output will show 22 mA and LEDs will blink.
- The fan speed is monitored and will trigger an error if the fan is blocked or slowed down.
- A periodic Zero and Span check correction is a standard function of Dumo.
- The solid state relays are normally energized to enable the detection of interruptions in the power supply.
- Voltage supply tolerant to +/- 20 % voltage changes.
- During Auto setup the LED will blink green and a countdown is shown on the display.
- In hazardous locations Auto Setup can be triggered without opening the instrument.
- It is possible to perform some very easy bump check after installation:
 - A properly grounded Dumo will show no re-action on the measurement by touching it with your hand.
 - Dumo will react by tearing a piece of paper apart in front of the inlet.
- Dirty or wet sensors may become grounded which distorts the signal. These incidents are detected and an error signal is prompted.
- On board display for direct verification of dust levels or mA output.

The DumoPro can be installed anywhere in the production process where the determination of the dust levels is critical or informative. The DumoPro makes the task of dust monitoring easier, faster and more reliable than ever before.



Product Name	DumoPro
Measurement objects	Total Suspended Particles (TSP)
Measurement range	Detection Limit 0.01 mg/m ³ Maximum Range up to several g/m ³
Measurement principle	Inductive Electrification
Protection code	IP65
Power supply	24 V DC + - 20%
Power consumption	Up to 10 W
Output signals	<ul style="list-style-type: none"> Two configurable alarm outputs (100 mA @24 V DC) Isolated 4 - 20 mA output loop, up to 250 Ω loop resistance, Namur NE43 compliant alarms
Communication interface	<ul style="list-style-type: none"> Serial communication RS485, USB, Wireless Radio Frequency (RF) (Option)
Communication protocol	<ul style="list-style-type: none"> Modbus RTU (RS-485) Sintrol network (USB, RF and RS-485)
Alarm settings	Set by auto setup based on average measured dust level: 5 times and 20 times of reference dust level. User adjustable
Signal averaging time	Default at factory: 100 s, Adjustable from 0-6000 s.
Alarm delay time	Default at factory: 30 s, Adjustable from 0-60 000 s.
Alarm hysteresis time	Default at factory: 0 s, Adjustable from 0-25 s.
Ambient Conditions	
Running temperature	-40°C to +60 °C (-40 °F to 140 °F)
Humidity	Max 95 % RH (non-condensing)
Materials and Dimensions	
Weight	4.2 kg (9.3 lbs)
Enclosure / housing	Aluminum enclosure, stainless steel cover plates and probe (AISI 316L).
Dimensions (mm):	288 (L) x 191 (W) x 174 (H)
Options	Installation Bracket Installation Arm Conduit Fitting for DumoPro Ex UL/CSA Ex Cable Gland for DumoPro Ex Sintrol Network Router & DustLog Software
Hazardous Location Approvals	US: Zone 20 AEx ia ta IIIC T93°C Da CAN: Ex ia ta IIIC T93°C Da US/CAN: CL II, DV 1, GP E, F, G. IS Probe Ta = -30°C to +60°C ATEX and IECEx pending

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