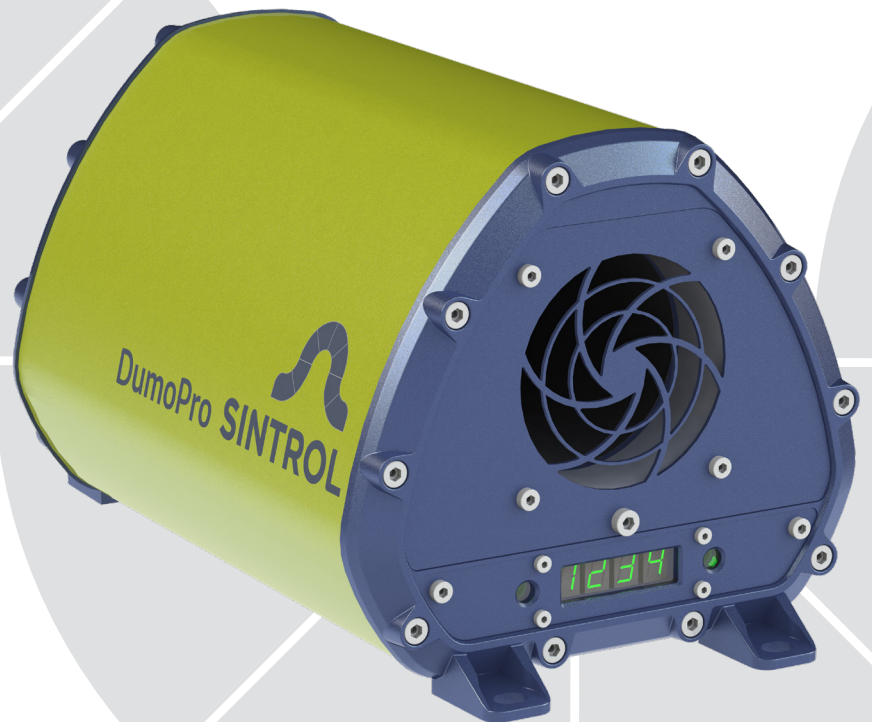


PRODUCT BROCHURE

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**



SINTROL
Measuring Matters

Features:

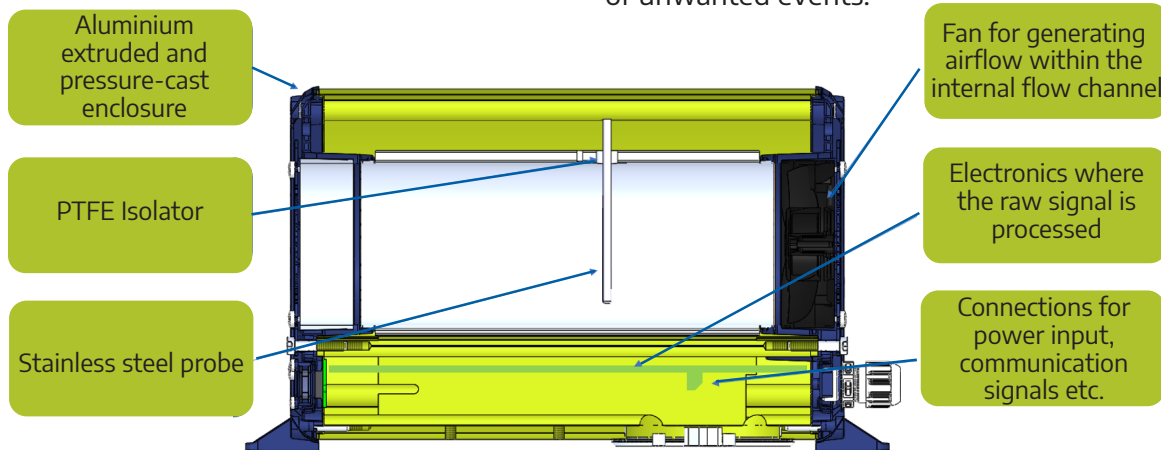
- Inductive Electrification technology for accurate dust detection
- Auto Setup for easy commissioning and alarm configuration
- Internal fan for consistent airflow through the measurement channel
- Self-monitoring diagnostics and failsafe operation
- RS-485 and USB interfaces for connectivity
- Compatible with DustTool software
- Suitable for hazardous areas (DumoPro Ex: Zones 20, 21, 22)
- IP66-rated enclosure for industrial environments

Benefits:

- Early detection of dust events
- Improved workplace safety and hygiene
- Reduced risk of dust explosions
- Protection of equipment and personnel
- Supports regulatory compliance and good housekeeping
- Low maintenance and long-term reliability
- Real-time 24/7 monitoring with fast response

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

The robustness of 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 housekeeping, dust explosion risk mitigation, HazLoc monitoring and the detection of unwanted events.

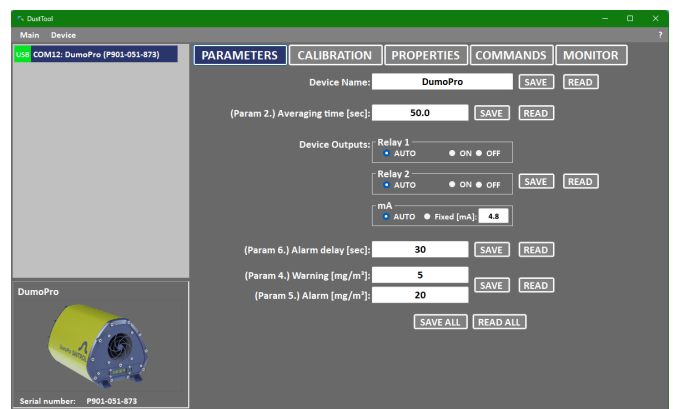
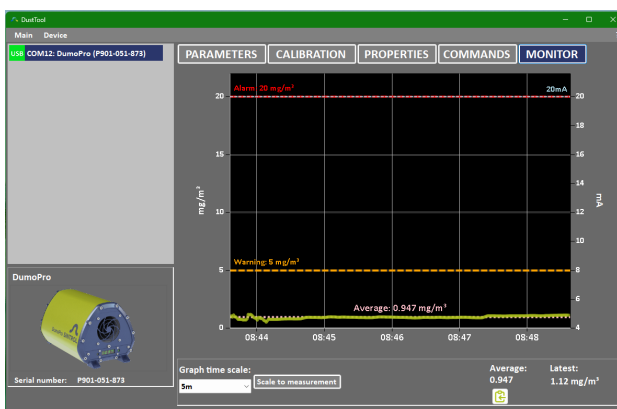


Sintrol's Unique Auto Setup Function

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.

DustTool

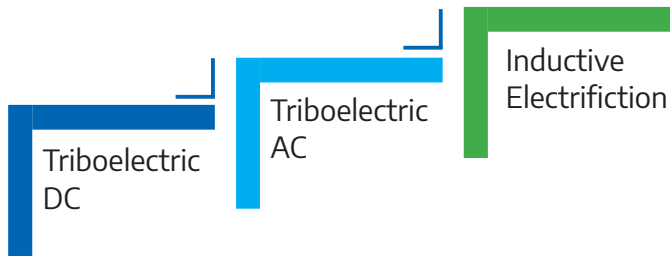
DumoPro can be managed and parameterized with the DustTool PC Software. This offers a convenient platform to view the measurement results, to initiate the Auto Setup and adjust the parameters of the monitor.



Inductive Electrification

Since 1993, Sintrol has become a globally recognized dust monitor supplier with over 20 000 installations in more than 50 countries. The measuring principle has evolved into a proven standard for dust monitoring needs.

Inductive Electrification Technology



The measurement principle of Sintrol dust monitors results from particulate matter interacting with a sensor probe. When particles pass near or collide with the probe, they generate either an AC signal through electrostatic induction or a DC signal via direct charge transfer. The DC signal is removed, and AC signal is processed using advanced mathematical algorithms to filter out noise to produce a clean signal that is directly proportional to the ambient dust concentration.

Calibration to mass concentration

DumoPro can be calibrated to display results in mg/m^3 using DustTool or local interface. Calibration requires reference measurement such as gravimetric sampling.

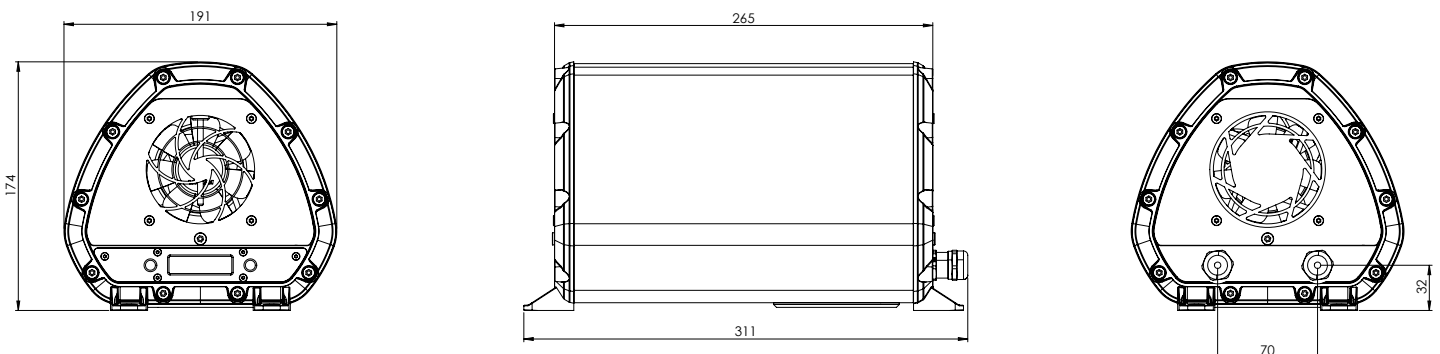
Reliable and user friendly


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

- 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 and correction is a standard function of DumoPro.
- Voltage supply tolerant to $\pm 10\%$ 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 a simple functional test after installation:
 - A properly grounded DumoPro will show no reaction on the measurement by touching it with your hand.
 - DumoPro 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.
- Instrument parameters and settings easily accessible with Sintrol DustTool software.

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

DumoPro dimensions (mm)



Product Name	DumoPro / DumoPro Ex
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	IP66
Power supply	24 V DC ± 10%
Power consumption	Up to 10 W
Output signals	<ul style="list-style-type: none"> Two independent solid-state relays, max. 30 V DC / 1 A Isolated active 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
Communication protocol	<ul style="list-style-type: none"> Modbus RTU (RS-485) Sintrol network (USB 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 0-60000 s.
Ambient Conditions	
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):	311 (L) x 191 (W) x 174 (H)
Ordering information	PC901600 DumoPro PC901080 DumoPro Ex
Options	MC900222 Installation Bracket MC900237 Installation Arm FC900047 DumoPro Adapter M16 Male thread to 1/2" NPT female thread (HazLoc) FC900162 ATEX/IEC Cable Gland for DumoPro Ex
Hazardous Location Approvals DumoPro Ex	IEC/ATEX:  II 1 D Ex ia ta IIIC T ₂₀₀ 93°C Da T _{amb} -30°C to +60°C US: Zone 20 AEx ia ta IIIC T93°C Da Ta = -30°C to +60°C CAN: Ex ia ta IIIC T93°C Da Ta = -30°C to +60°C