

Wireless Monitoring Systems

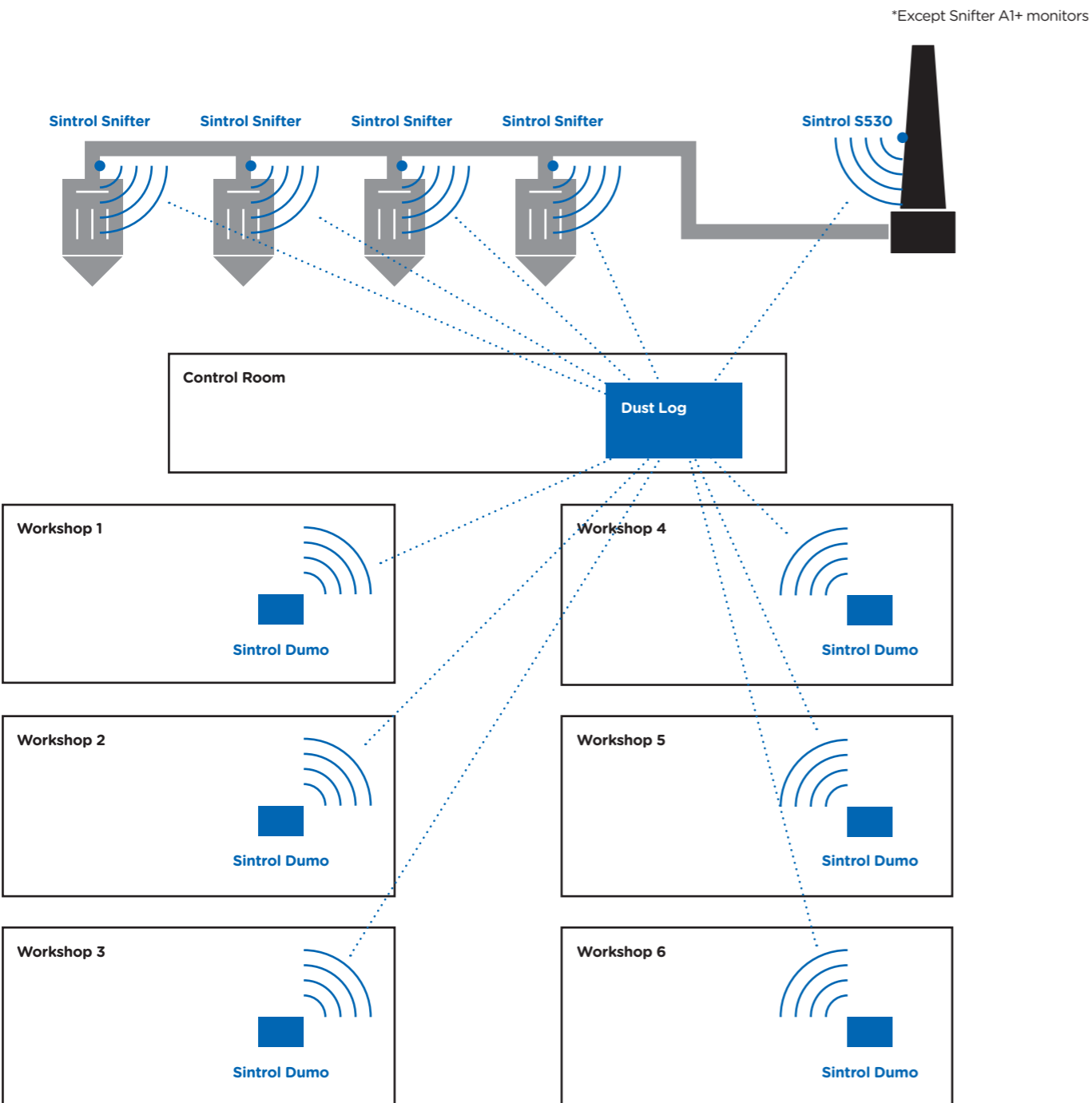
Sintrol

Ruosilantie 15,
FI-00390 Helsinki, FINLAND
Tel. +358 9 561 7360
e-mail: info@sintrolproducts.com
www.sintrolproducts.com

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In addition to our measurement devices, Sintrol's Wireless Monitoring System makes it easier to connect, track, manage and control a network of dust monitors. Using any combination of Sintrol's dust monitors*, the entire system can be integrated and set up via our RF network and managed with our DustLog 8 software. While installing cables around a plant has been the common practice for decades, it can be an expensive and inconvenient setup. Additionally, having to manage the installation and commissioning in the plant can be difficult, especially when monitors are placed in difficult to reach places or under extreme temperatures. With the Wireless Monitoring System, each monitor has the ability to communicate via RF with any other monitor as well as with the control room. Each monitor has a range of over 1 km and can act as a repeater within the network so installation is easy, simple and less costly than traditional methods. DustLog 8 enables the operator to see and control all monitors in the network, providing access to change parameters, see data history and alarms, and map all the monitors in the plant. Below is an example of a Wireless Monitoring System that can be done by combining our monitors with the RF network and DustLog 8:



Sintrol Dumo

Sintrol Snifter

Sintrol S500

Sintrol Dust Control Systems

A plant may have different units and dust measurement needs requiring the use of a variety of monitors. Any combination of our monitors* can be connected wirelessly within the same network. The DustLog 8 recognizes each type of monitor within the network and provides access to the parameter settings for each monitor. All signals and alarms are charted in one location for easy access and management. To break down the example on the previous page, we can find several applications being tied into one system.

Ambient Air Monitoring

Multiple measuring points for ambient dust concentrations can be networked using a Dumo with RF networking in each workshop. All monitors can be connected easily and managed directly from the control room. Each individual dust concentration can be seen from one screen along with any alarms that notify the operator when dust levels go above the programmed thresholds.

Broken Bag Detection

Plants that have multiple baghouses spread out can install a Snifter on the outlet duct of each baghouse and transport the data to a single DustLog 8 control point wirelessly. All parameters can be adjusted remotely from the control room giving the user easy access to the device without needing to physically reach the monitor. Alarms will also give quick notification for any breaches in the filtration system.

Emissions Monitoring

When larger end users have multiple official measurement points, the S500 monitors allow convenient access and management of the dust measurement devices. All trends and real time dust concentrations can be centrally managed for multiple stack emissions. Calibration programming, parameter adjustments and alarm notifications can all be accessed from the control room eliminating the need for climbing to the stack.

*Except Snifter A1+ monitors

Principle of Operation:

Sintrol dust monitors are based on a unique Inductive Electrification technology. The measurement is based on particles interacting with an isolated probe mounted into the duct or stack. When moving particles pass nearby or hit the probe a signal is induced. This signal is then processed through a series of Sintrol's advanced algorithms to filter out the noise and provide the most accurate dust measurement output.

Classic 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 Inductive Electrification technology is more sensitive and minimizes the influence of sensor contamination, temperature drift and velocity changes. By using the Inductive Electrification technology it is possible to reach dust concentration measurement thresholds as low as 0.01 mg/m³.