

## TRIBO.dsp U3000 Series

Auburn's **TRIBO.dsp U3000** series of electrostatic/triboelectric bag leak detectors, emission monitors, and solids flow monitors effectively measure dust emissions and dry solids flow from a wide variety of industrial processes.

Auburn's proprietary core technology, *TRIBO.dsp*, unifies DC impaction (triboelectric) and AC induction electrostatic signals for superior accuracy, reliability, and repeatability. Unlike monitors that use only the DC or only the AC induction signals, thereby using only a portion of the complete electrostatic signal, *TRIBO.dsp unified* DC/AC particulate monitors combine the benefits of each signal, providing a stable and reliable wide range signal, with robust electrical interference resistance - even in harsh industrial environments.



**U3200 Integral** is a simple and economical broken bag detector, or flow/no flow detector, for dust collector maintenance and process applications. The one-piece integral design makes it ideal for applications where a simple on/off relay contact for alarm is all that is needed. The U3200 is designed to monitor fabric filter baghouses, cartridge filters, cyclones, and all types of dust collection equipment. For flow/no flow detection, the 3200 Integral can be used to monitor processes that are dealing with the handling of dry bulk solids.



**U3200 Remote** is a reliable and versatile particulate detector. Similar in function to the U3200 Integral, the Remote version adds in a separate display module for operator use, as well as dual relay contacts for setting two independent alarm levels. The U3200 is designed to monitor fabric filter baghouses, cartridge filters, cyclones, and all types of dust collection equipment. For process/flow applications, the U3200's dual alarms can be configured as a flow/no-flow detector for pneumatic conveying and gravity fed flow applications.



**U3400 Integral or Remote** is a two-wire, 24 VDC loop powered, wide dynamic range particulate monitor that is simple to install and requires no operator sensitivity adjustment. It is ideal for all emission and process flow applications where a continuous 4-20 mA signal is needed. The U3400 is designed to be wired directly to a PLC, DCS, data logger, or any control device capable of providing the 24V loop power, while simultaneously receiving the continuous 4-20 mA signal. CSA Ordinary Location Certification optional.

**U3400H** and **U3400H CSA** offers the same options as the U3400 with the added benefit of HART protocol and is optionally available with CSA Hazardous Location Certification.



**U3600** is an innovative, self-checking, continuous emissions particulate monitor ideal for environmental compliance and dust collector maintenance applications. The unified DC/AC design provides the wide dynamic range with flexible scaling and alarm features needed for process flow applications.

The U3600 offers 4-20mA output and two independent SPDT relay contacts. Easy-to-read, real-time screen for emission levels and alarm status is continuously on display, showing the raw signal in pico amps (pA), or as a relative percentage (%). When correlated to stack test data, the U3600 can display the signal in mg/m<sup>3</sup>. All settings can be password protected. An optional digital output is available (Ethernet/IP, Modbus TCP).

**U3600-QAL1** is certified to comply with the automated measuring system's criteria for monitoring air quality under the EN 15267-3 standard. This approval has been certified by both TUV and MCERTS.



**U3300** dust monitor is ideal for multipoint applications where minimal installation / implementation costs are essential. Incorporating an easily expandable daisy-chain design, it is suitable for small or large multichannel dust monitoring applications. Our simple design requires no field set-up or periodic adjustments to the unit and is virtually maintenance free. The RS-485/Modbus RTU field bus communication is compatible with most PLC and generic OPC drivers, making it a versatile tool for integrating to existing data management systems.

# Auburn Product Line

**U3800** is a multichannel particulate monitor for emissions or flow applications. Each unit is capable of connecting up to six remote probes. The U3800 has an intuitive industrial grade touch screen, displaying user selectable views such as line chart, numerical, or bar chart views.

The U3800 can be used as a stand-alone system or integrated into existing plant data management systems using the digital communication protocol (Modbus TCP, Ethernet/IP). For a comprehensive bag leak detection system, multiple U3800 units can be managed by AUBURN.vision software.



## MONITORING SOFTWARE

### AUBURN.vision™ Software Bag Leak Detection System and more...

While all emission monitoring instruments collect useful but isolated data, existing factory automation software products are focused on process control and production and are not particularly designed for user friendly emission monitoring and reporting functions.

AUBURN.vision solves this issue by organizing information and providing alarm functions for a large number of devices: emissions control systems; differential pressure; bin level; temperature; fan amps; and various maintenance and ancillary manufacturing activities while eliminating costly programming. It can be used as a stand-alone system or as a complement to existing data management software.



## VELOCITY

**TRIBO.hs Model 5000 Particulate Velocity Monitor** uses the triboelectric signal along with a cross correlation technique to provide a true particle velocity in a dust laden pipe or duct. Monitoring actual particle velocity can help preserve product quality, maintain optimum velocity ranges for improved performance and air usage energy savings.



## SENSOR OPTIONS FOR SPECIAL APPLICATIONS

### Ambient Fugitive Dust Sensor (AFDS)

Auburn's TRIBO.series dust monitors can detect unexpected rises in ambient dust levels within the workplace. The AFDS uses compressed air to create a Venturi effect. Room air is drawn through the sensor, generating a triboelectric signal. The increased signal can alert personnel to the presence of more ambient dust in the monitoring area.



### Ring Sensors

For applications with smaller pipe sizes or when a protruding probe is not desirable. The sensor is an insulated conductive ring that is the same ID as the pipe - mounted in-line preventing any disruption of flow.

### Wire Rope Sensor

For applications where our standard probes can't be used, such as large ducts, plenum openings, or positive pressure baghouses using roof vents, the Wire Rope Sensor configuration is installed to span the area where the particulate will flow across the sensor. The wire rope sensor is connected to a standard probe and can be used with any of our models.

In addition to these sensor options, Auburn often provides custom probe configurations based on the site specific conditions where monitoring is needed. Our engineering department will provide a configuration that best meets the needs of our customer while providing the best monitoring solution. Contact Auburn or your Rep for more details on these types of applications.

