

The **TRIBO.dsp U3400** is the industry's first two-wire, loop powered, wide dynamic range emissions or flow monitor for both high and low temperature applications. Automatic offset/drift tracking eliminates the need for periodic manual drift or zero adjustment. Auburn's industry leading technology also provides an automatic probe contamination check standard on all **TRIBO.dsp** units. The U3400 indicates when a battery or bridging effect is detected (i.e. moisture or particulate matter accumulates on the probe). The U3400 is simple to install and requires no set-up or sensitivity adjustments. Created by the originators of electrostatic/triboelectric particulate monitoring technology, Auburn's U3400 is one of the most reliable, easy to use particulate *emissions* and *flow* monitoring system available today.

The U3400 is wired directly to PLC's, data loggers, or any control device capable of simultaneously providing 24V loop power while receiving the continuous 4-20 mA signal. The **TRIBO.dsp U3400** is often the most suitable and economical choice for large multiple point bag leak detection applications. It is easily installed and connected to PLC's or data hubs for plant wide, data management purposes.



Features of the U3400

- Two wire system, no line power required, minimal installation costs
- Continuous 4-20 mA Output
- User friendly set-up, log or linear modes easily selected
- Widest performance range available, use for flow or emissions applications
- No operator drift adjustment required - set and forget
- Automatic probe contamination check

Applications for the U3400

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|------------------------------|--------------------------|
| • Emission Monitoring | • Process Monitoring |
| • Bag Leak Detection | • Process Optimization |
| • Dust Collector Maintenance | • Gravity Feed |
| • Product Loss Prevention | • Injection Flow |
| • Equipment Protection | • Material Flow Control |
| • EPA/MACT Compliance | • Flow/No Flow Detection |

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.

TRIBO.dsp's Working Principal:

As dust particles collide with, or closely pass by a probe, charge transfers occur. **Tribo.dsp** series products detect the signal created by the changes in particulate concentration, as in the onset of a bag leak or an increase or decrease in flow. 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 3000 series combines the benefits of each method, providing the user with a superior reliable and repeatable signal, with electrical interference resistance - even in harsh industrial environments. They can activate operational functions such as alarms and relays or can generate continuous 4-20 mA or digital signals for trending and recording purposes.

TRIBO.dsp U3400™

ELECTRONICS SPECIFICATIONS

Electronic Enclosure	Cast aluminum, electrostatically applied powder coating, equivalent NEMA 4X
Power	12-32 VDC (Two-wire, loop-powered)
Power Consumption	< 1 Watt
Operating Temperature	-40° - 185° F (-40° - 85° C)
Humidity Range	0 - 95% relative; non-condensing
Dynamic Range	1 pA - 10,000,000 pA - standard 0.1 pA - 1,000,000 pA - optional
Resolution/Precision (pA)	1 pA standard 0.1 pA optional
Sensitivity Range	Concentrations as low as .005mg/m ³ have been detected
Output	Isolated 4-20mA compatible loop or powered network, with user selectable scaling
Approvals	CE Approved. €€ Optional: CSA Class: 2252 85, 2252 05 , HART  

SENSOR SPECIFICATIONS

Remote Sensor Enclosure	Cast aluminum, electrostatically applied powder coating, equivalent NEMA 4X
Sensor Probe	Probe - 316 stainless steel (standard); other materials available
Wetted Metal Parts	All others - 303 stainless steel minimum grade
Insulation	Extended High Performance (PFA)- standard, -40° - 450°F (-40° - 232°C) Ceramic (High Temperature or Pressure) -40° - 1000°F (-40° - 540°C) Consult factory or your local representative for proper recommendations
Probe Insertion Length	Standard probe lengths: 3, 6, 12, 18, 30, 36 inch (7.6, 15.2, 30.5, 45.7, 76.2, 91.4 cm) (specify to reach approximately mid-duct or further)
Installation	Weld the supplied fitting into the pipe or duct and insert sensor
Remote Sensor Cable	Special coaxial cable; temperature range: -60° - 400°F (-50° - 200°C) Maximum distance: contact factory
Wiring Connections	¾ inch NPT female conduit fitting
Pipe/Duct Connections	½ inch NPT male fitting or 1" quick release ferrule (other options available)
Options	Wire-Rope Sensor; In-Line Ring Sensor; Ambient Fugitive Dust Sensor

