NEW!! 36 Channel Multipoint Airflow & Temperature Measurement System

ATM2400

Features

- *Connect 36 air velocity and airflow temperature sensors (UAS1000 Series) and/or thermocouple sensors (UTS1000 Series)*
- *Validate thermal and airflow models quickly and accurately*
- *Measure Air & Temperature in multiple locations simultaneously*
- *Small sensors access remote and compact locations*
- *USB connection to PC*
- *New and improved AccuTrac software included*
- *Easy to use – just plug in and start measuring*
- *Airflow measurement accuracy 5% of reading from 0°C to 70°C*

About the ATM2400

Multipoint measurement of air velocity as well as air and surface temperature are crucial steps in the new product development process. These measurements, however, have traditionally been inexact, labor-intensive, repetitive, and tedious. The new AccuSense ATM2400 has been designed to reduce cost, increase efficiency, improve accuracy and compress testing and evaluation time. Furthermore, the ATM2400 expands on the capabilities of its predecessor, the ATM-24, with the inclusion of thermocouple sensors, improved airflow sensor accuracy, enhanced AccuTrac 5.0 software as well as an additional 12 channels.

The ATM2400 now allows you to perform simultaneous measurement of air velocity and of airflow and surface temperatures at 36 locations. Multiple ATM's can be connected together to measure up to 100 points. The information is recorded real-time, and can be analyzed as data is being collected. The ATM2400 uses the UAS Series of Airflow Sensors and UTS Series of Thermocouple Sensors. Improved air velocity accuracy to ±5% of reading from 0°C to 70°C further enhances the ATM2400's performance.

AccuTrac 5.0, a powerful Windows-based software package, comes with the ATM2400. With real-time graphing and statistical analysis, AccuTrac's new capabilities also include the ability to set testing time length, display calibration date of sensors, and alarm when collected data is outside of the sensor calibration range. The sampling rate is now as fast as 10 readings per second. All data is saved in Excel compatible files.

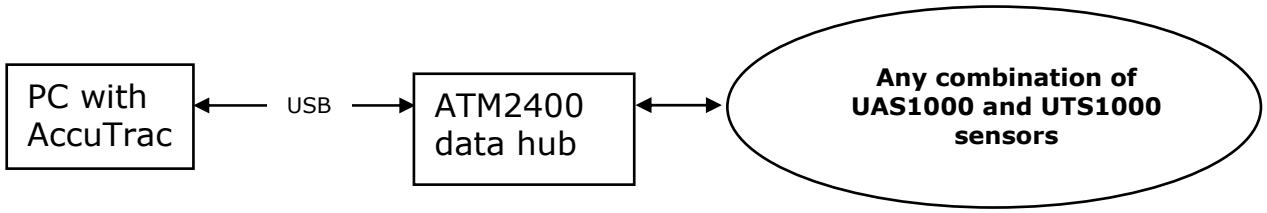
Typical applications include thermal analysis of electronics in computer and telecommunications equipment, validation of CFD airflow and temperature modeling, airflow analysis in automotive compartments, containment enclosures, and architectural modeling.

Whether you are determining the number of fans, analyzing airflows around critical components, or validating software prediction models, the ATM2400, from AccuSense, the renowned expert in airflow sensing, is the new gold standard for multipoint airflow and temperature monitoring.

18 Meadowbrook Drive Milford, NH 03055 USA **Tel:** 603-672-8900 or 1-877-degreeC **Fax:** 603-672-9565

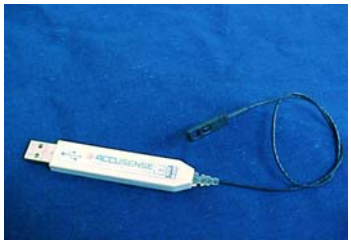
ATM2400

Block Diagram



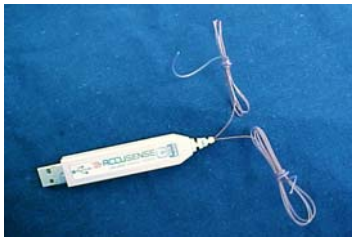
Airflow Measurement

Refer to the UAS1000 datasheet for airflow and airflow temperature measurement details.



Temperature Measurement

Refer to the UTS1000 datasheet for surface temperature measurement details.



Specifications

Operating temperature	10°C – 60°C for the ATM2400 hub
Storage temperature	-20°C – 70°C
Relative humidity (non-condensing)	5-95%
Supply voltage	92-240VAC, 50-60 Hz internal power supply. Power cord included
Density correction	Via AccuTrac 5.0 software
Sampling rate	0.1 seconds to 60 minutes

Mechanical Specifications

Dimensions	235 mm long X 300 mm wide X 35 mm high
Weight	2.5 Kg

PC Requirements

USB 1 or 2. See AccuTrac 5.0 datasheet for specific AccuTrac details

Part Number Format

ATM2400

Purchase of ATM2400 includes ATM2400, power supply, carrying case, AccuTrac software, sensor mounting clips, user manual

UAS & UTS sensors are sold separately.

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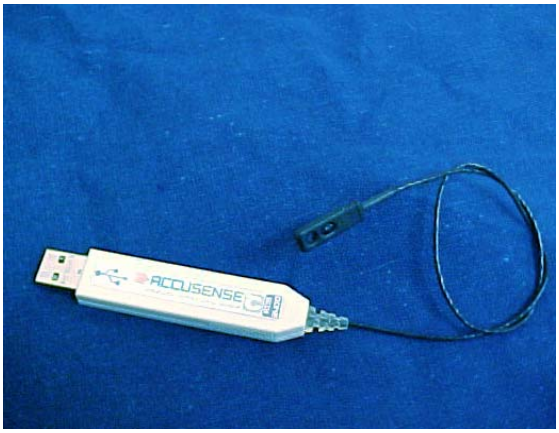
Airflow and Airflow Temperature Sensors for the ATM2400 Measurement System

UAS1000 Series

Features

- *UAS1000 measures air velocity and airflow temperature simultaneously*
- *Sensors connect to the ATM2400 data hub*
- *Easy to use – just plug in and start measuring*
- *Validate thermal and airflow models quickly and accurately*
- *Small sensors to reach distant and compact locations*
- *±5% of reading accuracy from 0-70°C*
- *Fully interchangeable with one another*
- *3 sensor head options*



About the UAS Series

The AccuSense UAS1000 Series is an air velocity and air temperature sensor used with the new ATM2400 Measurement System. The new UAS1000 Series offers many improvements with regards to accuracy and sensor ranges.

With a variety of sensor ranges from 0.15 m/s to 20 m/s (30-4000 fpm), the AccuSense UAS1000 Series offers such features as unimpaired access to tight locations, improved measurement accuracy with ±5% of reading from 0°C to 70°C, ease of installation, multipoint measurement, rugged construction, and probe interchangeability.

3 unique sensor head styles, remotely located on a 5 meter shielded cable, allow access in distant and compact locations such as between semiconductor devices, heat sinks, and inside ducts and plenums. These small heads cause minimal distortion of the true airflow picture, and air velocity and airflow temperature measurements are obtained at the same time.

The AccuSense UAS1000 Series sensors are also fully interchangeable with one another, as each sensor has its own on-line circuitry normalizing the performance of each sensor.

Simultaneous use of up to 36 UAS sensors with the ATM2400 data hub allows the user to have a snapshot of the airflow environment at any given time. Multiple ATM2400's can also be connected together to obtain up to 100 data points. For surface temperature measurement, please refer to the UTS1000/2000 Thermocouple Sensors datasheet. Both the UAS1000 and UTS1000/2000 can be used simultaneously with the ATM2400 data hub to obtain airflow, air temperature, and surface temperature in one instrument.

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UAS1000 Series

UAS Series Airflow & Temperature Measurement

Standard medium is air at standard pressure (101.3 kPa, 29.95" Hg). For use with other gases, please contact Degree Controls. Altitude compensation is available in AccuTrac 5.0 software

UAS1100 0.15 – 1.0 m/s (30 - 197 fpm)
UAS1200 0.50 – 5.0 m/s (99 - 985 fpm)
UAS1300 4.50 - 20 m/s (887 - 3940 fpm)

Air Velocity Accuracies

0-70°C Greater of ±5% of reading or 1% full-scale

Repeatability is ±1% under same conditions

Airflow Temperature Accuracies

0-70°C ±1°C

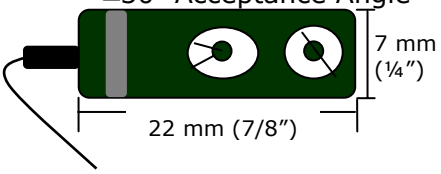
Repeatability is ±1% under same conditions

UAS-1000 Series General Specifications

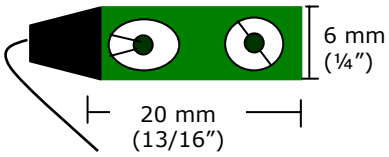
Operating temperature	0°C to 70°C
Storage temperature	0°C to 80°C
Relative humidity (non-condensing)	5-95%
Warm-up time after power up	Less than 5 seconds
Supply voltage	Supplied by ATM2400 data hub

Sensor Head Options

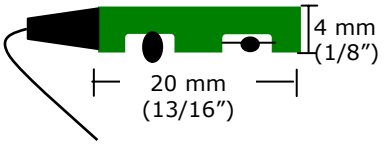
Plastic Head
±30° Acceptance Angle



Low Profile
±45° Acceptance Angle



XS Blade
±60° Acceptance Angle



Sensor Connector
100 mm long X 17 mm wide X 8 mm thick

Standard cable length is 5 meters shielded from connector to sensor head

Part Number Format

UASXXXXXX

1100 0.15 – 1.0 m/s
1200 0.50 – 5.0 m/s
1300 4.50 – 20 m/s

PC Plastic Head
LP Low Profile
XS Blade

ATM2400 & UTS1000 sold separately.

Specifications subject to change without notice

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Doc. No. 03092005
Rev:1.0

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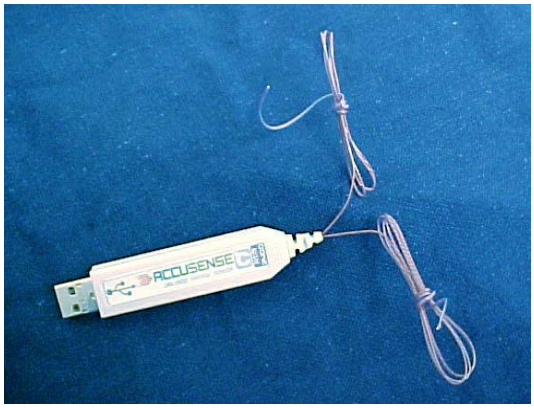
Thermocouple Sensors for the ATM2400 Measurement System

UTS1000

Features

- *UTS Series measures surface temperatures from -50°C to 250°C with ±1°C accuracy*
- *Sensors connect to the ATM2400 data hub*
- *Easy to use – just plug in and start measuring*
- *Electrically isolated up to 1500V.*
- *Small sensors to reach distant and compact locations*
- *Welded tips for quick installation*
- *Excellent for measuring live electronics*



About the UAS1000

The AccuSense UTS1000 are thermocouple sensors for use with the ATM2400 Measurement System. The ATM2400 data hub holds up to 36 UTS1000 sensors. Now, users of the ATM2400 can obtain thermocouple measurements as well as airflow and airflow temperature measurements (see UAS1000 Series) in one instrument.

With a measurement range of –50°C to 250°C and an accuracy of ±1°C, the UTS Series has a 30 AWG thickness and T type thermocouple. Standard thermocouple length is 5 meters. The thermocouple wires are welded at the factory, eliminating the need for the user to solder their own thermocouple tips.

AccuTrac 5.0 software allows you to collect, analyze and store the data quickly and easily. Data is collected for each sensor in an Excel format, with choice of statistical calculations of each sensor

UTS Series General Specifications

Operating temperature for connector	10°C to 60°C
Storage temperature	0°C to 80°C
Relative humidity (non-condensing)	5-95%
TC measurement range	-50°C to 250°C
Warm-up time after power up	5 seconds max
Accuracy	±1°C
Supply voltage	Supplied by the ATM2400 data hub
Thermocouple length	5 meters, T type thermocouple, 30 awg
Connector dimensions	100 mm long X 17 mm wide X 8 mm thick

Part Number Format

UTS1000

ATM2400 & UAS1000 sold separately.

Specifications subject to change without notice

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Doc. No. SD03092005
Rev:1.0

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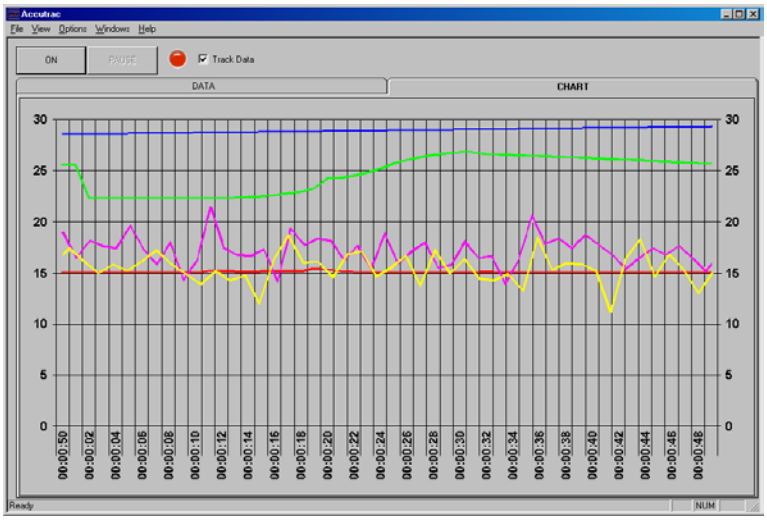
CAMBRIDGE ACCUSENSE

Graphing & Analysis Software for the ATM2400 Airflow and Temperature Measurement System

AccuTrac Revision 5.0

Features

- *Data saved in Excel format*
- *Easy-to-use graphing and spreadsheets*
- *Automatically inserts flow range and calibration date of each sensor into spreadsheet*
- *Alarms for out-of-range measurement*
- *Create customized labels for sensors*
- *Customize start and stop times for tests*
- *Automatic or manual data collection*



About AccuTrac 5.0

The Windows-based AccuTrac Rev. 5.0 software package turns your PC into a powerful test and analysis center. Used with the new AccuSense ATM2400 USB-based airflow and temperature instrument, AccuTrac collects airflow and temperature data real-time and displays, saves, reviews, graphs, and prints without export to another program.

The user-friendly AccuTrac software increases measurement versatility, reduces testing time, and improves testing flexibility. AccuTrac allows you to connect up to 4 instruments. However, users can choose whether all data are to be viewed and graphed real-time, or saved and reviewed later. Increased flexibility is also achieved by adjusting sampling rates of the UAS & UTS sensors to better understand turbulence. AccuTrac 5.0 is compatible with the ATM2400 Multipoint Airflow and Temperature Instrument which uses the UAS1000 Airflow and Airflow Temperature Sensors, and UTS1000/2000 Thermocouple Sensors.

System requirements are Windows 2000/XP, 50 MB free disk space, 1.0 GHz processor, 256 MB RAM

ATM2400 with UAS1000 Airflow Sensor

Close up of UAS1000 XS sensor head