degreeC™

DEGREE CONTROLS,INC.

Your Partner for Airflow Sensing & Controls

UAS1000 XS

Features

- UAS1000 measures air velocity & airflow temperature simultaneously
- Sensors connect to the °C Port data acquisition instruments
- Easy to use – just plug in & start measuring
- Validate thermal and airflow models quickly & accurately
- Small sensors to reach distant & compact locations
- Fully interchangeable with one another
- Multiple sensor head options

Overview

The UAS1000 Series is an air velocity and air temperature sensor used with the °C Port3600/ °C Port1200 Multipoint Measuring Instruments.

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

The UAS1000 Extra Small (XS) Blade sensor head style is remotely located on a 5 meter shielded cable to provide access to distant and compact locations such as between semiconductor devices, heat sinks, and inside ducts and plenums. This small head causes minimal distortion of the true airflow profile, and air velocity and airflow temperature measurements are obtained at the same time. The UAS1000 Series sensors are also fully interchangeable with one another, since each sensor has its own onboard circuitry normalizing the performance of each sensor.

Simultaneous use of up to 36 UAS sensors with the °C Port3600/ °C Port1200 data acquisition systems allows the user to have a snapshot of the airflow environment at any given time. Multiple °C Port3600s/°C Port1200s can be connected together to obtain up to 100 data points.

For other sensor head options, please refer to the UAS1000 LP, PC, Wand and UAS1000 Series, Board Mount datasheets.

For surface temperature measurement, please refer to the UTS1000 Thermocouple Sensor datasheet.

Humidity sensing is available with the UHS1000. UAS1000, UTS1000, and the UHS1000, can be used simultaneously with the °C Port3600/°C Port1200 to obtain airflow, air and surface temperature, and humidity in one instrument.

Extra Small (XS) Blade Sensor Head for UAS1000

°C Port3600 Data Acquisition Instrument for USB Sensors

Additional Sensor Head options for UAS1000 are available:

- *Low Profile (LP)*
- *Plastic Cap (PC)*
- *Wand*
- *UAS1000 Series, Board Mount*

Please refer to the UAS1000 LP, PC, Wand datasheet as well as the UAS1000 Series, Board Mount datasheet for other sensor head options.

Degree Controls, Inc.

is an ISO-9001 certified, world-class designer and manufacturer of airflow sensing, monitoring, and control solutions. With over 25 years of proven experience, we pride ourselves on delivering solutions which provide the value, differentiation, and service required by our customers, to meet the rapidly changing competitive landscape that they face.

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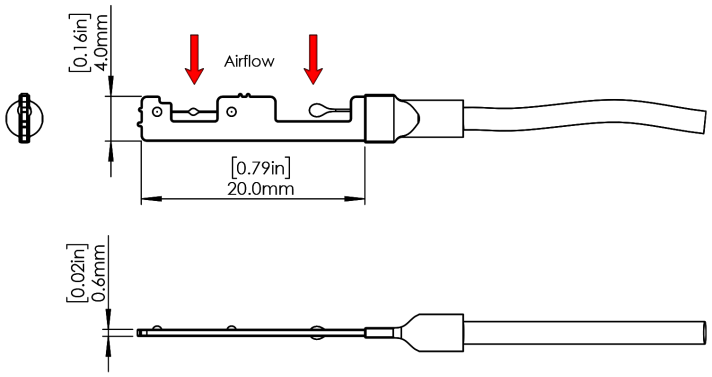
NOVA INSTRUMENTS

Specifications

Operating Temperature	0°C to 70°C
Storage Temperature	-40°C to 85°C
Relative Humidity (non-condensing)	5-95%
Warm Up Time After Power Up	Less than 5 seconds
Supply Voltage	Supplied by USB or °C Port Instrument

Sensor Head



Extra Small (XS) Blade Sensor Head

Airflow should approach the notched edge of the PCB.

USB Connector

USB Sensor Connector

Standard cable length is 5m (16') from sensor to connector, shielded. Nominal cable diameter is 2mm (0.08").

Airflow & Temperature Measurement

Air Velocity

Temperature Compensation Range: 0-70°C (32-158°F)
Accuracy (the greater of): ±0.025m/s (5fpm) or ±5% of reading
Repeatability (the greater of): 1% or ±0.01m/s (2fpm)

Temperature

Measurement Range: 0-70°C (32-158°F)
Measurement Accuracy[1]: ±1°C (1.8°F)
Resolution: ±0.1°C

Temperature Compensation Range: The UAS1000 is a thermal airflow sensor; it is sensitive to changes in air density and indicates velocity with reference to a set of standard conditions 25°C (77°F), 760mmHg (101.325kPa), and 0%RH. The UAS1000 has been designed so that when used over the stated temperature compensation range, the sensor indicates very close to actual air velocity and minimal compensation is only required to account for changes in barometric pressure or altitude.

Accuracy: Valid between 15-35°C (60-95°F), increasing by ±0.25% per degree and ±0.005m/s (1fpm) over remaining temperature compensation range.

[1]Above 0.5m/s (100fpm), ±1.5°C (2.7°F) below 0.5m/s (100fpm).

Part Number Format

UASXXXXXX

1100	0.15 – 1.0 m/s (30 – 200 fpm)	XS	Extra Small Blade
1200	0.5 – 5.0 m/s (100 – 1000 fpm)		
1300	4.5 – 20.0 m/s (900 - 4000 fpm)		
1500	0.15 – 20.0 m/s (30 - 4000 fpm)		

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