UHS1000

Applications

- Micro Environments
- Telecommunication Huts
- Electronic Cabinets
- Air Handlers
- Comfort Testing
- Datacenter Studies
- Critical Containment
- Air Compressor Ducts
- Automotive Airflow Testing
- HVAC Duct Testing
- Incubation
- Respiratory Products
- Weather Stations
- Critical Containment

Additionally, the UHS1000 can be used as the compensating sensor for °C Port multipoint airflow experiments!

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.

Degree Controls, Inc.
300 Innovative Way
Suite 222
Nashua, NH 03062-5746

603.672.8900 or 1.877.334.7332
sales@degreeC.com
www.degreeC.com

Overview

The UHS1000 from Degree Controls, is an airflow humidity and temperature sensor with USB interface and works with AccuTrac™ datalogging software. Newly released with 1.5% accuracy in environments from 0% to 100% humidity, the UHS1000 is an excellent complement to the °C Port family of airflow testing and data acquisition instrumentation.

Designed to fit into tight locations, the UHS1000 is the smallest humidity and temperature sensor on the market, and is suitable for both standalone airflow testing, and multipoint testing of ducted air systems. When used with the °C Port family of Airflow Testing Instruments, the UHS1000 sensor provides high accuracy humidity input for real time compensation of the measured air velocity.

The UHS1000 features a rugged construction, shielded cable (can be extended via A-Male to A-Female USB extension cable), and up to 36 sensors can be connected together using the °C Port3600 for the most rigorous multi-point airflow experiments or datalogging activities. Typical applications include HVAC duct testing, air conditioner intake and return monitoring, vivarium monitoring, automotive airflow testing, laboratory and critical environment monitoring, weather stations, and more.

With dual channels of data (humidity and air temperature), the UHS1000 is a compact and accurate device with 100's of uses. When used as the compensating device for UAS1000 air velocity sensors and the °C Port family of data acquisition instrumentations, it becomes the most powerful multi-point airflow analysis platform on the market.

Adding thermocouple measurements to study surface or case temperatures may also be vital while conducting air velocity experimentation. The UTS1000 is a USB based thermocouple which is also part of the DegreeC airflow testing suite, and is used to study the temperature variation of surfaces during airflow testing. See the corresponding UAS1000 (air velocity and temperature sensors) and UTS (thermocouple sensors) Data Sheets for further information.

Features

- Dual channel sensor with simultaneous humidity and temperature outputs
- Includes hydrophobic filter and condensation-resistance
- 1.5% humidity accuracy and 0.1 °C temperature accuracy
- High, 14-bit humidity and temperature sensor resolution
- -40°C to 125°C operating range
- Convenience of USB connectivity
- Single point or multipoint experimentation
- Works with AccuTrac™ datalogging software
- RoHS 6 compliant
- NIST traceable

*°C Port3600 Data Acquisition Instrument for USB Sensors*

NOVA INSTRUMENTS

Specifications

Operating Humidity Range	Sensor Body: 5 - 95%RH Sensor Head: 0 - 100%RH
Operating Temperature Range	Sensor Body: 0°C to 70°C Sensor Head: -40°C to 125°C
Storage Humidity Range	30-50%RH
Storage Temperature Range	-40°C to 125°C
Hysteresis	±1.0%RH
Response Time	Humidity: t 63% - max 8 seconds Temperature: t 63% - max 30 seconds
Long Term Stability	<0.05%RH/yr

The sensor shows best performance when operated within recommended normal temperature and humidity range of 5°C to 60°C and 20 – 80%RH, respectively.
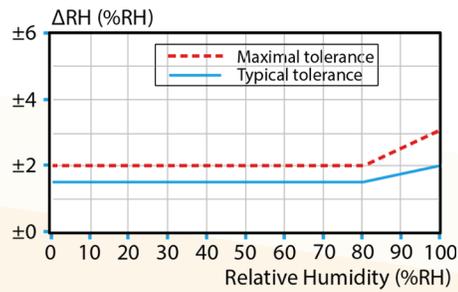
Tolerance of RH at 25°C
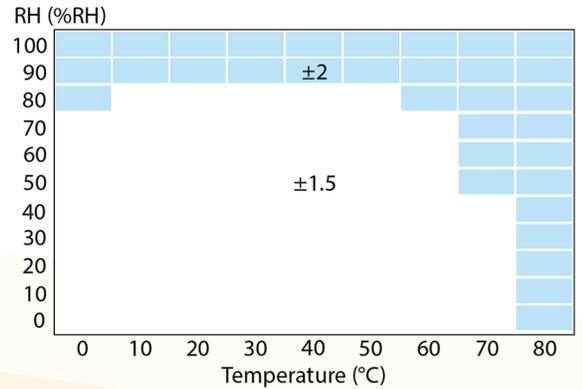
Typical Tolerance of RH over T

Mechanical Dimensions

Cable Length	1 meter (39") from connector to sensor head (A-Male to A-Female USB Extension can be used)
Sensor Head Dimensions	W - 8.3mm (.33") L - 19.4mm (.77") D - 4.2mm (.16")
Sensor USB Connector	W - 17mm (.67") L - 100mm (3.9") D - 8mm (.32")

Sensor Recalibration

Over time, exposure to elevated temperatures and low humidity conditions, will dry out the sensing element. If recalibration is not performed, your sensor may read a slight offset, and extended exposure to condensing and high humidity environments (>90%RH) may cause a revisable shift in readings.
Degree Controls recommends recalibrating your sensor on an annual basis, in order to ensure full function of pre-calibrated values.