

Applied Technologies, Inc.

Ultrasonic Anemometer Line

High Speed, High Accuracy Temperature Probe

FEATURES:

- Settings operator controlled
- Digital outputs
- Time proven design
- Sensor emulation
- Low power
- Solid-state digital operation
- Different mechanical arrays available
- Custom design array available
- We have no problem adapting and tailoring the probe head to your application.



The Applied Technologies, Inc High-Speed, High Accuracy Temperature Probe can provide a fast temperature measurement, and a highly accurate

If there is a requirement for a temperature measurement with some unusual parameters, there may be a solution that will help solve these issues. There might be occasions when there is a requirement for a fast response temperature measurement. Or there might be a requirement for trying to get an accurate temperature measurement with a high-resolution temperature reading. Or there might be a requirement for measuring a fast temperature transition. Or there might be a requirement for getting a quick temperature reading without waiting for a normal thermometer to settle down.

Applied Technologies, Inc. has a probe that can perform unusual requirements, for air or a good deal of the gases, when making temperature measurements. It can provide a high-speed temperature, a high-resolution temperature, a fast temperature measurement, and a highly accurate temperature.

The electronics are all contained within the probe bar, and the transducers are completely sealed. This allows it to be operated as a tower mounted instrument, capable of withstanding hostile environmental conditions. The transducer operation and sonic functions, as well as all computation and transmission of data are under microprocessor control.

Data from the Sonic Anemometer/Thermometer are digital in nature. The output is RS-232C compatible in a UART asynchronous format. It represents the data in ASCII decimal numbers, and may be connected directly to a computer, transmitted to any digital recording device, or the format is such that it can also be read directly on a terminal. The temperature information is the sonic temperature of the measured winds and is calculated from the vertical sonic measurements.

FUNCTIONS:

- Ability to do remote commands through the serial port
- Perform internal calibration to maintain accuracy
- User programmable data rates and averaging, from 1 output per 60 minutes to 200 Hz
- Select data averaging or median filter
- Select from several output formats
- Select from several baud rates
- Synchronize sonic operation to external trigger
- Ability to output a trigger pulse for other instruments
- Select the output Speed of Sound and/or Temperature
- Enter RH value for more accurate temperature output
- User adjustments to temperature calculations
- User adjustments to data quality calculations
- Ability to provide data quality status word in output format

Specifications

High speed temperature measurements:	<1 Hz to 200 Hz - variable
High resolution temperature:	
Nominal	0.01°C
Optional	0.001°C
Accurate temperature:	
Absolute	±1.2°C
Nominal (Sonic)	±0.1°C
Possible	±0.05°C
Output:	
Data Rate	<1 Hz to 200 Hz
Nominal	Serial RS-232
Optional	RS-422
Optional	Binary Included
Baud Rate:	4800 to 460,800
Operation:	
Temperature	-50°C to +70°C
Relative Humidity	0 to 100%
Power Requirements:	+12 Vdc @ <50 mA (9 – 32 Vdc)
Probe Array:	2.54 cm x 15.9 cm x 17.8 cm Size can be adjusted
Weight:	<0.5 Kg
Mounting:	3.175 cm square tube

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