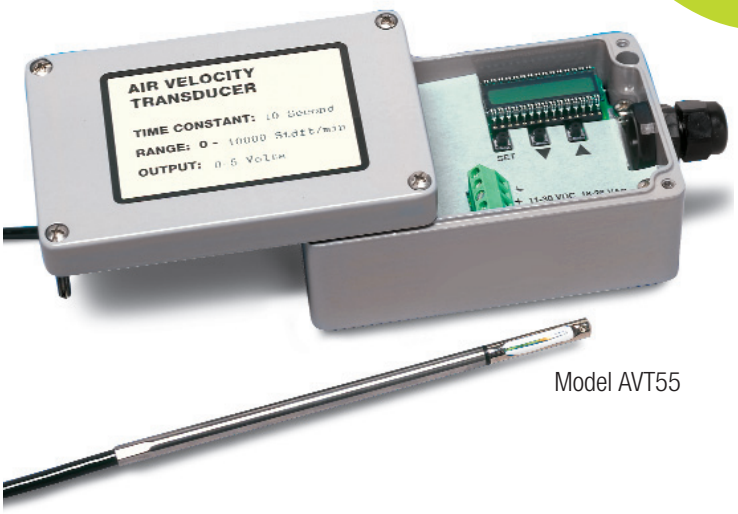
Air Monitoring



Model AVT55

AVT55

AVT65

AVT75

Air Velocity Transducers

Models AVT55, AVT65, and AVT75

The AVT55, AVT65, and AVT75 Air Velocity Transducers are ideal for both temporary and permanent installations for air velocity measurements in research and development labs, manufacturing processes, and other applications. The full–scale range, signal output, and time constant are user selectable and can be easily changed to meet the needs of your application.

General Purpose (AVT55)

- Protected probe tip
- Rugged ceramic sensor
- Wide range of measurement applications
- Fast response time

Windowless (AVT65)

- Less flow blockage
- Ideal for measuring in confined spaces
- Fast response time

Omnidirectional (AVT75)

- Omnidirectional probe tip
- Accurate at low velocities from 0.05 to 0.5 m/s (10 to 100 ft/min)
- Ideal for unknown or varying flow direction

Applications

- Comfort and draft studies
- Critical environment installations (e.g., clean rooms and hospitals)
- Diffuser design analysis
- Monitoring drying processes
- Monitoring air flows in tunnels and subways
- Used as a standard in wind tunnels and calibration facilities
- Environmental monitoring in greenhouses and IAQ applications
- General engineering applications

Accurate. Reliable. Every Time.

TSI AIRFLOW INSTRUMENTS

Models AVT55, AVT65, AVT75

All models contain on-board electronics and calibration curves that provide a linear signal output. This linear signal is sent out as either a current (mA) or a voltage (V) signal, allowing output to a variety of data loggers or data acquisition systems. In addition, the current and voltage output ranges are user-selectable for your convenience.

Specifications

Models AVT55, AVT65, AVT75

Accuracy

AVT55 ±2.0% of reading[1], ±0.5% of full scale of selected range

AVT65 ±2.0% of reading[1], ±0.5% of full scale of selected range

AVT75 ±3.0% of reading[2], ±1.0% of full scale of selected range

Field Selectable Range

AVT55 and AVT 65 0.125 m/s to 1.0, 1.25, 1.50, 2.0, 2.5, 3.0, 4.0, 5.0, 7.5, 10.0, 12.5, 15.0, 20.0, 25.0, 30.0, 40.0, 50.0 m/s (25 ft/min to 200, 250, 300, 400, 500, 750, 1,000, 1,250, 1,500, 2,000, 2,500, 3,000, 4,000, 5,000, 7,500, 10,000 ft/min)

AVT75 0.05 m/s to 0.5, 0.75, 1.0, 1.25, 1.50, 2.0, 2.5 m/s (10 ft/min to 100, 125, 150, 200, 250, 300, 400, 500 ft/min)

Repeatability

AVT55 and AVT 65 <±1.0% of reading[3]

AVT75 N/A

Response to Flow

AVT55 and AVT 65 0.2 sec.[4]

AVT75 0.2 sec.[5]

Temperature Range

Compensation 0 to 60°C (32 to 140°F)

Operating (electronics) 0 to 93°C (32 to 200°F)

Operating (sensor) 0 to 93°C (32 to 200°F)

Storage 0 to 93°C (32 to 200°F)

Resolution (minimum)

0.07% of selected full scale

Input Power

11-30 VDC or 18-38 VAC, 350 mA max[6]

Output

Impedance Voltage mode: less than 1 ohm, 20 mA max source current

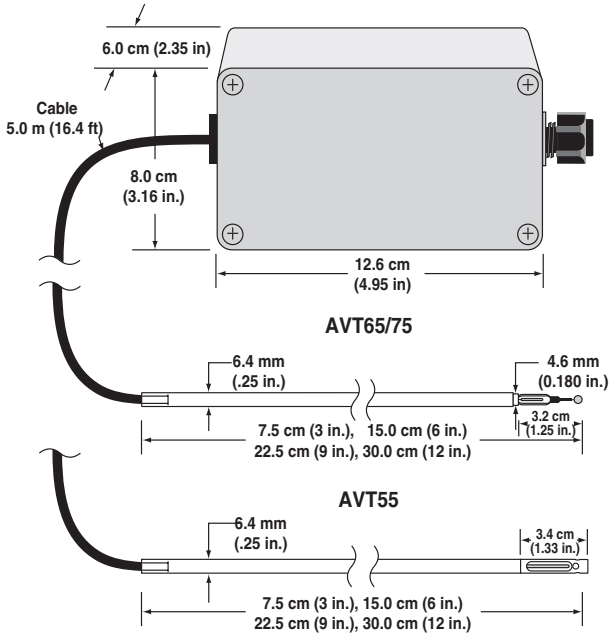
Resistance Current mode: 500 ohms maximum load

Signal Field selectable 0–20 mA, 4–20 mA, 0–5V, 0–10V, 20–10V

Time Constant Field selectable 0.05 to 10 seconds

Probe length

7.5 cm, 15 cm, 22.5 cm, or 30 cm (3 in., 6 in., 9 in., 12 in.)



	AVT55/AVT65	AVT75
Range	0.127 to 50.8 m/s (25 to 10,000 fpm), selectable	0.051 to 2.54 m/s (10 to 500 fpm), selectable
Accuracy	±(2% of reading at 18 to 28°C (64.4-82.4°F) + 0.5% of full scale of selected range)	±(3% of reading at 20 to 26°C (68.0-82.4°F) +1% of full scale of selected range)
Response time	0.2 seconds	5.0 seconds
Input power	350 m , 11-30 VDC or 18-28 VAC, A maximum	

[1] From 18 to 28°C (64.4 to 82.4°F), outside this range and within temperature compensation range add 0.2% per °C (0.4% per °F).

[2] From 20 to 26°C (68 to 78.8°F), outside this range and within temperature compensation range add 0.5% per °C (0.9% per °F). Directed sensitivity of the Model AVT75 is a +5%/-20% of reading +0/-0.05 m/s (+0/-10 ft/min) over 270° solid angle regardless of flow direction.

[3] Standard deviation based on one minute average from 0.5 to 5.0 m/s (100 to 1000 fpm).

[4] For 63% of final value, tested at 7.5 m/s (1500 fpm).

[5] For 63% of final value, tested at 2.5 m/s (500 fpm).

[6] Input voltage must be maintained within specifications at the transducer.

Specifications subject to change without notice.

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