

# AVT Series

## Air Velocity and Air Temperature Series

# AVT Air Velocity and Air Temperature Sensor

## Features

- Measures Air & Gas Velocity and Temperature
- Flow Ranges up to 20m/s (4000 fpm)
- Temperature from 10-70°C
- Linear Output
- Ultra-Sensitive
- Choice of outputs 0-5V, 0-10V, 4-20mA
- Universal Supply: 12-24VDC
- Temperature compensated from 10-60°C



## About the AVT Sensor

The AVT Air Velocity and Air Temperature Sensor is a newly developed transmitter based on AccuSense's accurate and reliable thermal anemometer technology. In addition to air, it can be used in a wide range of other gases. For details and compensation factors please contact AccuSense, a division of Degree Controls, Inc.

The AVT series offers both linearized airflow and air temperature readings taken by separate sensors only millimeters apart, which allows simultaneous measurement in real time.

AccuSense has developed a new temperature compensation algorithm for this OEM sensor, which reads airflow accurately from 10-60°C. This makes this product suitable not only for room temperature, but also for a wide range of elevated temperature applications like electronics cooling. Other applications include biological safety cabinets, animal cages, process control, HVAC and isolation rooms.

Additional features include the compact transmitter case design, and a newly designed flange for easy mounting of the sensor head.

## Specifications

Supply Voltage:	12-24 VDC	Warm-up Time:	< 10 s
Supply Current:	30-150 mA	Repeatability:	± 0.5 %
Current Loop Load:	200 OHM	• Transmitter:	0 - 50°C (32 - 122°F)
Time Constant:	200 ms	• Sensor Heads:	-20 - 100°C (-4 - 212°F)

## Temperature

Range:	10-70°C (50-158°F)
Accuracy:	± 1.0°C with flowing air
Resolution:	± 0.1°C

## Measurement

Standard medium is air at standard pressure (101.3 kPa, 29.95" Hg). For altitude compensation and use with other gases, please contact Degree C.

Compensation Range:	10-60°C
Airflow Range:	Various ranges from 0.15 to 20m/s (30 to 4,000 fpm)
Accuracy Option 5:	Greater of ±5% of reading or ±0.05m/s (10 fpm) or 1% of full scale
Option 8:	Greater of ±8% of reading or ±0.05m/s (10 fpm) or 1% of full scale
Output Resolution:	1,024 steps

## Mechanical Dimensions

Transmitter	16 mm H x 47 mm W x 61 mm L
Cable length	1 or 2 meter shielded
Sensor head options:	
Plastic on stainless steel rod	DIAMETER 5.0mm (1/4 "),
rod length	50mm (2"), 100mm (4"), or 150mm (6")
Plastic type	7.1mm (0.28") x 22mm (0.88") x 3.3mm (0.13")
Low Profile	5.0mm (0.20") x 14mm (0.55") x 0.5mm (0.02")
XS type	3.8mm (0.15") x 15mm (0.575") x 0.5mm (0.02")

## Connector Configuration

Supply:	Red Black	Supply Ground
Output:	Yellow White	Airflow Signal Temperature Signal

AVT	X	X	X	X	X	X	X	X	X
AIR VELOCITY AND AIR TEMPERATURE SENSOR	SERIES	SUPPLY VOLTAGE	CASE	SENSOR RANGE	ACCURACY	OUTPUT	SENSOR HEAD	CABLE LENGTH	CONNECTOR OPTIONS
For details on other gases and gas correction factors please contact AccuSense.	0 = Non-Directional Sensor	U = 12-24VDC	5 = Plastic  6 = Case on DIN Rail adapter	<u>Velocity</u> Minimum detectable flow rate: 0.15 m/s (30 fpm)  B = 200 fpm C = 500 fpm D = 1000 fpm E = 1500 fpm F = 2000 fpm G = 2500 fpm  I = 3500 fpm J = 4000 fpm  M = 1 m/s N = 2 m/s O = 5 m/s P = 10 m/s Q = 15 m/s R = 20 m/s  Temperature 10-70°C (50-158°F)	5 = Greater of ±5% of reading or ±0.05 m/s (10 fpm) or 1% of full scale.  8 = Greater of ±8% of reading or ±0.05 m/s (10 fpm) or 1% of full scale.	1 = 0-5 VDC 2 = 0-10 VDC 3 = 4-20 mA	0 = Plastic sensor head 1 = Low-Profile 2 = 50 mm (2") 4 = 100mm (4") 6 = 150mm (6") stainless steel rod with flange (photo page 1) 7 = 30 mm (1.2") sensor head on flange 9 = XS Blade type	(shielded) 1 = 1 m 2 = 2 m  For other lengths please contact AccuSense	6 = 300mm (12") with Mate-N-Lok Connector  Matching mates include Molex™ Series 5559, 5566 and 5569.  For other lengths and custom connector options please contact AccuSense.