

AIR FLOW AND VELOCITY TRANSMITTERS

AVT SERIES

Multifunctional air velocity transmitters for building automation systems

The AVT series air velocity transmitters are engineered for building automation in the HVAC/R industry. The AVTs measure air velocity and temperature, with field selectable range and output options in a single device. Designed with a duct mount probe and adjustable collar suitable for round or rectangular ducts.

AVT series devices include:

- 3 field selectable measurement ranges for air velocity, selectable via jumper (see Model Summary).
- Separate readings and outputs for air velocity and temperature.
- Proportional output options include: voltage (0–10 V) and current (4–20 mA).

AVT series device options offer:

- Backlit display
- Field adjustable relay

The versatility of the AVT series air velocity transmitters ensures that the right product for your application is available.



SIMILAR PRODUCTS

- DPT-FLOW series air flow transmitters

APPLICATIONS

AVT series devices are commonly used in HVAC/R systems for:

- in-duct air flow and velocity monitoring
- in-duct temperature monitoring
- VAV applications

MODEL SUMMARY

| | | |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------|
| Measurement ranges Velocity: (m/s) Temperature: °C (field selectable via jumper) | 0...2 / 0...10 / 0...20 m/s 0...50 °C | |
| Description | Model | Product code |
| All-in-one air velocity transmitters | AVT | 117.004.001 |
| - with display | AVT-D | 117.004.002 |
| - with display and relay | AVT-D-R | 117.004.003 |

Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

For pricing or any further information, please contact Omni Instruments Ltd.

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SPECIFICATIONS

Performance

Measurement ranges:

Velocity:
 Range: 0–2 m/s
 Range: 0–10 m/s
 Range: 0–20 m/s
 Temperature: 0–50 °C

Accuracy:

Velocity:
 Range: 0...2 m/s: <0.2 m/s + 5 % from reading
 Range: 0...10 m/s: <0.5 m/s + 5 % from reading
 Range: 0...20 m/s: <1.0 m/s + 5 % from reading
 Thermal shift: ±0.8 % FS / °C
 Units calibrated at 22 °C. Rapid thermal shift stabilisation time 10 min.
 Temperature: <0.5 °C (velocity > 0.5 m/s)

Technical Specifications

Media compatibility:

Dry air or non-aggressive gases

Measuring units:

m/s and °C

Measuring element:

Temperature: ntc10k
 Velocity: Pt1000

Environment:

Operating temperature: 0...50 °C
 Storage temperature: -20...70 °C
 Humidity: 0 to 95 % rH, non-condensing

Physical

Dimensions:

Case : 90.0 x 95.0 x 36.0 mm
 Probe: OD 10 mm, length 210 mm from bottom of the cover
 Immersion Length with Flange: Adjustable 50–180 mm

Weight:

220 g

Mounting:

Mounting flange, ø 4.0 mm

Materials:

Case: ABS
 Lid: PC
 Probe: Stainless steel 304
 Mounting flange: LLPDP

Protection standard:

IP54

Display:

3 1/2 digit LCD backlit display
 Size: 45.7 x 12.7 mm

Electrical connections:

Power supply & signal out: 4-screw terminal block
 12–24 AWG (0.2–1.5 mm²)
 Relay Out: 3-screw terminal block
 12–24 AWG (0.2–1.5 mm²)

Cable entry:

M16

Electrical

Input: 24 VDC / 24 VAC ± 10 %
 Current consumption 35 mA (50 mA with relay)
 + 40 mA with mA-outs

Output signal 1: (T out)

0–10 V (linear to temperature)
 L min 1 kΩ

4–20 mA (linear to temperature)
 L max 400 Ω

Output signal 2: (v out)

0–10 V (linear to m/s)
 L min 1 kΩ

4–20 mA (linear to m/s)
 L max 400 Ω

Relay Out: 3-screw terminal block
 (NC, COM, NO)

Potential free SPDT

250 VAC, 6A / 30 VDC, 6 A adjustable switching point and hysteresis

Conformance

Meets the requirements for CE marking:
 EMC Directive 2014/30/EU
 RoHS Directive 2011/65/EU
 LVD Directive 2014/35/EU
 WEEE Directive 2012/19/EU



HOW TO GENERATE A MODEL?

| Example: | Product series | | |
|----------|----------------|---------|--------------------------|
| | AVT-D-R | AVT | Air velocity transmitter |
| | | Display | |
| | | -D | With display |
| | | | Without display |
| | | Relay | |
| | | -R | With relay |
| | | | Without relay |
| Model | AVT | -D | -R |

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