



AVDT25N

Air velocity sensor

Duct sensor for air velocity measurement in HVAC-systems.

AVDT25N is intended for mounting in ventilation ducts or similar applications.

- ✓ Selectable working range 0...10/15/20 m/s
- ✓ Output signal 0...10 V DC or 4...20 mA
- ✓ Supply voltage 24 V AC/DC
- ✓ Adjustable damping time
- ✓ Short reaction time
- ✓ Adjustable probe insertion length

Function

The air velocity sensor operates on the hot-wire anemometer principle. The sensor element is a specially designed thin film element which is heated. The cooling rate of the element, which depends on the air velocity, is measured and is transformed by the built-in electronics to an analogue output signal proportional to the air speed. The signal is compensated for varying temperature. The very thin measuring element has the advantage of being highly resistant to contamination by dust etc.

Selectable working range

The working range can be set by means of a jumper on the printed circuit board. This facilitates easy adjustment to the correct working range on start-up.

See next page for further information.

Output signal

The sensor output signal is selectable 0...10 V or 4...20 mA.

Sensor casing

The sensor casing has protection class IP65.

Probe length

The sensor can be mounted with stepless insertion length 20...200 mm.

See next page.

Mounting

The sensor can be mounted with the whole of the probe length (220 mm) inside the duct. The sensor is then fastened to the bottom of the casing by two screws. If only part of the probe is to be inserted the mounting device is used. This enables the probe to be inserted between 20 and 200 mm.

Note: The sensor is to be mounted so that the direction of air-flow is parallel to the sensor duct.

Technical data

Supply voltage	24 V AC/DC $\pm 20\%$
Power consumption	5 VA
Wiring	Screw terminals
Ambient temperature	-10 +50°C
Storage temperature	-30...+60°C
Time constant	1.5 s at 10 m/s
Protection class	IP65

Inputs

Sensor element	Thin film element
Working range	0...10 / 0...15 / 0...20 m/s, selectable

Accuracy

Range 0.2...10 m/s	$\pm(0.2 \text{ m/s} + 3\% \text{ of value})$
Range 0.2...15 m/s	$\pm(0.2 \text{ m/s} + 3\% \text{ of value})$
Range 0.2...20 m/s	$\pm(0.2 \text{ m/s} + 4\% \text{ of value})$
Response time	Selectable 0.7 or 4 s

Outputs

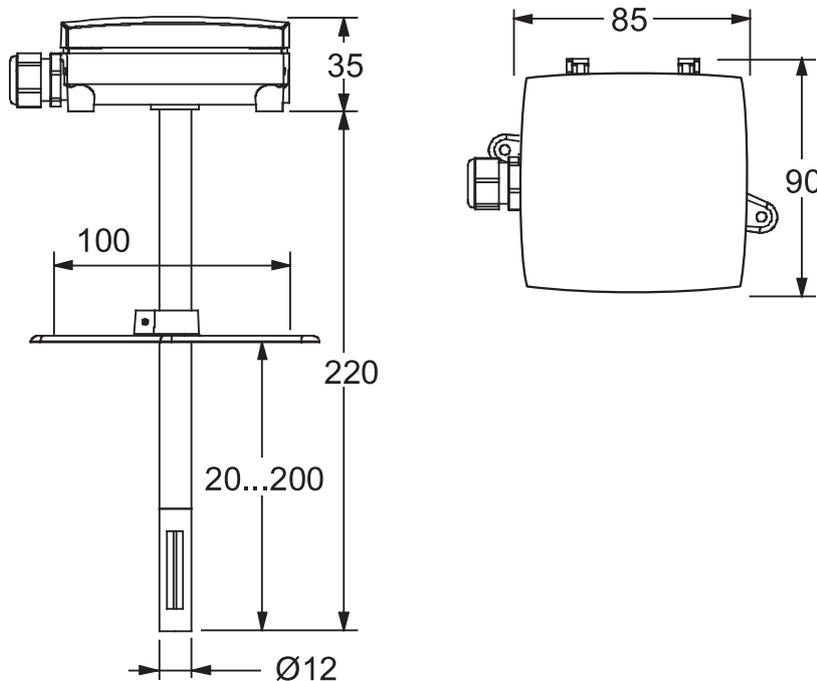
Output	0...10 V DC or 4...20 mA, selectable
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CE

EMC emissions & immunity standards: This product conforms to the requirements of the EMC Directive 2014/30/EU through product standards EN 61326-1 and 61326-2-3.

RoHS: This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council through standard EN 50581:2012.

Dimensions



Measurements in mm