

AV-R-10 and AV-D-10 AIR VELOCITY TRANSMITTERS

- Highly accurate measurement of air velocities of up to 20 m/s (2000 ft/min).
- Mounting flange permits continuous adjustment of immersion depth at duct.
- Response time (t_{90}), measuring range, and output signal (0-10 V / 4-20 mA) can all be independently reset by shifting jumpers on the circuit board.



SYSTEM OVERVIEW

The AV-D-10 Duct-Mounted and AV-R-10 Remote Air Velocity Transmitters are designed for highly accurate measurement of air velocity up to 20 m/s (2000 ft/min). They feature a thin-film sensor which operates according to the hot-film anemometer principle. The mounting flange permits a continuous adjustment of immersion depth at the duct. The output signal, measuring range, and response time can be adjusted by shifting a jumper on the circuit board.

The AV-R-10 and AV-D-10 air velocity transmitters are ideal for accurate and reliable measurement in building automation and ventilation applications. For special applications, please contact Honeywell.

The transmitters are suitable for use in all systems capable of accepting 0-10 VDC inputs.

Technical Specification

Measuring range

Working range	0-10 m/s (0-2000 ft/min) 0-15 m/s (0-3000 ft/min) 0-20 m/s (0-4000 ft/min)
Accuracy	±0.2 m/s + 3% of m.v. at 20 °C (68 °F), 45% r.H., 1013 hPa
Response time τ90	typ. 4 s (default) or 1 s (constant temperature)

General

Power supply Output	0...10 V, 4...20 mA (default); -1 mA < IL < 1 mA RL < 500 Ω (linear, 3 wires)
Current consumption	max. 170 mA (AC), max. 70 mA (DC)
Electrical connection	screw terminals, max. 1.5 mm ² (AWG 16)
Cable gland	M16x1.5

Housing material	Polycarbonate, UL94V-0 approved
Approvals	CE
Protection class	Enclosure IP65 / NEMA 4, remote probe IP20
Storage temperature	-30 to +60 °C (-22...+140 °F)
Working temp. probe	-25 to +50 °C (-13...+122 °F)
Working temp. electronics	-10 to +50 °C (+14...+122 °F)
Working humidity	5 to 95% r.H. (non-condensing)

Dimensions

Dimensions	see Fig. 1 on page 2
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Dimensions

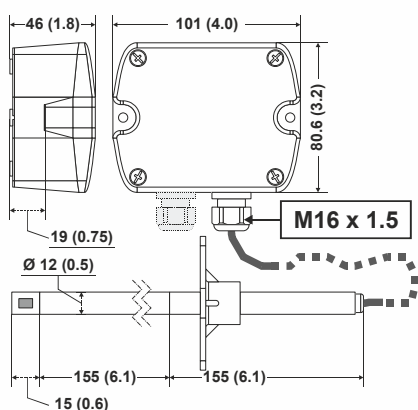


Fig. 1. Dimensions in mm (inches)

Wiring

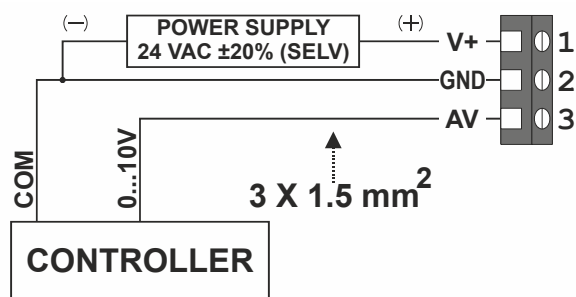


Fig. 2. Wiring

NOTE: Use shielded wiring in areas with high EMI. Keep 15 cm (5.9") minimum distance between sensor lines and 230 VAC power lines.

Settings

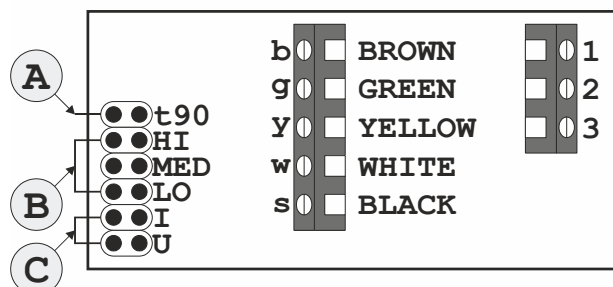


Fig. 3. Jumpers (A = response time; B = measuring range; C = output signal)

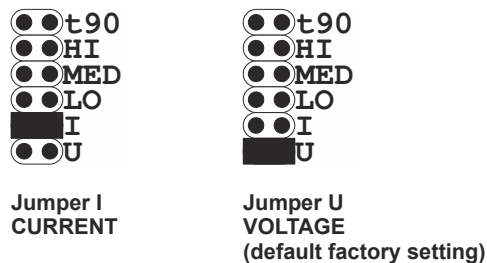
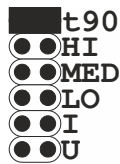
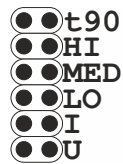


Fig. 4. Selection of output signal

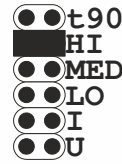


Jumper t90
SLOW (4 sec)
(default factory
setting)

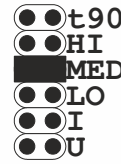


No jumper
FAST (1 sec)

Fig. 5. Selection of response time



Jumper HI
0...20 m/s
(0...4000 ft/min)



Jumper MED
0...15 m/s
(0...3000 ft/min)



Jumper LO
0...10 m/s
(0...2000 ft/min)
(factory default
setting)

Fig. 6. Selection of measuring range

Mounting

NOTE: The accurate and reliable determination of airvelocity depends on the correct positioning of the probe. Accurate measurements are possible only if the probe is installed in a location with approximately laminar flow. In the case of duct mounting, suitable inlet and outlet paths must be present. Extreme mechanical and unspecified strain and corrosive environments and condensation must be avoided. See also AV-R-10 and AV-D-10 – Mounting Instructions (MU1B-0620GE51).

For more information!

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