

# E-AV-K

## HVAC Miniature Air Flow Transmitter

The E-AV-K is a compact air velocity probe for HVAC applications. The built-in flow sensing element combines the advantages of state-of-the-art thin-film manufacturing and of the newest transfer molding technology. It operates on the hot-film anemometer principle and ensures high accuracy and reproducibility as well as long-term stability and outstanding resistance to pollutants. The measured air velocity up to 10 m/s (2000 ft/min) is a linear voltage output of 0 - 5 V. The alignment strip on the probe and the matching mounting flange within the scope of supply simplify installation and correct positioning in the air flow. The flange enables the immersion depth to be infinitely variable.



### Typical Applications

Heating and ventilation systems  
 Flow monitoring and control  
 Inlet air monitoring in ovens

### Features

High accuracy and long-term stability  
 Outstanding resistance to contamination  
 Easy and quick mounting  
 User configurable

### Technical Data

#### Flow measurement

Measurement range	0...10 m/s (0...2000 ft/min)
Output signal	0 - 5 V (max. 1 mA)
Accuracy <sup>1)</sup> at 20 °C (68 °F) / 45 % rh and 1013 hPa (14.7 psi)	1... 10 m/s (200...2000 ft/min): ±(0.3 m/s / 60 ft/min + 4 % of measured value)
Response time $\tau_{90}$	typ. 4 s

#### General

Supply voltage	10...29 V DC SELV
Current demand	max. 50 mA at 10 m/s (2000 ft/min)
Temperature range	operation: -20...60 °C (-4...140 °F) storage: -30...60 °C (-22...140 °F)
Operating range humidity	5...95 % rh (non-condensing)
Connection	
Cable version	0.5 m (1.6 ft) / 2 m (6.6 ft) cable, PVC, temperature-flexible, 5x0.25 mm <sup>2</sup> (AWG 23) with ferrules
Electromagnetic compatibility <sup>2)</sup>	EN61326-1 EN61326-2-3
Material / protection class	polycarbonate / IP50 (probe head); IP54 (housing)

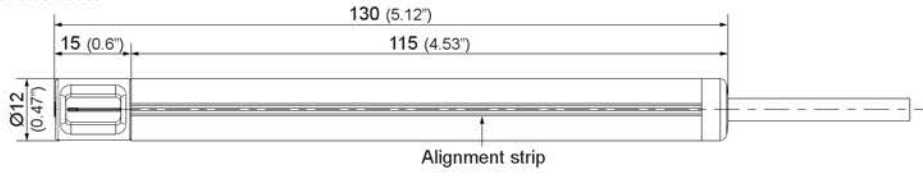


1) The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-fold standard deviation). The tolerance was calculated in accordance with EA-4/02 following the GUM (Guide to the Expression of Uncertainty in Measurement).

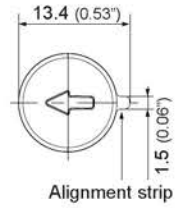
2) The E-AV-K is not short-circuit-proof and not surge-proof (ESD-sensitive device).

# Dimensions (mm/inch)

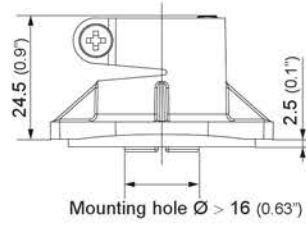
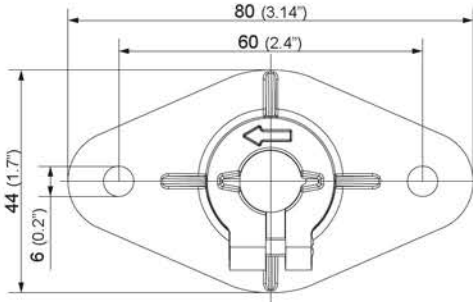
## Cable version



## Front view Measurement head:



## Flange (within the scope of supply):



## Cable Assignment

- V+ ..... white
- GND..... brown
- Analogue output... green
- SDA<sup>\*)</sup>..... grey
- SCL<sup>\*)</sup>..... yellow

<sup>\*)</sup> digital setup interface E2