![E+E ELEKTRONIK logo] **YOUR PARTNER IN SENSOR TECHNOLOGY**

EE671

HVAC Air Velocity Probe

The compact EE671 air velocity probe is dedicated for HVAC applications. It operates on the hot-film anemometer principle and offers high accuracy and excellent long-term stability.

Reliability

The flow sensing element combines state-of-the-art E+E thin-film technology with modern transfer molding technology. By this, the EE671 is very robust and highly insensitive to contamination.

Easy installation

EE671 is available with fixed cable or M12 connector. The alignment strip on the probe facilitates the correct positioning in the air flow. The mounting flange within the scope of supply enables precise setting of the immersion depth.

Versatility

The measured data up to 20 m/s (4000 ft/min) is available either on the analogue voltage output or on the RS485 interface with Modbus RTU protocol.

Configurable and adjustable

The free PCS10 Product Configuration Software together with an optional adapter facilitates the configuration and adjustment of the EE671.

Typical Applications

Heating and ventilation
Intake air monitoring in ovens

Features

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

Technical Data

Air Velocity

Measurement range	0...5 m/s	(0...1000 ft/min)
	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[1]	±(0.2 m/s / 40 ft/min + 3 % of mv):	0.5...5 m/s (100...1000 ft/min)
at 20 °C (68 °F) / 45 % RH and 1013 hPa (14.7 psi)	±(0.3 m/s / 60 ft/min + 4 % of mv):	1... 10 m/s (200...2000 ft/min)
	±(0.35 m/s / 70 ft/min + 5 % of mv):	1... 15 m/s (200...3000 ft/min)
mv = measured value	±(0.4 m/s / 80 ft/min + 6 % of mv):	1... 20 m/s (200...4000 ft/min)
Analogue output signal	0 - 1 / 5 / 10 V[2], max. 1 mA	
Digital interface	RS485 with Modbus RTU protocol (EE671 = 1 unit load)	
Response time τ_{90}, typ.	4 s	

General

Supply voltage (Class III) ⟨III⟩	10 - 29 V DC	
Current consumption, max.	50 mA at 20 m/s (4000 ft/min)	
Connection	Cable	0.5 m (1.6 ft) / 2 m (6.6 ft) cable, PVC, 5x0.25 mm² (AWG 23) with ferrules
	Plug	M12 connector, 5-pin
Electromagnetic compatibility[3]	EN 61326-1 EN 61326-2-3 Industrial Enviroment	
	FCC Part15 Class A ICES-003 Class A	UK CA CE
Material / protection rating	Polycarbonate / IP50 (probe head); IP54 (enclosure)	
Temperature range	Operation	-20...60 °C (-4...140 °F)
	Storage	-30...60 °C (-22...140 °F)
Humidity range	5...95 % RH (non-condensing)	

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) 0 - 10 V version only with supply voltage ≥ 15 V
3) The EE671 is not short-circuit-proof and not surge-proof (ESD-sensitive device).
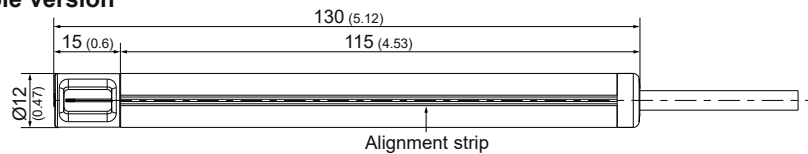
E+E Modular Sensor Platform

The EE671 is compatible with the Sigma 05 host device of the E+E Modular Sensor Platform. Together they become a versatile, plug-and-play modular air velocity sensor with analogue outputs and optional display. Besides EE671, Sigma 05 accommodates also other E+E intelligent sensing probes. See www.epluse.com/Sigma05 for further details.
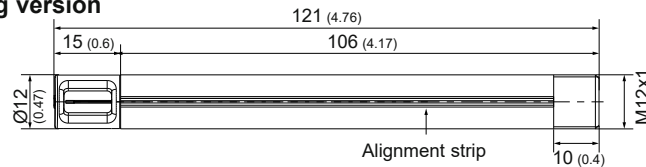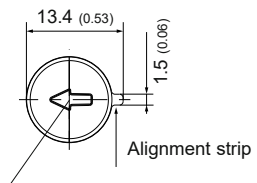
Dimensions

Values in mm (inch)

Cable version

130 (5.12)
15 (0.6)   115 (4.53)
Ø12 (0.47)
Alignment strip

Plug version

121 (4.76)
15 (0.6)   106 (4.17)
Ø12 (0.47)
M12x1
Alignment strip
10 (0.4)

Flange (included in the scope of supply)**:**

80 (3.14)
60 (2.4)
44 (1.7)
6 (0.2)

24.5 (0.9)
2.5 (0.1)
Mounting hole Ø > 16 (0.63)

Front view sensing head:

13.4 (0.53)
1.5 (0.06)
Alignment strip

The arrow indicates the air flow direction during factory adjustment.
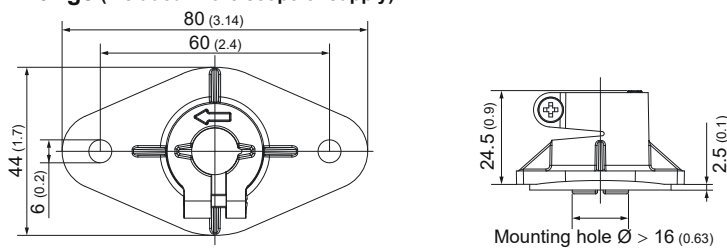
Ordering Guide

		EE671-	
Model	With cable	T14	
	With M12 plug	T15	T15
Output	0 - 1 V	A1	
	0 - 5 V	A2	
	0 - 10 V	A3	
	RS485		J3
AV Range	0...5 m/s (0...1000 ft/min)	HV25	
	0...10 m/s (0...2000 ft/min)	HV26	
	0...15 m/s (0...2000 ft/min)	HV27	
	0...20 m/s (0...4000 ft/min)	HV28	
Cable length [1]	0.5 m (1.64 ft)	KL50	
	2 m (6.56 ft)	KL200	
Protocol [2]	Modbus RTU		P1

1) For cable version T14 only
2) Factory setting: Baud rate 9600, Even Parity, Stopbits 1. Other factory settings available upon request. Baud rate choice: 9 600 / 19 200 / 38 400.
   Modbus Map and communication setting: see User Guide and Modbus Application Note at www.epluse.com/EE671

Order Example

EE671-T14A2HV26KL200

Model:	With cable
Output:	0 - 5 V
AV range:	0...10 m/s (0...2000 ft/min)
Cable length:	2 m (6.56 ft)

Accessories
(for further information, see data sheet "Accessories")

E+E Product Configuration Software		PCS10
(free download: www.epluse.com/pcs10)		
Connection cable M12 - flying leads	1.5 m (59.06")	HA010819
	5 m (196.85")	HA010820
	10 m (393.70")	HA010821
M12 cable connector for self assembly		HA010707
Protection cap for the M12 plug		HA010782
Protection cap for the M12 cable socket		HA010781
Modbus configuration adapter		HA011018
T-coupler M12 - M12		HA030204