

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 EE-PCS 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, max. 32 unit load devices in one bus		
Response time τ_{90}	typ. 4 s		

General

Supply voltage (Class III)	10...29 V DC SELV	
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 mm ² (AWG 23) with ferrules	
plug	M12 connector, 5-pin	
Electromagnetic compatibility ³⁾	EN61326-1	
	EN61326-2-3	
Material / protection class	polycarbonate / IP50 (probe head); IP54 (housing)	
Temperature range	operation: -20...60 °C (-4...140 °F)	
	storage: -30...60 °C (-22...140 °F)	
Humidity range	5...95 % RH (non-condensing)	

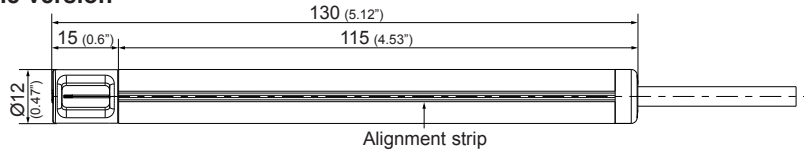
1) The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-fold standard deviation). The tolerance was calculated in accordance with EA-4/02 following the GUM (Guide to the Expression of Uncertainty in Measurement).

2) 0 - 10 V version only with supply voltage \geq 15 V

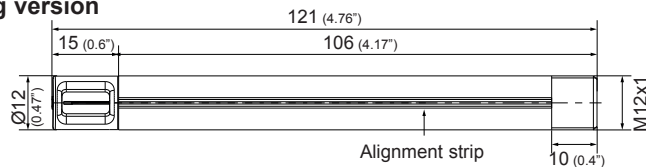
3) The EE671 is not short-circuit-proof and not surge-proof (ESD-sensitive device).

Dimensions in mm (inch)

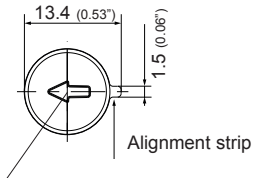
Cable version



Plug version

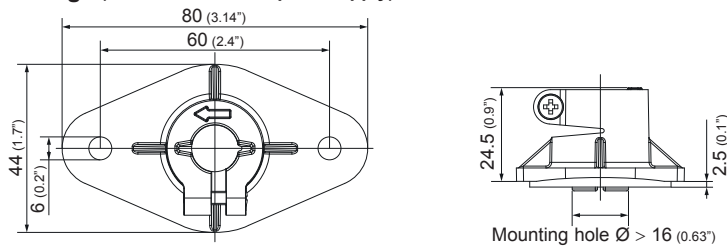


Front view sensing head:



The arrow indicates the air flow direction during factory adjustment.

Flange (included in the scope of supply):



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: 9600 / 19200 / 38400. 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 (See data sheet "Accessories")

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
E+E Product Configuration Software		EE-PCS (free download: www.epluse.com/configurator)
T-coupler M12 - M12		HA030204