

## EE660

## Transmitter for minimal Air Velocity

The EE660 is intended for the precise measurement of minimal air velocities.

The EE660 is the ideal solution for laminar flow monitoring and for applications in clean rooms.

The E+E flow sensor used in the EE660 functions in accordance with the hot film anemometer principle and permits outstanding measurement accuracy levels and very good long-term stability from as little as 0.15m/s.

The EE660 is available with a current and voltage output. Both signals are present on the terminal. The measurement range and the response time can be selected via a jumper.

Various designs and a very small angle dependence facilitate easy, cost-effective mounting. For an on-site display of the measurement data, the flow transmitter is available with an integrated LCD display.

The transmitter can be adjusted using the configuration accessories. This means that display settings can also be changed.



EE660 - duct mounting



EE660 - remote probe

## Features

### Display

- » large, easily readable
- » back ground illumination
- » 180° rotatable

### Smooth cover surface

- » No accumulation of dust in protruding edges

### Electronics on the underside of the PCB

- » Optimum protection against mechanical damage during installation

### Appropriate for US mounting requirements

- » Knockout for 1/2" conduit fitting

### External mounting holes

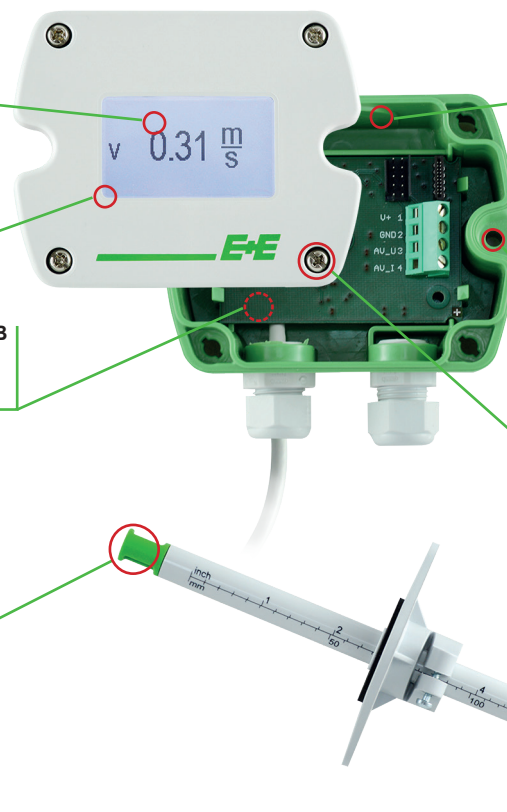
- » Mounting with a closed cover
- » Electronics protected against construction site pollution
- » Easy and fast mounting

### Bayonet Screws

- » Open/closed with a 1/4 rotation

### E+E Air velocity sensor VTM

- » Long-term stability
- » Measurement from 0.15 m/s
- » lowest sensitivity to dirt



## Technical Data

### Measuring values

Working range <sup>1)</sup>	0...1 m/s (0...200ft/min)
	0...1.5 m/s (0...300ft/min)
	0...2 m/s (0...400ft/min)
Output	0 - 10 V $-1 \text{ mA} < I_L < 1 \text{ mA}$
0...1 m/s / 0...1.5 m/s / 0...2 m/s	4 - 20 mA $R_L < 450 \Omega$ (linear, 3-wires)
Accuracy at 20 °C (68 °F), 45 % RH, 1013 hPa	0.15...1 m/s (30...200 ft/min) $\pm (0.04 \text{ m/s (7.9 ft/min) + 2 \% of mv)$
	0.15...1.5 m/s (30...300 ft/min) $\pm (0.05 \text{ m/s (9.8 ft/min) + 2 \% of mv)$
	0.15...2 m/s (30...400 ft/min) $\pm (0.06 \text{ m/s (11.8 ft/min) + 2 \% of mv)$
Response time $\tau_{90}$ <sup>1) 2)</sup>	typ. 4 sec or typ. 1 sec (at constant temperature)

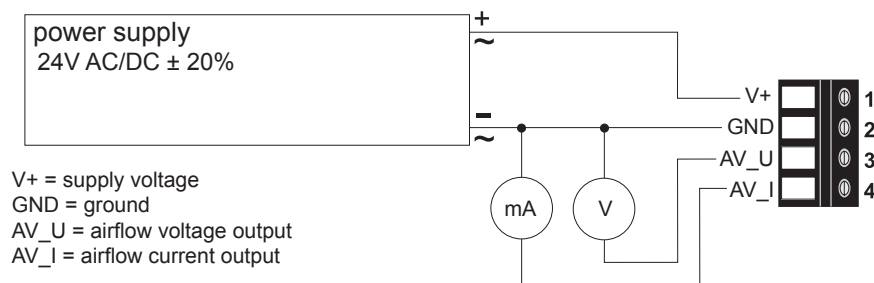
### General

Power supply	24V AC/DC $\pm 20\%$
Current consumption	
for AC supply	max. 180 mA rms (with Display), 74 mA rms (without Display)
for DC supply	max. 85 mA (with Display), 41 mA (without Display)
Angular dependence	< 3% of the measured value at $ \Delta\alpha  < 10^\circ$
Electrical connection	screw terminals max. 1.5 mm <sup>2</sup> (AWG 16)
Cable gland	M16x1.5
Electromagnetic compatibility	EN61326-1 EN61326-2-3 Industrial Environment
Housing material	Polycarbonate, UL94V-0 (with Display UL94HB) approved
Protection class	Enclosure IP65 / NEMA4, remote probe IP20
Temperature range	working temperature probe -25 ... +50 °C (-13...122°F)
	working temperature electronic -10 ... +50 °C (14...122°F)
	storage temperature -30 ... +60 °C (-22...140°F)
Working range humidity	5...95 % RH (non-condensing)

1) Selectable by jumper

2) Response time  $\tau_{90}$  is measured from the beginning of a step change of air velocity to the moment of reaching 90% of the step.

## Connection Diagram



## Configuration

With the configuration accessories an adjustment of the transmitter possible. Various display settings such as background illumination and orientation can also be adjusted.

#### Position 1:

- configuration adapter (incl. USB cable for PC) (EE-PCA)

#### Position 2:

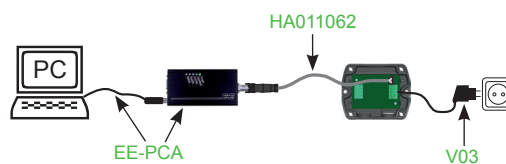
- cable for configuration adapter (HA011062)

#### Position 3:

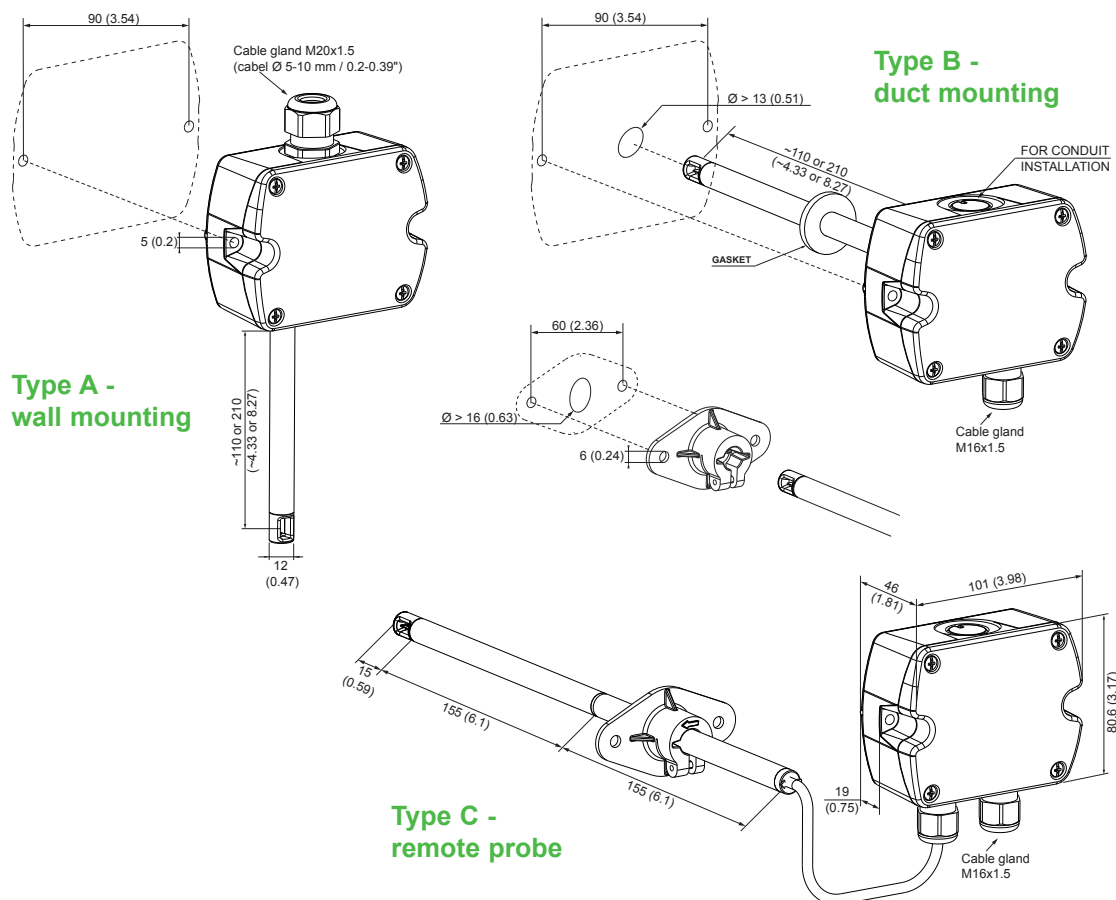
- configuration software: free download: [www.epluse.com/EE660](http://www.epluse.com/EE660)

#### Position 4:

- power supply for EE660 (V03)



## Dimensions mm (inch)



## Ordering Guide

MODEL	ANALOG <sup>1)</sup>	DIGITAL <sup>1)</sup>	HOUSING	PROBE LENGTH	CABLE LENGTH	DISPLAY
Velocity (V)	0-10V / 4-20mA (7)	none (x)	wall mounting <sup>2)</sup> (A)	100mm (3.9") (D)	1m (3.3 ft) (B)	Display (D)
			duct mounting (B)	200mm (7.9") (F)	2m (6.6 ft) (D)	none (x)
			remote probe (C)	housing C (x)	5m (16.4 ft) (G)	
					10m (32.8 ft) (H)	
					housing A, B (x)	
<b>EE660-</b>						

1) A combination of analog and digital version is not possible

2) available June 2015

### Setup - Display

#### UNIT

metric [m/s] (M)

non-metric [ft/min] (N)

## Order Example

### EE660-V7xBFxx

Model: Velocity  
 Housing: Duct mounting  
 Probe lenght: 200mm  
 Display: no Display

### EE660-V7xCxDD/M

Model: Velocity  
 Housing: remote Probe  
 Cable length: 2m  
 Display: with Display metric (m/s)

## Accessories

Product configuration adapter  
 Product configuration software  
 Power supply adapter

see data sheet EE-PCA  
 EE-PCS (free download: [www.epluse.com/EE660](http://www.epluse.com/EE660))  
 V03 (see data sheet Accessories)