

USER'S GUIDE

EE660 - Transmitter for Very Low Air Velocity

GENERAL

The EE660 transmitters are designed for the exact measurement of air velocity. The measuring method is based on the hot film anemometer principle. The special construction of the sensor mounting provides a very small directional derivate within a wide range, thus allows easy mounting. Using the mounting device the penetration depth is infinitely adjustable. By changing a jumper on the PCB the measuring range and the response time can be set.

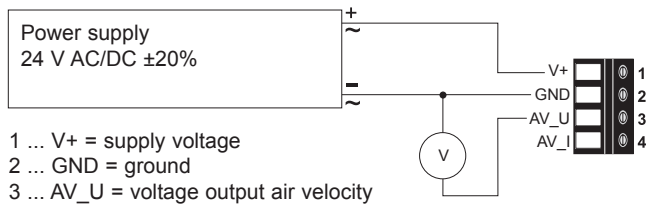
The transmitters are designed for applications within the HVAC industry, in clean room applications and laminar flow control. For special applications do not hesitate to contact the manufacturer or the corresponding distributor.

CAUTION

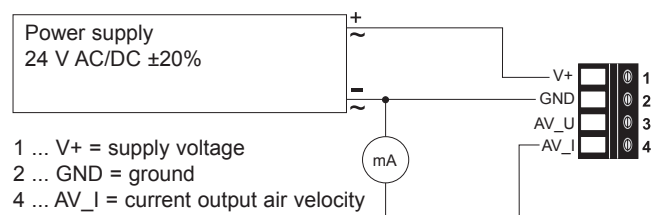
- The accurate and reliable determination of the air velocity depends on the correct positioning of the probe. Accurate measurements are only possible if the probe is installed in a location with approximate laminar flow.
- For duct mounting the required inlet and outlet paths have to be observed. More information can be found on www.epluse.com.
- Extreme mechanical, unspecified strain, corrosive environments and condensation must be avoided.

CONNECTING DIAGRAM

EE660 - Voltage output 0-10 V

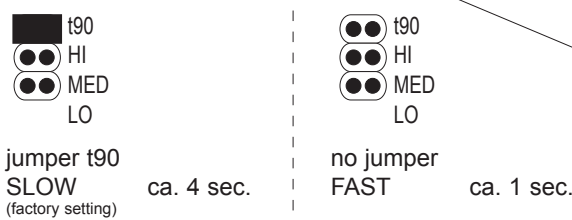


EE660 - Current output 4-20 mA

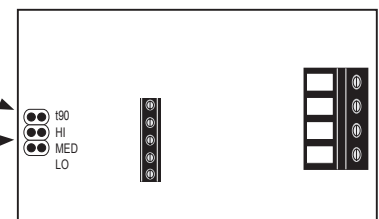
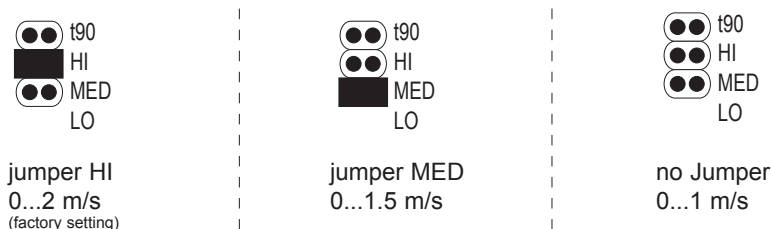


SETTINGS

Selection of the response time t_{90}



Selection of the working range



By using the Configuration Software (EE-PCS) to change the output scaling, the jumper has to be on HI.

TECHNICAL DATA

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Measuring values

Working range ¹⁾

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) $\pm (0.04 \text{ m/s (7.9 ft/min) + 2 \% \text{ of mv})$

0.15...1.5 m/s (30...300 ft/min) $\pm (0.05 \text{ m/s (9.8 ft/min) + 2 \% \text{ of mv})$

0.15...2 m/s (30...400 ft/min) $\pm (0.06 \text{ m/s (11.8 ft/min) + 2 \% \text{ of mv})$

Response time τ_{90} ¹⁾²⁾

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 mm² (AWG 16)

Cable gland

M16x1.5

Electromagnetic compatibility

EN61326-1 EN61326-3



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)

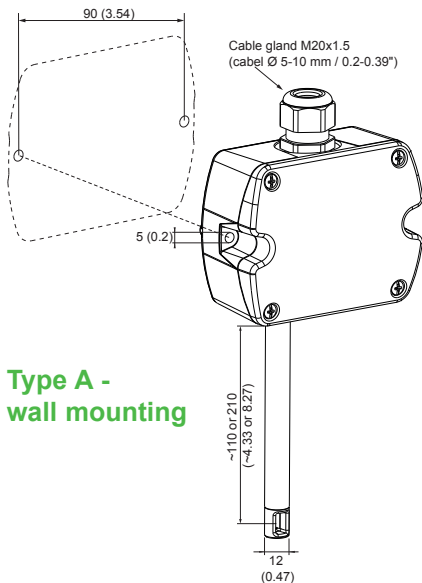
Working range humidity

5...95 % RH (non-condensing)

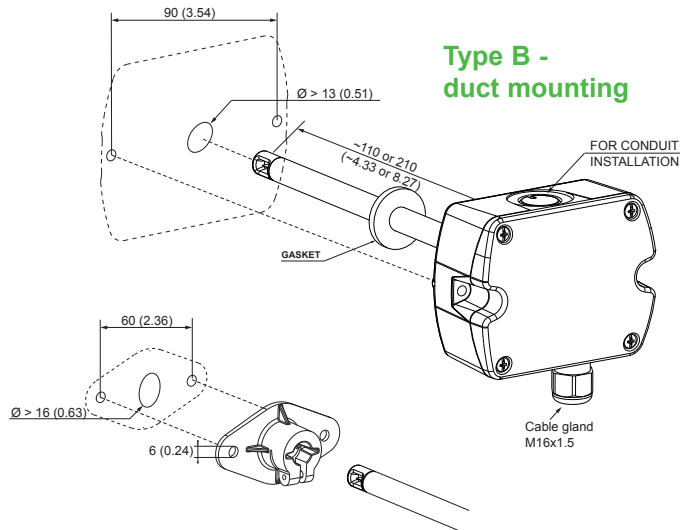
1) Selectable by jumper

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

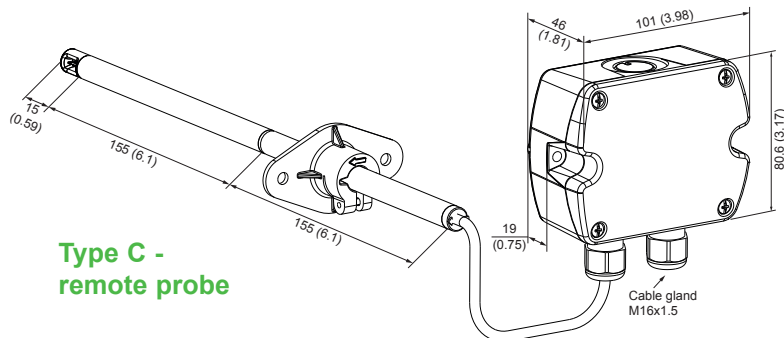
DIMENSIONS MM (INCH)



Type A -
wall mounting



Type B -
duct mounting

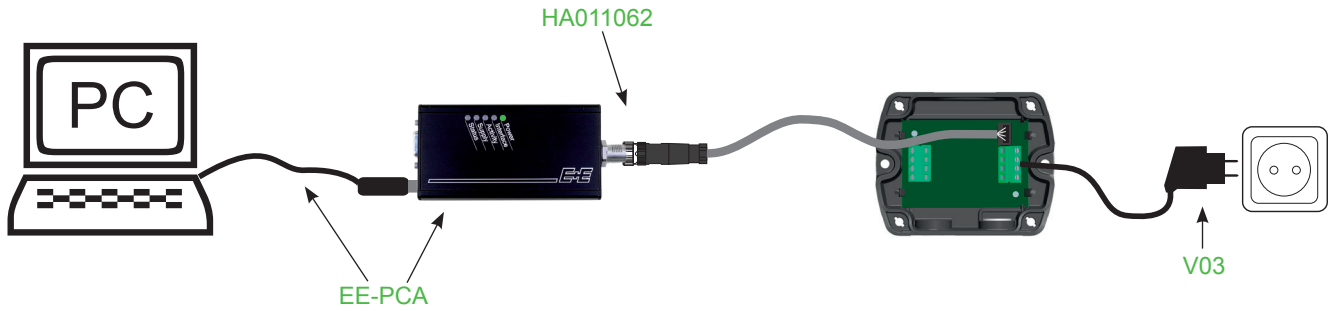


Type C -
remote probe

SETUP AND ADJUSTMENT

The EE660 is ready for use immediately and requires no configuration set-up by the customer.

If required, the optional E+E Product Configuration Adapter (EE-PCA) and the E+E Product Configuration Software (EE-PCS) can be used for customer adjustment of the air velocity. Various display settings such as backlighting and orientation can also be changed.



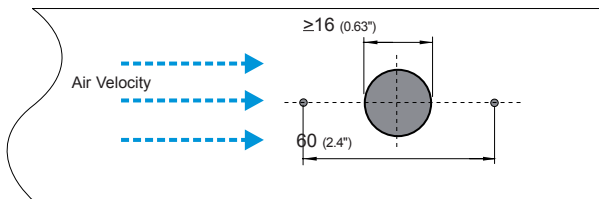
For product data sheets EE-PCS and EE-PCA please see www.epluse.com.

The E+E Product Configuration Software (EE-PCS) is free and can be downloaded from www.epluse.com/configurator

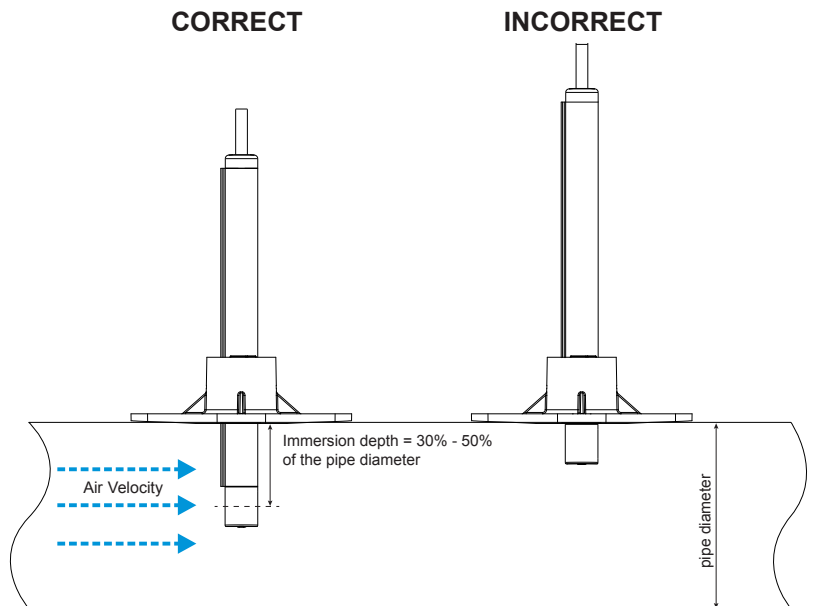
MOUNTING

Bore for mounting flange:

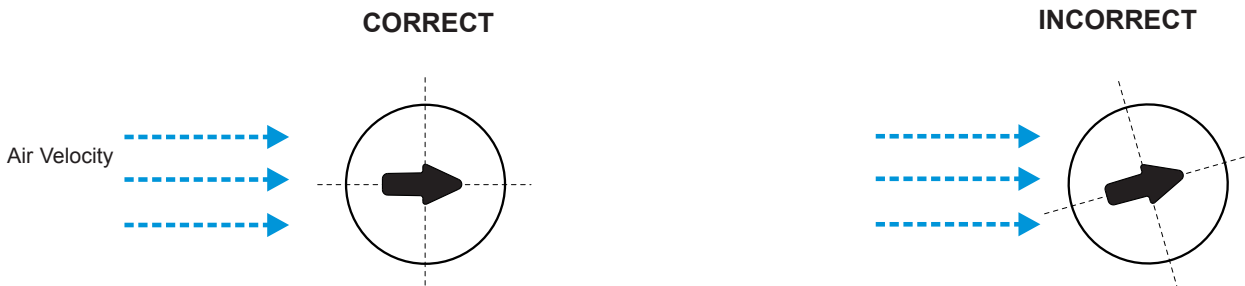
drilling in the wall of the duct:



The mounting flange allows for an infinite variation of the depth of the sensor probe. It is important to ensure that the sensor head is completely submerged into the flow.



If the sensor probe is installed without a mounting flange, make sure the air velocity sensor is aligned parallel with the air stream.



INFORMATION

+43 7235 605 0 / info@epluse.com

E+E Elektronik Ges.m.b.H.
Langwiesen 7 • A-4209 Engerwitzdorf
Tel: +43 7235 605-0 • Fax: +43 7235 605-8
info@epluse.com • www.epluse.com
LG Linz Fn 165761 t • UID-Nr. ATU44043101
Place of Jurisdiction: A-4020 Linz • DVR0962759

