



# Quick Guide

## AVS701 - Highly Accurate Air / Gas Velocity Sensor for Industrial Applications



your partner  
in sensor  
technology.

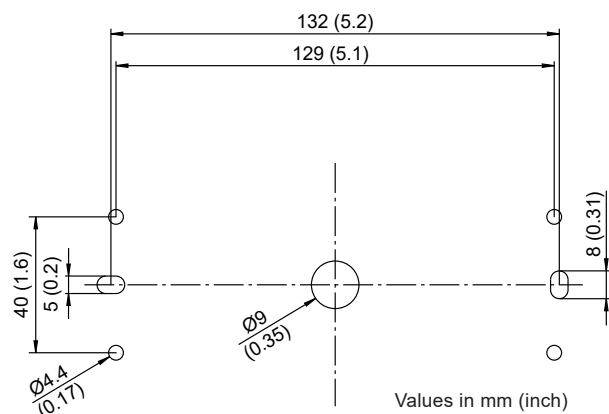
### **i** PLEASE NOTE

Find this document and further product information on our website at [www.epluse.com/avs701](http://www.epluse.com/avs701).

### Mounting

Choose the sensor location so that the M12 plugs or cable glands are easily accessible.

Wall-mount enclosure drilling pattern for 2 or 4 screws (screw diameter < 4.2 mm (0.2"), not included in the scope of supply).



#### Tools recommended

Screwdriver acc. to screws

Drill with Ø9 mm drill bit (duct mount probe)

Drill with Ø6 mm drill bit (enclosure wall mount)

Wrench 19 mm (SAE 3/4") (for plastic cable glands)

Wrench 20 mm (SAE 3/4") (for metal cable glands)

#### Installation Parts recommended

Screws (for wall plugs), 2 or 4 pcs 4.2 x 35 mm

Screws (for panel mount), 2 or 4 pcs 4.2 x min. 16 mm

Wall plugs (2 or 4 pcs) e.g. fischer universal plug UX 6 x 30

For more information on the mounting options, please refer to the User Manual at [www.epluse.com/avs701](http://www.epluse.com/avs701).

### Mounting Location and Flow Direction

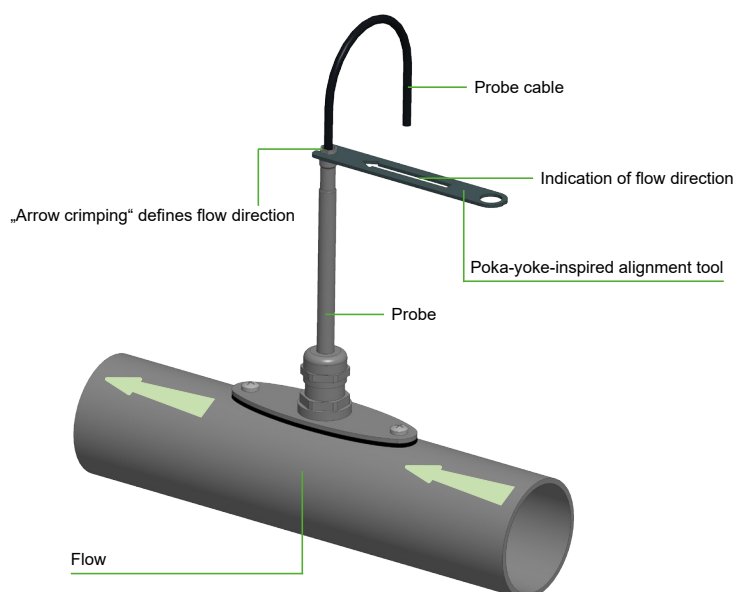
|                                           |                              |
|-------------------------------------------|------------------------------|
| Probe's immersion depth                   | 30...50 % of duct diameter D |
| Minimum distance in front of obstructions | 3*D                          |
| Minimum distance after obstructions       | 6*D                          |

Please refer to User Manual's chapter 4.7 *Mounting Location in Duct Systems* for more details.

For best measuring accuracy, the angular deviation (yaw) must be kept to a minimum.

Remote probe: The arrow shall point exactly in the direction of flow, can be adjusted with using the alignment tool:

Duct mount: carefully turn the enclosure into the right position.



AVS701 remote probe mounting



AVS701 for duct mounting

## Electrical Connection

### ⚠ WARNING

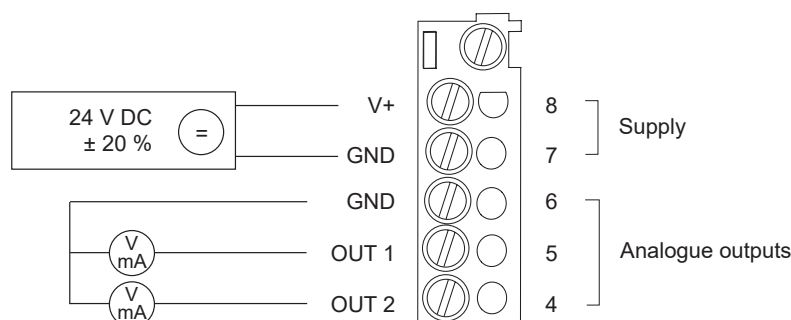
Incorrect installation, wiring or power supply may cause overheating and therefore personal injuries or damage to property. It is essential that the cables are not under voltage during installation. No voltage must be applied when the product is connected or disconnected. For correct cabling of the device, always observe the presented wiring diagram for the product version used. The manufacturer cannot be held responsible for personal injuries or damage to property as a result of incorrect handling, installation, wiring, power supply and maintenance of the device.

The AVS701 is powered with protective extra-low voltage (PELV) 24 V DC  $\pm 20\%$ . The sensor is supplied either via the M12 connector or through the cable glands on the internal terminals.

## Analogue Outputs

Two freely configurable analogue outputs either voltage (0 - 10 V) or current (0 - 20 mA) are available. A failure state indication according to NAMUR is configurable via PCS10 Product Configuration Software.

The analogue output signals are available either on the M12 connector or via the cable glands on the internal terminals.



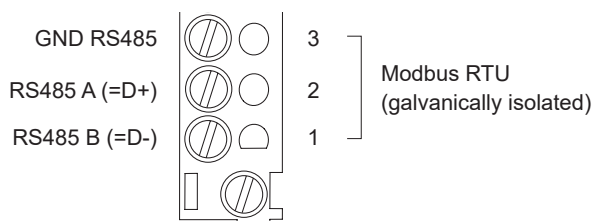
For more information on electrical connection, please refer to the User Manual's chapter 5 *Electrical Connection*.

Device address, baud rate, parity and stop bits can be set via:

- PCS10 Product Configuration Software and USB-C cable.  
The PCS10 can be downloaded free of charge from [www.epluse.com/pcs10](http://www.epluse.com/pcs10).
- Modbus protocol in the register 1 (0x00) and 2 (0x01).  
See Application Note Modbus AN0103 (available at [www.epluse.com/avs701](http://www.epluse.com/avs701)).

## Digital Interface

The AVS701 sensor features an RS485 interface with Modbus RTU protocol. It can get integrated into an RS485 network either via the M12 plugs or direct wiring to the terminals through the cable glands.



### i PLEASE NOTE

- The recommended settings for multiple devices in a Modbus RTU network are 9600, 8, even, 1.
- The AVS represents 1 unit load on an RS485 network.

