Instromart
Sensors & Instrumentation

# Datasheet EE576

## Probe for Very Low Air Velocity

# EE576

## Probe for Very Low Air Velocity

The compact EE576 probe is optimized for low air velocity measurement in applications like laminar flow control or filter monitoring. It operates on the hot-film anemometer principle which stands for high accuracy and fast response time.

## Reliability

The the flow sensing element manufactured in state-of-the-art E+E thin-film technology is highly insensitive to contamination and offers excellent long-term stability.

## Easy installation

The alignment strip on the probe facilitates the correct positioning in the air flow. The mounting flange within the scope of supply enables accurate setting of the immersion depth.

## Output

The measured data up to 1 m/s (200 ft/min) or 2 m/s (400 ft/min) is available on the 0 - 5 V or 0 - 10 V output.

EE576 air velocity probe with flange

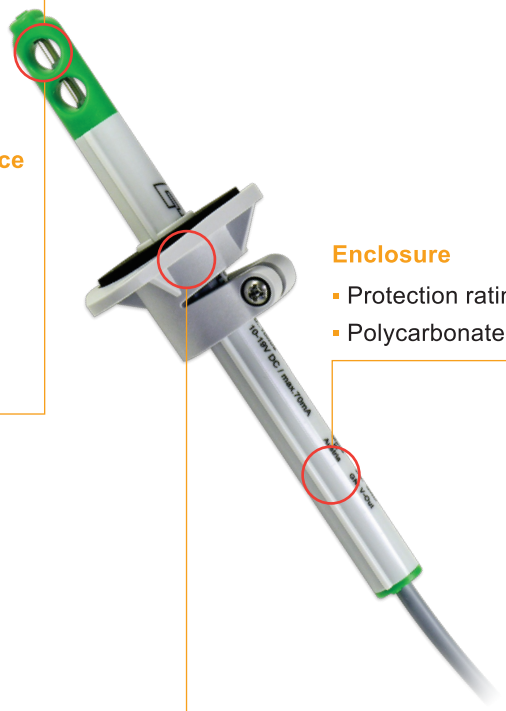
# Features

**Sensing head**

- Protection rating IP20
- Polycarbonate (PC)
- Operates on the hot-film anemometer principle
- E+E thin-film technology
- Excellent long-term stability

**Measurement performance**

- High accuracy
- Measuring range:
  - 0...1 m/s
  - 0...2 m/s
- Fast response time:
  - 4 s @ 1 m/s



**Enclosure**

- Protection rating IP40
- Polycarbonate (PC)

**Mounting flange**

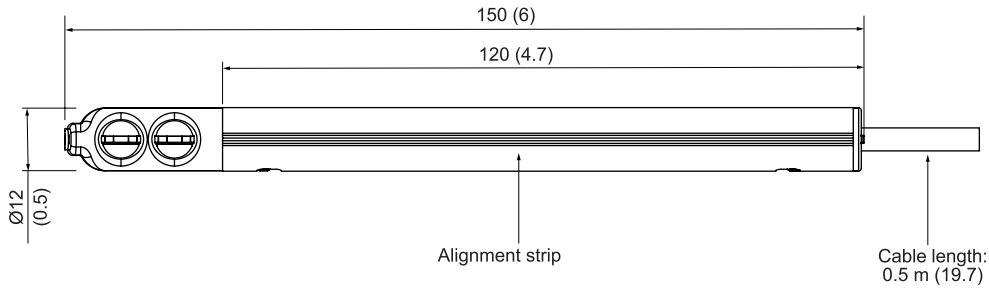
- Easy and quick mounting
- Accurate setting of the immersion depth

# Dimensions

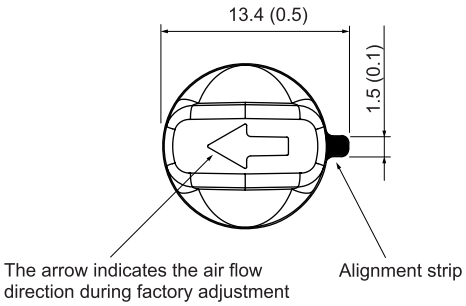
Values in mm (inch)

### Probe

Polycarbonate (PC)

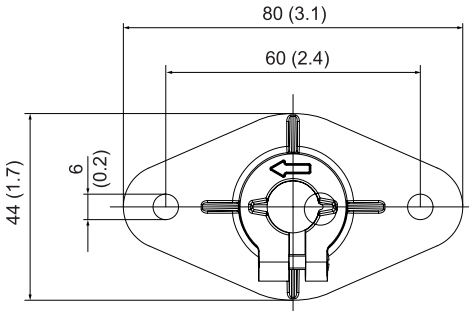



### Front sensing head



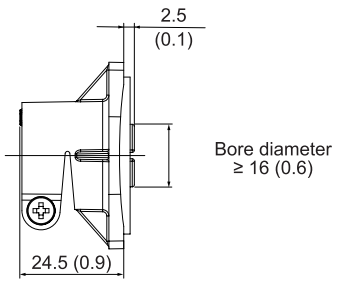

### Mounting flange

Included in the scope of supply




### Mounting flange

Side view



# Technical Data

## Measurands

### Air Velocity (v)

| | |
|---|---|
| **Measuring range** | 0...1 m/s (0...200 ft/min)<br>0...2 m/s (0...400 ft/min) |
| **Accuracy**[1)]<br>@ 20 °C (68 °F), 45 %rF und 1 013 hPa (14.7 psi)<br>**0.2...1 m/s (40...200 ft/min)**<br>**0.2...2 m/s (40...400 ft/min)** | <br><br>±(0.05 m/s +2 % of mv)<br>±(0.08 m/s +4 % of mv) mv = measured value |
| **Response time $t_{90}$**, typ. | 4 s bei 1 m/s (200 ft/min) |

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

## Output

### Analogue

| | | | |
|---|---|---|---|
| **Air velocity (v)** | 0 - 5 V<br>0 - 10 V | 0 < $I_L$ < 1 mA | $I_L$ = load current |

## General

| | |
|---|---|
| **Power supply** class III<br>USA & Canada: Class 2 supply necessary | 10 - 19 V DC or 19 - 29 V DC |
| **Current consumption**, max.<br>@ 2 m/s (400 ft/min) | 70 mA |
| **Humidity range**<br>**Operation and Storage** | <br>10…95 %RH, non-condensing |
| **Temperature range**<br>**Operation**<br>**Storage** | <br>-20...+60 °C (-4...+140 °F)<br>-30...+60 °C (-22...+140 °F) |
| **Probe cable** | Polyvinylchloride (PVC), 3 x 0.25 mm² with wire ferrules |
| **Probe material** | Polycarbonate (PC) |
| **Protection rating**<br>**Probe head**<br>**Probe** | <br>IP20<br>IP40 |
| **Electromagnetic compatibility** | EN 61326-1 EN 61326-2-3 Industrial environment<br>FCC Part15 Class B ICES-003 Class B |
| **Conformity** | CE UKCA |

# Ordering Guide

| | Feature | Description | Code |
|---|---|---|---|
| Hardware Configuration | | | EE576- |
| | Output | 0 - 5 V | A2 |
| | | 0 - 10 V (with 19 - 29 V DC supply only) | A3 |
| | Measuring range | 0...1 m/s (0...200 ft/min) | HV21 |
| | | 0...2 m/s (0...400 ft/min) | HV23 |
| | Power supply | 10 - 19 V DC | V5 |
| | | 19 - 29 V DC | V6 |
| | Connection cable length | 0.5 m (1.64 ft) | KL50 |
| | | 2 m (6.56 ft) | KL200 |

# Order Example

**EE576-A2HV23V5KL200**

| Feature | Code | Description |
|---|---|---|
| Output | A2 | 0 - 5 V |
| Measuring range | HV23 | 0...2 m/s (0...400 ft/min) |
| Power supply | V5 | 10 - 19 V DC |
| Connection cable length | KL200 | 2 m (6.56 ft) |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