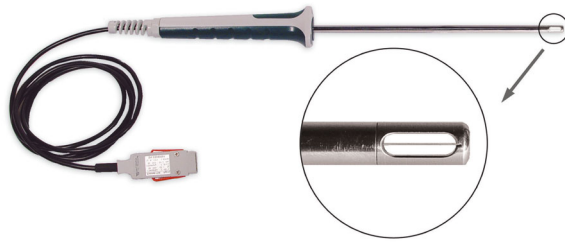


# AIR FLOW

## Thermo-anemometer probe FV A935-TH4 / -TH5



## Typ FV A935-TH4Kx / -TH5Kx



- ▶ Thermo-anemometer probes FVA935TH4 and FVA935TH5 are especially suitable for measuring and recording flow velocity and temperature data even when measuring operations are performed in cramped and restricted conditions.
- ▶ Measured values can be acquired with a high level of accuracy even at velocities below 0.5 m/s (100 ft/min).
- ▶ The sensor can be used with either side facing the direction of flow.
- ▶ Temperature is compensated over a wide range. 0 to +50 °C.
- ▶ The sensor tube is only 6 mm in diameter (0.24").

### Accessories (only for FVA935THxK1/K2)

Clamped screw connection with thread adapter for telescopic extension / extension sets (max. 80 °C) Order no. ZV9915KV

Telescope extension  
Ø 15 to 24 mm, 330 / 1010 mm Order no. ZV9915TV

Extension set Ø 15 mm, 4 x 255 mm Order no. ZV9915VR3



### Variant (including works certificate)

- Sensor 2 m/s, length = 210 mm, with handle
- Sensor 2 m/s, length = 80 mm, with electronicbox
- Sensor 2 m/s, length = 300 mm, with electronicbox
- Sensor 20 m/s, length = 210 mm, with handle
- Sensor 20 m/s, length = 80 mm, with electronicbox
- Sensor 20 m/s, length = 300 mm, with electronicbox

### Other designs are available on request.

High-temperature thermoanemometer MT8636THx  
Operative range -40 to +120°C, up to 40 m/s  
probe with cable and electronics housing

## Technical data

### Flow

Measuring range	FVA935TH4 / TH4Kx	0.08 to 2 m/s
	FVA935TH5 / TH5Kx	0.2 to 20 m/s
Resolution	FVA935TH4 / TH4Kx	0.001 m/s
	FVA935TH5 / TH5Kx	0.01 m/s
Response time		<1.5 s
Accuracy	FVA935TH4 / TH4Kx	± (0.04 m/s + 1% of meas. val.)
	FVA935TH5 / TH5Kx	± (0.2 m/s + 2% of meas. val.)
Temperature compensation		0 to +50 °C
Influence of temperature	FVA935TH4 / TH4Kx	±0.5% of measured value /°C at 0.3 to 2 m/s
	FVA935TH5 / TH5Kx	±0.3% of measured value /°C at 0.3 to 20 m/s
Direction facing the flow		bidirectional
Angle dependence		<3% of measured value with deviation <15°
Pressure range		ambient pressure

### Temperature

Measuring range	-20 to +70 °C
Resolution	0.1 °C
Accuracy	±0.7 °C at 0 to 50°C and > 0.5 m/s
Response time T <sub>90</sub>	typical 10 seconds

### Nominal conditions

Temperature	22 °C ±2 K
Atmospheric humidity	45 ± 10% relative humidity (non-condensing)
Atmospheric pressure	1013 mbar

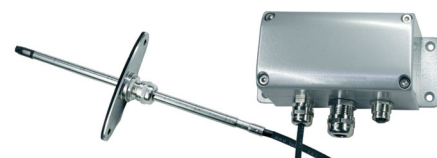
### Power supply

	6 to 13 V / 40 mA
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### Dimensions

Probe diameter	6 mm
Flow cross section :	approx. 10 x 3 mm
FVA935TH4/TH5	Probe with handle, probe lengths : 210 mm (plus handle) ALMEMO® cable, 1.5 meters
FVA935TH4Kx/TH5Kx	Probe with remote electronics in the cable housing Probe lengths THxK1, 80 mm / THxK2, 300 mm Probe cable 5 m to electronics, ALMEMO® cable, 1.5 m

- Order no. FVA935TH4
- Order no. FVA935TH4K1
- Order no. FVA935TH4K2
- Order no. FVA935TH5
- Order no. FVA935TH5K1
- Order no. FVA935TH5K2



## Thermoelectric Flow Sensor FV A605 TA



- ▶ Probe tube with heated miniature thermistor for flow measurement and precision NTC resistance for automatic compensation.
- ▶ Evaluation electronics are located in a separate sensor transmitter module.
- ▶ High accuracy as a result of integrated temperature compensation and individual calibration in wind tunnel, with laser Doppler anemometer as reference system.
- ▶ Response time only 2s for smoothing the measured value indicated, optionally without smoothing with 100ms response time.
- ▶ Suitable for measuring small flow velocities in gaseous substances, particularly for control systems and monitoring.
- ▶ Typical applications include comfort index measurements, HEVAC applications, environmental technology, clean room technology and process measuring and control technology.



A special connector cable allows to connect the flow sensors to all ALMEMO® multi-purpose devices, data loggers and data acquisition systems. For volume flow rate measurements the cross section of the ventilating shaft can be easily entered into ALMEMO® devices. A problem-free averaging is then possible.

### Types (incl. clamping holder and ALMEMO® connecting cable 1.5m long):

Unidirectional (sensitive in one direction) with protected measuring tip

Measuring range up to 1m/s, smoothed

**Order no. FVA605TA1D**

Measuring range up to 5m/s, smoothed

**Order no. FVA605TA5D**

Measuring range up to 1m/s, not smoothed

**Order no. FVA605TA1U**

Measuring range up to 5m/s, not smoothed

**Order no. FVA605TA5U**

Omnidirectional (direction-independent, symmetrical ball tip) with protecting cage (Ø110mm) including carry-case

Measuring range up to 1m/s, smoothed

**Order no. FVA605TA1OD**

Measuring range up to 5m/s, smoothed

**Order no. FVA605TA5OD**

Measuring range up to 1m/s, not smoothed

**Order no. FVA605TA10U**

Measuring range up to 5m/s, not smoothed

**Order no. FVA605TA50U**

### Technical Data:

#### Electronics Box with Sensor

Measuring range:	
FV A605 TA1(O)	0.01 to 1m/s
FV A605 TA5(O)	0.15 to 5m/s
Resolution:	
FV A605 TA1(O)	0.001m/s
FV A605 TA5(O)	0.01m/s
Accuracy:	
FV A605 TA1(O)	±1.0% of final value and ±1.5% of meas. value
FV A605 TA5(O)	±0.5% of final value ±1.5% of meas. value
Nominal conditions:	22°C, 960hPa
Automatic temperature compensation:	effective in range 0 to 40°C
Temperature influence:	±0.5% of fin. value/°C

#### Sensor

Head size:	Ø 8mm
Shaft:	Ø 15mm
Operative range:	0 to 40°C
Angle of attack:	
FV A605 TA1/TA5	±30°
FV A605 TA1O/TA5O	±180°
Inlet opening:	
FV A605 TAx:	9mm
FV A605 TAxO:	protecting cage 110mm
Sensor length:	
FV A605 TAx:	300mm
FV A605 TAxO	310mm
Sensor cable length:	1.5m
Storage temperature:	-30 to +90°C

#### General Technical Specifications

Measurement medium:	dry air or inert gases
Response time:	
FVA605TAxD	smoothened, 1 $\tau$ = 2s
FVA605TAxU	not smoothened, 1 $\tau$ = 100ms
Power supply:	through ALMEMO® device (approx. 7... 12V)
Current consumption:	approx. 70mA
Output signal:	0 ... 1V, linearised, load resistance min. 10kohms
Housing:	
Dimensions:	100 x 60 x 35mm (L x W x H)
Protection system:	IP 40 (aluminium housing)
Weight:	approx. 250g
Operating temperature:	0 to 40°C
Storage temperature:	-30 to 90°C
Air humidity:	0 ... 90% r.H., non-condensing
Adjusting reference:	laser Doppler wind tunnel, adjustment at 22°C/approx. 960hPa, (certificate according to SN EN 45001)

01/2011 We reserve the right to make technical changes.