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.

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 and ±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 τ = 2s
FVA605TAxU	not smoothened, 1 τ = 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)

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

	Order no.
Unidirectional (sensitive in one direction) with protected measuring tip	
Measuring range up to 1m/s, smoothened	**FVA605TA1D**
Measuring range up to 5m/s, smoothened	**FVA605TA5D**
Measuring range up to 1m/s, not smoothened	**FVA605TA1U**
Measuring range up to 5m/s, not smoothened	**FVA605TA5U**
Omnidirectional (direction-independent, symmetrical ball tip)with protecting cage (Ø110mm) including carry-case	
Measuring range up to 1m/s, smoothened	**FVA605TA1OD**
Measuring range up to 5m/s, smoothened	**FVA605TA5OD**
Measuring range up to 1m/s, not smoothened	**FVA605TA1OU**
Measuring range up to 5m/s, not smoothened	**FVA605TA5OU**

DAkkS / DKD or factory calibration KV90xx, air flow, for sensor or measuring chain (sensor + device) (see chapter „Calibration certificates“)

10/2013 • We reserve the right to make technical changes.