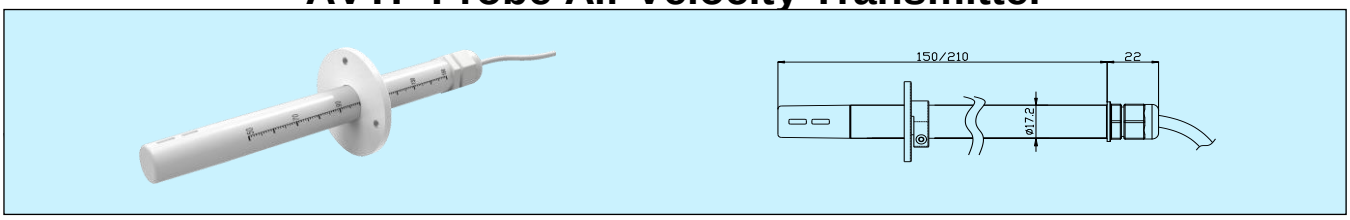
AVTP Probe Air Velocity Transmitter



Applications & Features

- It is designed for air velocity measurement in the ventilation system or equipment. Especially for laminar flow in small cabinets in cleanroom and pharmaceutical industry
- Based on thermal anemometer principle, use innovative and sensitive hot-film sensor, which is insensitive to dust and dirt, easy to install and maintain
- No moving parts, provide accurate, reliable, sensitive and long-term measurement, with good temp. compensation
- Digital technology applied to ensure output accuracy
- Over voltage and reverse polarity protection with high reliability and anti-interference capacity
- Innovative probe design with various lengths available with scales on

Specifications

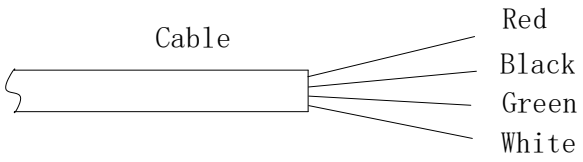
Sensor: Hot-film sensor
Range and accuracy: 0~30m/s with different accuracy, see Models
Response time: typical 2s
Angle dependence: < 3% reading @ | Δα | < 10°
Temperature compensation: 10~40°C
Output: 4-20mA (3 wires),0-10V, RS485/Modbus
Output Load: ≤500Ω (current), ≥2KΩ (voltage)
Power: 24V AC/DC±20%
Electrical Connection: PVC cable, 1m
Working Environment: -20~80°C, 0~95%RH (Non cond.)
Housing: fire retardant PC (UL94 V-0)
Protection: IP65
Weight： depending on different lengths, 130g~160g
Approval: CE

Models

Model	AVTP				Probe air velocity transmitter
output		1			0~10VDC
		2			4~20mA
		8			RS485/Modbus
Range& Accuracy			1		0~1 m/s, ±(0.03m/s+5%Reading)
			2		0~2 m/s, ±(0.03m/s+5%Reading)
			5		0~5 m/s, ±(0.2m/s+5%Reading)
			6		0~10 m/s, ±(0.2m/s+5%Reading)
			7		0~20 m/s, ±(0.2m/s+5%Reading)
			8		0~30 m/s, ±(0.2m/s+5%Reading)
Probe Length				0	150 mm
				1	210 mm

Connection

Different models have different wirings. The wirings corresponding to different models are shown in the following diagram and table, where the x in the models is represented as any selection.



Models	Cable descriptions				
AVTP1xx	Cable Color	Red	Black	Green	White
	Electrical Signal	+24V	GND	0-10V	NA
AVTP2xx	Cable Color	Red	Black	Green	White
	Electrical Signal	+24V	GND	4-20mA	NA
AVTP8xx	Cable Color	Red	Black	Green	White
	Electrical Signal	+24V	GND	A+	B-

Installation and instruction

To ensure the best installation and application, please strictly follow the instructions below.

(1) The air velocity probe should be installed in stable air flow. It should be installed in the middle of a long duct, with front >10D and back >5D, as Fig 1 below. And try to insert the probe end (location of the sensor) near the duct center as much as possible.

(2) The depth of the probe insertion: the probe have scales as shown in Fig 2 below. The scale value is the length from the end of the probe to this position. It means, the scale which can be read from outside is the depth of the inserted part.

(3) The flow direction and angle: It was calibrated in standard wind tunnel with fixed air flow direction in factory. So, it should be installed with the same flow direction, as Fig 2 and 3 below. The flow direction should be exactly 90° angle with the scale line on the probe, as shown in Fig 3.

(4) When apply for laminar flow, the probe can be mounted on the wall, inside clean bench or biological safety cabinet using a mounting flange, as shown in Fig 4 below. Be sure to let the flow direction totally be parallel to the hole on the top of the probe，refer to Fig 3.

● Probe installation:

The probe should be installed with flange, as Fig 3 below. Open a hole of Φ19 mm on duct, install the flange on the duct with 3 screws, insert the probe to required depth, then use another screw to tighten the probe with the flange.

● Electrical connection: connect the wires according to the wiring diagram.

● During the above procedures, the sealing ring must be used correctly to ensure overall protection rate could meet up to IP65.

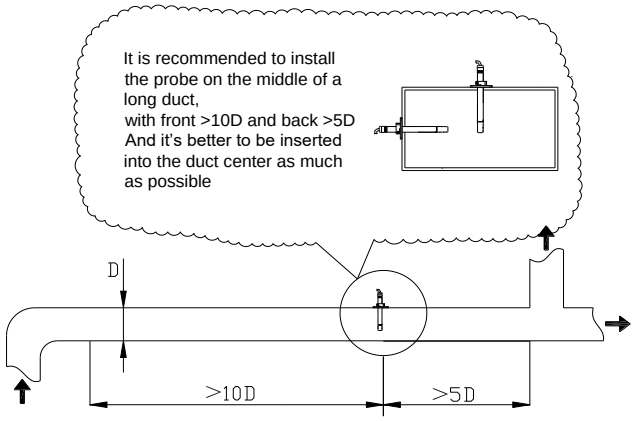


Fig 1

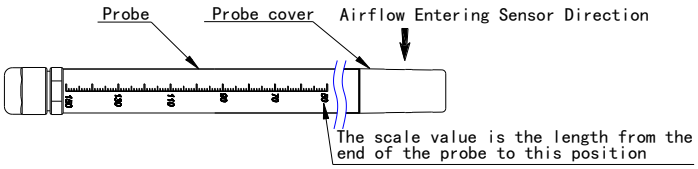
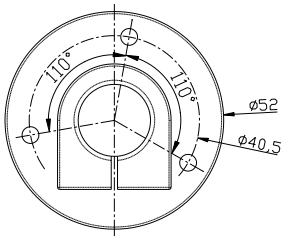
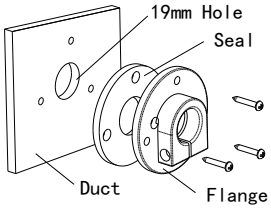


Fig 2





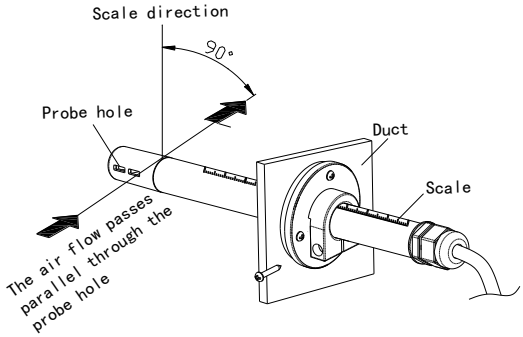


Fig 3

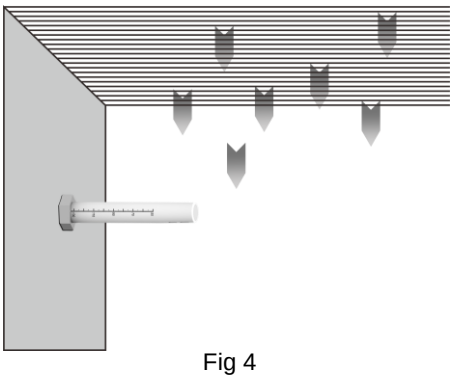


Fig 4

Attention

It should be power OFF during installing and wiring. When using 24VAC, it is strongly recommended to power the unit with independent transformer. If sharing a 24VAC transformer with other equipment such as controllers, transmitters or actuators, please make sure the terminals 24V and GND are connected correctly. Otherwise, it may reduce serious damages.

Warranty

It has limited warranty for eighteen (18) months after the production date.

Shenzhen TEREN Control Technology Co. Ltd.
14F, Building No.8, Fashion Valley, Shanghenglang, Dalang, Longhua, Shenzhen, Guangdong, China
Tel: 0755-23935155 Fax: 0755-23935156
web: www.teren-control.com

TEREN website Alibaba shop