Please refer to page 3 for detailed selection

FPT30
Pitot Tube Flow Sensor

Product Description

The Pitot tube flow sensor is a new type of plug-in flow sensor that can be installed and disassembled online without interruption. Based on the Pitot static pressure tube principle, it is designed and manufactured in accordance with ISO7145 "Measurement of fluid flow in circular cross-section closed pipelines - Method for measuring velocity at a point in the cross-section" and ISO3966 "Measurement of fluid flow in closed pipelines - Velocity area method of Pitot static pressure tube" standards. Its unique sensor structure and large aperture pressure tapping point design have good measurement effects for high dust, low flow velocity, adhesion, and corrosive applications.

Scope of application

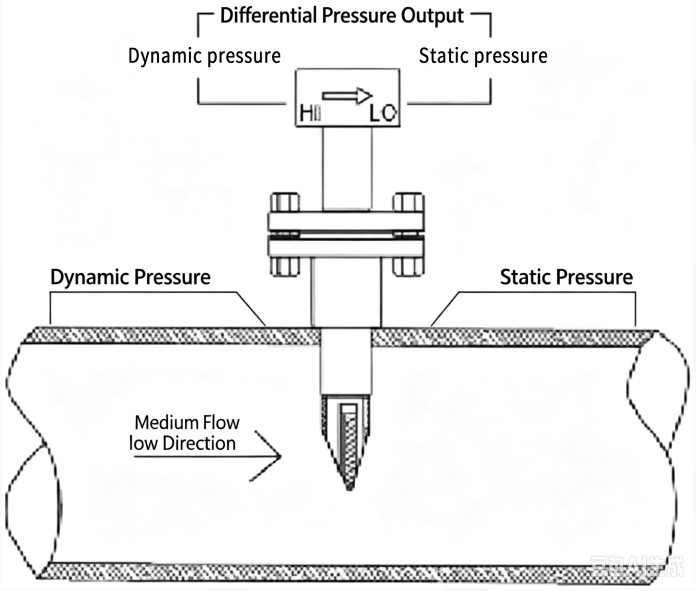
The Pitot tube flow sensor relies on the principle of differential pressure speed measurement and is suitable for measuring the flow of gases, clean flue gas, and air duct media. Widely used in HVAC ducts, boiler flue gas, industrial dust removal ducts, monitoring fan airflow and exhaust flow rate; Measurement of high-temperature hot air and process waste gas in metallurgical and chemical pipelines; Detection of flue gas volume and flow rate of denitration and desulfurization flue gas in power plants; Tunnel and mine ventilation air volume monitoring; Measurement of building fresh air and clean room air systems. The equipment has a sturdy structure that is resistant to high temperatures and dust, suitable for large pipe diameters and high temperature and high pressure conditions. It is often used in conjunction with differential pressure transmitters and is not suitable for highly viscous media containing a large amount of solid particles. It is mostly used in industrial ventilation and online smoke monitoring scenarios.

Features

- Plug in structure design, easy to install and maintain.
- It can be installed, disassembled, and maintained online with minimal pressure loss, low energy consumption, and significant energy-saving effects.
- The sensor features a large aperture pressure point with anti blocking design, ensuring long-term stable operation.
- The sensor is made of wear-resistant and corrosion-resistant materials, expanding its application range.

Measuring principle

The pitot tube flow sensor is based on the pitot static pressure tube principle. When the fluid flows in the pipeline, the pitot tube is impacted by the fluid in the upstream direction to measure the total pressure of the fluid. The static pressure of the fluid is measured by the static pressure hole of the sensor and output after being evenly distributed in the pressure equalization chamber. The difference between the total pressure and static pressure of the fluid (i.e. differential pressure value) has a certain numerical relationship with the flow velocity of the measured fluid. Therefore, the volumetric flow rate of the measured medium can be calculated by measuring the fluid flow velocity. For applications that require high measurement accuracy, temperature and pressure compensation combined with temperature and pressure sensors can be converted into mass flow rate.



Technical indicators

Measurement accuracy	±1.5%	Turndown ratio	10:1
Repeatability accuracy	±0.1%	Adapt to pipelines	≥DN100 round or square tube
Work pressure	0~30Kpa~1600Kpa	Straight pipe section	Front straight pipe section 3D, rear straight pipe section 1D
Operating temperature	-40℃~400℃	Scope of application	High concentration dust, adhesive and corrosive gases

FPT30 Pitot Tube Flow Sensor - Selection and Composition

Example of Selection **FPT30** A / B / S(10/7) / C / E / G / K / M

(1 2 3 4 5 6 7 8)

1 Product series	A	Uniformity Tube (Bar) Flow Sensor Series	
2 models	B	Pitot tube flow sensor	
3 Pipeline dimensions	S( )	Outer diameter/inner diameter (mm)	
4 Pipeline Material	C	Stainless steel 304 or stainless steel 316	
	D	carbon steel	
5 pipeline directions	E	Horizontal direction	
	F	vertical direction	
6 types of media	G	Pure gas	
	H	Smoke or gas containing a small amount of impurities	
	J	Dirty gas, containing a lot of dust or tar, etc	
7 types of connectors	K	Standard form	
	L	Configure the anti blow interface	
8 Sensor Material	M	304 stainless steel	
	N	316L stainless steel	
	O	Anti corrosion material	
	P	Wear resistant material	
	Q	Other materials	

Instructions:

The FPT30 averaging tube (bar type) pitot tube flow sensor has an outer diameter of 10mm and an inner diameter of 7mm. The pipeline material is stainless steel 304 or 316, and the pipeline direction is horizontal. The medium type is pure gas, the joint type is standard, and the sensor material is 304 stainless steel.

Product Certification

Compliance and approval; Rod Weige flowmeter meets key standards and certifications for process measurement technology;Thus ensuring the highest reliability in such settings;