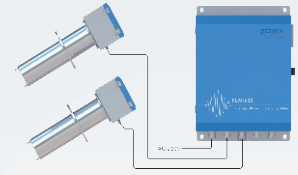


PFLW-100 Flue Gas Ultrasonic Velocity Meter

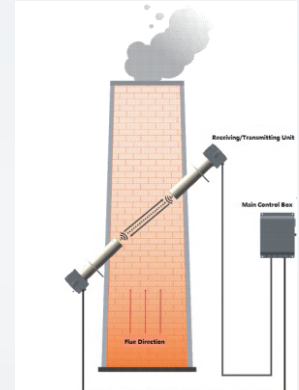
Overview

PFLW-100 flue gas ultrasonic velocity meter is a device for measuring gas flow based on the principle of ultrasonic time difference method. The equipment is composed of a pair of transducer probes and a control box. The transducer probes are installed on the opposite sides of the pipeline at a certain angle to alternately transmit and receive ultrasonic signals. The linear average flow velocity on the acoustic transmission path is calculated by measuring the flight time of the ultrasonic downstream and upstream. The product meets the measurement requirements of high and low flow rates and wide range, and effectively solves the problem of accurate measurement of gas volume under the working conditions of composition and humidity changes.



Advantages

- The measurement results does not affect by gas components, temperature, pressure or humidity fluctuations;
- Measuring average flow velocity of the line, the results are more representative;
- Support two pairs of probes to form "X-shaped" dual channels to achieve "quasi plane" measurement;
- The measurement will not produce pressure loss and will not affect the normal operation of the production process;
- Non contact measurement, high equipment reliability, small maintenance.



Technical Parameters

Measurement Name	Velocity	Pressure (Optional)	Temperature (Optional)
Measurement Principle	Ultrasound Method	Pressure Sensor	Thermal Resistance
Measurement Range	(0~45) m/s	(-10~10)kPa	(0~500)°C
Measurement Accuracy	Detection limit: 0.03m/s Sound velocity deviation: $\leq \pm 0.2\%$ Repeatability: $<0.2\%$ ($>5\text{m/s}$), $<0.01\text{m/s}$ ($\leq 5\text{m/s}$)	Not exceed $\pm 10\%$	Not exceed $\pm 3^\circ\text{C}$
Response Time	$<1\text{s}$	$<1\text{s}$	$<8\text{s}$
Measuring Pipe Diameter	0.15m~13m		
Power Supply	220VAC, 50Hz		
Power	$<40\text{W}$		
Probe Material	316L stainless steel		
Medium Temperature Range	$-40^\circ\text{C} \sim 120^\circ\text{C}$, high temperature version - $40^\circ\text{C} \sim 450^\circ\text{C}$		
Ambient Temperature Range	$-40^\circ\text{C} \sim 60^\circ\text{C}$		
Analog Signal	4-way 4~20mA output; 2-way 4~20mA inputs		
Digital Signal	5-way switching value output; 4-way switch input		
Communication Interface	1 way RS-232; 1 way RS-485		

Applications

Emission monitoring of coal-fired power plants, waste incineration, cement, steel, glass industry, petrochemical, paper making, textile and other industries.



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