Quality Forges Quality Service Moves Customers

Jiangsu Hualiu Instrument Co., Ltd

Address: 286 Tongtai Avenue, Economic Development Zone,
JinhuCounty, Huai'an City, Jiangsu Province, China

Code : 211600

Phone : 0517-86850886

Fax : 0517-86859386

Email : hualiyb@163.com

Https://www.jshualiu.com

华流

Selection sample

Flowmeter series / Temperature series
Pressure transmitter series Liquid level gauge series
Digital display series / Valve series

Jiangsu Hualiu Instrument Co., Ltd

ABOUT US

Jiangsu Hualiu Instrument Co., Ltd. is a manufacturer dedicated to the production, research and development, and sales of industrial automation instruments. The company is located in Huai'an City, the hometown of the great Premier Zhou Enlai, and is known as Jinhu County, the capital of lotus flowers. The company was established in 2012, covering an area of 2500m ^{2}, with 40 employees, including 9 with a bachelor's degree or above and 2 as senior engineers from the China Institute of Instrumentation and Design. The company has modern production workshops, intelligent standard gas flow and liquid flow calibration equipment, CNC machine tools and processing equipment; There are Marketing Department, Administration Department, Finance Department, Production Department, Technology Department, Procurement Department, International Trade Department, etc. There are offices in the western Inner Mongolia and Gansu regions.

The company has complete qualifications and registered the "Hualiu" brand in 2016. In 2019, the company was awarded the "National High tech Enterprise" and in 2023, it obtained the "Special Equipment Manufacturing Production License". The company holds the "ISO9001-2015 Quality System Certification", the type approval certificate for measuring instruments, explosion-proof certificates for various products, SIL safety certificates, CE certifications, and national utility model patent certificates.

In 2023, our company and China University of Metrology will collaborate on flow simulation research on "CFD numerical simulation and optimization of flow meters";

The company's main products include vortex flow meters, electromagnetic flow meters, precession vortex flow meters, thermal gas mass flow meters, gas-liquid turbine flow meters, Roots flow meters, orifice flow meters, Ba type flow meters, ultrasonic flow meters, radar level meters, and pressure/differential pressure transmitter systems; At the same time, we produce and sell products such as ultrasonic level gauges, magnetic flap level gauges, thermal resistors, thermocouples, regulating valves, shut-off valves, gas alarm devices, etc.

Honorary qualifications

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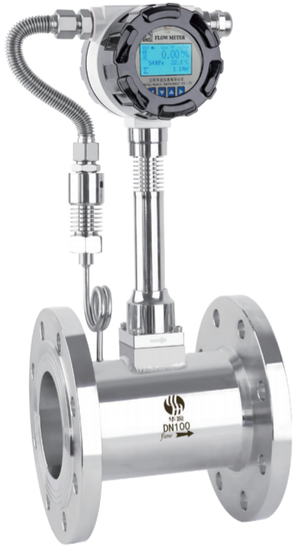
Vortex Flowmeter



Product features >>>

- The sensor has undergone high and low temperature resistance experiments, and can withstand low temperatures-90 ° C, can withstand high temperatures up to 400 ° C;
- The sensor is isolated from the process, with easy installation, constant instrument coefficient, high data repeatability, good compatibility between the converter and the sensor, and convenient and fast maintenance process;
- The detection sensor does not directly contact the tested medium, and is designed to resist water hammer and lightning strikes;
- The shell is corrosion-resistant and dirt resistant; After a long period of systematic experiments, it has been proven that the product has stable performance, long service life, high temperature resistance, and high reliability;

Technical parameters >>>

Nominal diameter	DN15-300 (can be made into an insertion type for diameters larger than 300)
Accuracy level	The accuracy of measuring gases is 1.5% better than that of soil; Liquid class accuracy is 0.75% better than soil; Insertion accuracy is 2.5% better than soil
Temperature requirements	Medium temperature -40 °C -350 °C; Environmental temperature -20 °C -70 °C
Body material	304 material is used for conventional measurement of slightly corrosive media, 316 material is used for corrosive or hygienic media
Sensor material	304, 316L; Special materials can be customized
Applicable media	Gas: air, oxygen, natural gas, liquefied gas, and other gases. Liquid: water, light oil, liquefied petroleum, acid, alkali, and other liquids Steam: It is related to steam and superheated steam
Flow velocity range	Gas: 5-50mm/s; Liquid: 0.5-7m/s
Repeatability	Better than 0.3%
Pressure level	1.6mpa, 2.5mpa, 4.0mpa, 6.3mpa (special customization available)
Protection level	IP65，IP67
Welding protection level	ExdIICT6; SII2 certification
Electrical interface	M20X1.5;NPT1/2
Power supply	24VDC; 3.6VDC
output signal	Simulate 4-20mA signal; Pulse;
display	No display: LCD display
Communication protocol	RS485: Hart protocol
Connection method	Flange connection, flange clamp, plug-in connection, threaded connection, clamp connection
structural style	Split type, integrated type

Electromagnetic Flowmeters

Product features >>>

- The linear measurement principle can achieve high-precision measurement without being affected by changes in fluid density, viscosity, temperature, pressure, and electrical resistivity;
- The converter adopts programmable frequency low-frequency rectangular wave excitation, which improves the stability of flow measurement and reduces power loss;
- The converter adopts a 16 bit embedded microprocessor, fully digital processing, fast operation speed, strong anti-interference ability, reliable measurement, high accuracy, and a flow measurement range of 50:1;
- Equipped with RS485 or RS2320 digital communication signal output;

Technical parameters >>>

Nominal diameter	DN6-DN3000mm
Nominal pressure	Flange connection PN1.0-42MPa
	Clamp connection PN1.0MPa
	Insertion type connection PN1.0- PN4.0MPa
accuracy	Pipe section type Taxi with a reading value of 0.5%, DN400 or above is better than 1%
	Insert type Taxi display 2.5%
Lining material	Polytetrafluoroethylene (PTFE), polychloroprene rubber, polyurethane rubber, silicone rubber, perfluoroethylene propylene (F46), PFA
Electrode material	316L, Hastelloy B, Hastelloy C, Titanium, Tantalum, Platinum/Iridium Alloy, Tungsten Carbide
ambient temperature	-20 °C~70 °C
Dielectric conductivity	20 μ s/cm
Protection level	IP65, 1P67, IP68 optional
Explosion proof level	EXDIICT6
Manufacturing standards	JB/T9248-1999
output signal	4-20mA; Frequency output; Pulse equivalent; Alarm output; Data communication
Power supply method	AC220V 50HZ/DC24V/3.6V lithium battery

Rotating vortex flowmeter

Product features>>

- detection seismic technology, it effectively suppresses vibration and pressure fluctuations, as well as interference signals caused by pipe-line vibration, and improves the strength of detection signals;
- Adopting a built-in combination, it can directly measure the flow rate, pressure, and temperature of the fluid, and automatically track and compensate for compression factor correction in real time;
- Adopting EEPROM technology, parameter settings are convenient, can be permanently saved, and can save up to one year of historical data;
- Cooperating with our company's FM data collector, remote data transmission of pressure and temperature signals can be achieved through the Internet or telephone network as sensor input methods, with strong interchangeability;

Technical parameters>>

Standard state conditions	P=101.325KPa，T=293.15K
Usage conditions	Environmental temperature: -30 °C~+65 °C;Relative humidity: 5%~95%
	Medium temperature: -20 °C~+80 °C; Atmospheric pressure: 86KPa~106KPa
Electrical performance indicators	Working power supply: A. External power supply:+24VDC ± 15%; B. Internal power supply: 1 set of 3.6V lithium battery (ER26500);
Pulse output mode	Power consumption of the whole machine: A. External power supply:<2W: B. Internal power supply: With an average power consumption of 1mW, it can be used continuously for more than two years;
4-20mA standard current signal (photoelectric isolation)	Directly proportional to the standard volumetric flow rate, 4mA corresponds to 0m3/h, and 20mA corresponds to the maximum standard volumetric flow rate (this value can be set in the first level menu) Standard: Two wire or three wire system, the flow meter can automatically recognize and output correctly based on the inserted current module;
Control signal output	A. Upper and lower limit alarm signals (UP/LP): photoelectric isolation, high and low level alarm, alarm level can be set, working voltage+12V~+/-24V, maximum load current 50mA;
	B. Valve closing alarm output (BC end, used for IC card controller): Logic gate circuit output, normal low level output, amplitude ⩽ 0.2V;Alarm output high level, amplitude ⩾ 2.8V, load resistance ⩾ 100k Ω;
	C. Battery undervoltage alarm output (BL end, used for IC card controller): Logic gate circuit output, normal output low level, amplitude ⩽0.2V; Alarm output high level, amplitude ⩾ 2.8V, load resistance ⩾ 100k Ω;
Explosion proof signs	ExdIIBT4
Protection level	IP65

Thermal gas mass flow meter

Product features>>

- Easy installation, simple maintenance, bidirectional detection, anti vibration up to 24 points, flow measurement output analog correction, multi-point nonlinear curve correction
- Wide range ratio 100:1

  Simultaneous detection of flow and temperature, switching to display large caliber and small flow measurements, capable of leak detection
- Adopting proprietary technology "dual balance structure" to package sensors with proprietary high temperature and high temperature algorithms, the medium temperature can reach 300 °C for direct mass flow detection, without the need for temperature and pressure compensation

Technical parameters>>

Measurable flow velocity range	0.5-120Nm/s
Applicable pipe diameter range	DN10-DN2000
Applicable flow range	0-770000 Nm3/h (DN2000 air)
Applicable pressure range	<2Mpa<10Mpa
Applicable media	Applicable materials include all gases except acetylene gas. Containing dust, sand, and various corrosive gases.
Sensor diameter	ψ 18
Sensor material	1Cr18Ni9Ti, Hastelloy, Titanium, 316L, Aluminum, 304 Stainless Steel
Probe material (protective tube)	1Cr18Ni9Ti, 304 stainless steel, 316L
Material of transmitter casing	Die cast aluminum
Instrument power supply	AC220V AC110V DC18-32V
output	Output four wire 4-20mA RS232、RS485、HART
On site display	16 characters x 4 lines
Display type	Split or integrated structure
structural style	Insertion type and pipeline type
Protection level	IP65
performance	Environmental temperature: -20~150 °C; Relative humidity: 45%~75%
	Atmospheric pressure 86~106kpa
	Medium temperature 0-200 °C; 0-300 °C
	Accuracy level: ± 1%; Soil 1.5%
	Preheating time: 15 seconds; Response time ⩽ 100ms

Turbine flow meter

Product features>>

- High precision, generally capable of reaching 1% R and 0.5% R of soil, while high-precision models can reach 0.2% R of soil; (R refers to reading error)
- Good repeatability, with a short-term repeatability of 0.05%~0.2%. Due to its good repeatability, such as frequent calibration or online calibration, extremely high accuracy can be achieved, making it a preferred choice for flow meters in trade settlement;
- Output pulse frequency signal, suitable for total quantity measurement and connection with computers, without zero drift and resistant to disturbances; The original pulse frequency range (10Hz~1.5KH) has strong signal resolution
- Maximum range width ratio, 10:1-20:1
- Suitable for high-pressure measurement, there is no need to open holes on the instrument body, making it easy to make high-pressure instruments; There are many types of specialized sensors, which can be designed according to the special needs of users, such as low-temperature, bidirectional, downhole, and sand mixing specialized sensors

Technical parameters>>

Tested medium	No impurities, low viscosity, no strongly corrosive liquids	
Execution standards	Turbine flow sensor (B/T9246-1999)	
Verification regulations	Turbine flow meter (JJG1037-2008)	
Instrument caliber And connection method	Flange connection type: DN15-DN200	Screw connection type: DN4-DN50
	Clamp connection type: DN4-DN200	Clamp connection: DN15-DN100
Flange standard	Conventional standard: GB/T9113-2000	
Accuracy level	1% R, 0.5% R	
Repeatability	0.15%, 0.1%, 0.03%	
Usage conditions	Medium temperature: general type, standard configuration: -20 °C~+80 °C; High temperature type, customized: -20 °C~+120 °C; Ultra high temperature type, customized: -20 °C -+150 °C;	
	Environmental temperature: -20 °C -+60 °C	Relative humidity: 5%~90%
	Atmospheric pressure: 86Kpa~106Kpa	
Output mode	Analog output: Pulse: 4-20mA	Digital communication: RS485; Hart protocol
Power supply method	3.6VDC lithium battery; 24VDC	
Flowmeter material	Shell material: 304; 316; Tetrafluoro (to be customized)	
	Impeller material: stainless iron; Dual phase steel: PTFE (to be customized)	
Voltage withstand level	Flange connection: PN1.0MPa to PN10MPa	Screw connection: PN6.3MPa
	Clamp connection: PN1.0MPa	Clamp connection: PN1.6MPa to PN40MPa

Gas turbine flowmeter

Product features>>

- The measuring room is isolated from the ventilation room, ensuring the safety of only the meter. It can detect the temperature, pressure, and flow rate of the measured gas, automatically track and compensate for the flow rate, and display the standard state,Accumulated gas volume (Pb=101-325KPa. Tb=293.15K); Real time query of temperature and pressure values
- Wide flow range (Qmax/Qmin>20:1), good repeatability, high accuracy (up to 1.0 level), low pressure loss, low starting flow rate, up to 0.6mm3/h
- Built in pressure and temperature sensors with high safety performance, compact structure, and beautiful appearance
- Adopting new microprocessors and high-performance integrated chips, it has high computational accuracy, powerful overall functionality, and superior performance.

Technical parameters>>

Execution standards	Measurement of Gas Flow in Closed Pipelines - Gas Turbine Flowmeters (GB/T8940-2003)
Instrument caliber and connection method	25, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300 are connected by flanges
Accuracy level	1.5% (± 1.0% to be customized)
Range ratio	1: 10; 1: 20; 1:30
Instrument material	Body: 304 stainless steel or cast aluminum; Impeller: corrosion-resistant ABS or high-quality aluminum alloy; Converter: cast aluminum
Usage conditions	Medium temperature: -20~80 °C; Environmental temperature: -20~70 °C; relative humidity:
	5%~90%; Atmospheric pressure: 86-106KPa
Working power supply	A. External power supply: 24VDC, ripple ± 5%, suitable for 4-20mA output, pulse output, RS485, etc
	B. Internal power supply: 1 set of 3.6VDC power supply, low-power design, continuous use for more than one year
Power consumption of the entire machine	Power consumption ⩽ 1W
signal output	Pulse signal, 4-20mA, RS485
Electrical interface	Internal thread M20 * 1.5 or 1/2NPT
Explosion proof level	EXDIICT6
Protection level	IP65

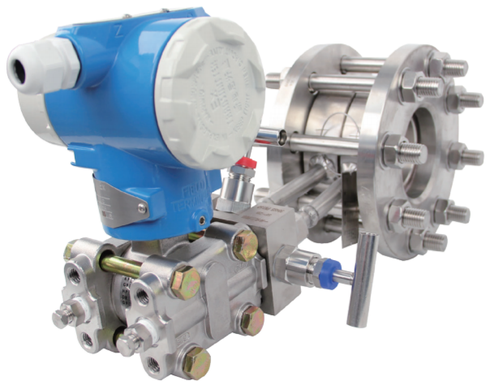
Orifice plate flowmeter

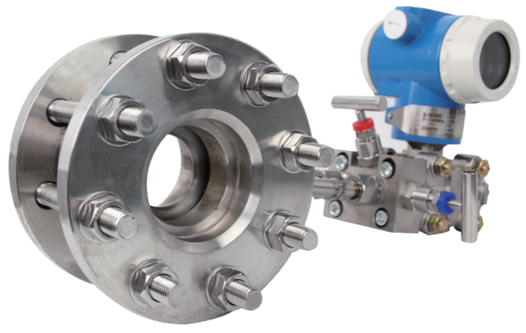
Product features>>

- The standard throttling component is fully functional and has been recognized by the International Organization for Standardization. It can be put into use without the need for actual flow calibration and is also unique in flow sensors;
- The structure is easy to replicate, simple, sturdy, stable and reliable in performance, and cost-effective;
- Widely applicable, including all single-phase fluids (liquid, gas, steam), some mixed phase flows, and the diameter and working state (temperature, pressure) of general production processes can be measured;
- The detection components and differential pressure gauges can be produced separately from different manufacturers, facilitating specialized scale production; Can measure gas, steam, liquid, and induced flow rates;
- Widely used in process control and measurement in fields such as petroleum, chemical, metallurgy, power, heating, and water supply; Measurement of steam and liquid flow rates. Has a simple structure, convenient maintenance, and stable performance;

Technical parameters>>

Nominal diameter	15mm ⩽ DN ⩽ 1200mm
Nominal pressure	PN⩽42MPa
working temperature	-50 °C ⩽ t ⩽ 560 °C
Range ratio	1: 10 (when using high-precision differential pressure transmitters), 1:3 (when using ordinary differential pressure transmitters)





Annubar flowmeter

Product features>>

- The Annubar flowmeter is an ideal product to replace orifice plates due to its simple installation, low pressure loss, high strength, unaffected by wear and tear, and no leakage.
- It can be widely used for flow measurement of blast furnace gas, compressed air, steam, and other liquids and gases in industrial and mining enterprises.
- The unique internal secondary averaging structure provides high precision (reading ± 1%) and high repeatability (± 0.1%). The outer impact tube is made of a single piece of material without welding, which naturally has the highest strength compared to similar products welded by a dual body structure. It is also convenient to choose materials that are resistant to high temperature and corrosion.
- The honeycomb hexagonal stable structure produces a unique beam distribution shape, ensuring the stability of low-voltage signals. The generated differential pressure is higher than that of similar products, improving the range ratio.
- Suitable for square or rectangular pipelines, with no flow coefficient drift and long-term stability.
- For similar products that inevitably encounter blockage issues when measuring dirty media, there are online pull-out types or manual and automatic blowing solutions and devices provided to achieve non-stop maintenance.

Technical parameters>>

specifications	DN50-DN5000 (mm); Insertion type: DN500-DN5000
Measurement accuracy	0.5% soil, 0.2% soil
Repeatability	Soil 0.1%
Range	Volume flow rate: 10:1; 100:1; Mass flow rate: 8:1;
working pressure	Average speed tube without lifting function type: \29.00MPa; Average speed tube with lifting function type: \10MPa;
Fluid temperature	450 °C;
Medium viscosity	30 CP (equivalent to heavy oil);
Wood material	Sensors and three valve assemblies: all made of 316L stainless steel, alloy steel, Hastelloy, Monel and other materials are optional;
Material of supporting parts	Flange: 316L stainless steel or carbon steel, alloy steel, Hastelloy alloy, Monel and other materials are optional;

Ultrasonic flowmeter

Product features>>

- With a very simple installation method, there is no need to break the pipe or cut off the water, making it easy for customers to achieve flexible pipeline flow measurement;
- It adopts the most advanced digital correlation technology and intelligent adaptive sound wave technology, making its measurement stability more prominent. At the same time, it uses patented sound focusing technology to significantly enhance the signal reception quality of the product during continuous measurement. Portable/handheld ultrasonic flow meters;
- Adopting non-contact measurement methods, with a large measurement range, no moving mechanical components, and unaffected by system pressure and harsh environments, it has been successfully applied in the measurement of fluids such as water, pure water, seawater, sewage, chemical wave bodies, river water, fuel oil, etc;
- Portable/handheld ultrasonic energy meters are widely used for measuring energy consumption in industries such as refrigeration, heating, heat exchangers, chiller boilers, etc;

Technical parameters>>

measurement accuracy	1%
Working power supply	Isolation 8-36VDC or 85-265VAC
power dissipation	Working current 50mA (without connecting the keyboard and buzzer)
Optional output	RS485 output for road sign brick isolation: 1 isolated 4-20mA or 0-20mA output (active or passive optional): Dual isolated OCT output (OCT1 pulse width) Programmable between 6-1000ms, default 200ms):
	One bidirectional serial peripheral universal interface, which can directly connect multiple analog output boards such as 4-20mA in series External devices such as frequency signal output boards, thermal printers, data recorders, etc.:
Optional Input	Three 4-20mA analog input circuits;
display	2x10 Chinese character backlight display (optional in both Chinese and English)
operation	Window operation with 16 keys or 4 keys
Other functions	Automatic memory of the first 512 days, first 128 months, and the first 10 years of positive and negative net cumulative flow. Automatic memory of the first 30 on/off times It can be automatically or manually supplemented with traffic and can be read out through the MODBUS protocol:
flow sensor	External clip type, insertion type, and pipe section type:

Coriolis mass flow meter

Product features>>

- Being able to directly measure the mass flow rate of fluids (which is of great significance for energy metering and chemical reaction detection and control in production processes);
- High measurement accuracy (measurement accuracy can be guaranteed to be between 0.1% and 0.5%);
- Wide application range (in addition to normal fluid measurement, it can also measure industrial media that are difficult to measure with general fluid measurement instruments, such as non Newtonian fluids, various slurries, suspensions, etc.);
- The installation requirements are not high (there are no requirements for the upstream and downstream straight pipe sections); Reliable operation, low maintenance rate, etc;
- Composed of measuring tube, measuring tube driving device, position detector support structure, temperature sensor, housing, etc;

Technical parameters>>

Applicable countries	Suitable for measuring small mass flow rates of liquids, gases, liquid-solid, and gas-solid materials
Measurement tube material	316L stainless steel or HaC alloy
Pressure level	PN1.6~4mpa，Special customization
Medium temperature	-50 °C~+150 °C: (Special customization possible: maximum temperature 350 °C, minimum temperature -273 °C)
ambient temperature	Sensor: -40 °C~+150 °C; Transmitters: -20 °C~+70 °C
Flow measurement accuracy	Choose from 0.2%, 0.15%, or 0.1%
Density measurement accuracy	0.002g/cm ^{3}
Repeatability	± 0.05%
output signal	4-20mA current signal; 0~10KHz frequency signal; 485 communication signal; Hart protocol
Explosion proof level	EX d ib HCT6Gb
Protection level	Sensor IP67; Transmitters IP65
Power supply	DC power supply: 18-32VDC; AC power supply: 110-260VAC
System power consumption	50W
Installation form	Split type; Integrated (transmitter and sensor used together)
Nominal diameter	DN10~DN250mm

Gas Roots flowmeter

Product features>>

- Wide range: Depending on different specifications, the maximum range can reach 1:216.
- Low starting flow rate: Depending on different specifications, the minimum starting flow rate can reach 0.04m3/h.
- High precision and repeatability: Long term accuracy is not affected by the medium, long-term operation, stable accuracy, and small pressure loss: according to different specifications, the pressure loss is 0.08kPa -0.58kPa.
- High integration and low power consumption: adopting advanced micro-computer technology and high-performance integrated chips, the whole machine has powerful functions and superior performance.
- Compact structure: Pressure sensors, temperature sensors, and flow sensors are all built-in, making the structure more compact.
- The configuration of digital temperature sensors and digital pressure sensors can be calibrated and verified separately, making them easy to replace, maintain, and use.
- Equipped with complete data storage function and GPRS real-time management system.

Technical parameters>>

Accuracy level	Level 1.0: Qmax-0.2Qmax ± 1.0% 0.2 Qmax Qmin ± 2.0%
	Level 1.5: Qmax-0.2Qmax ± 1.5% 0.2 Qmax Qmin ± 3.0%
Standard state conditions	P=101.325 kPa T= 293.15K
Usage conditions	a. Environmental temperature: -25 °C~+80 °C b. Medium temperature: -20 °C~+60 °C
	c. Relative humidity: 5% to 95% d. Atmospheric pressure: 86KPa~106Kpa
	e. Operating pressure: ⩽ 400KPA
Working power supply	Internal instrument power supply; Internal GPRS power supply; External power supply; Off grid (solar) GPRS power supply
Pulse output mode	1. Base meter pulse signal: (used for calibration of instruments)
	2. Corrected working condition pulse signal (or standard volumetric flow rate)
	3. Calibration pulse signal (used for IC card controller input)
Current output	4-20mA standard analog current output function
Output format	Two wire or three wire system
RS485 communication	Through the built-in RS485 standard interface, it can be connected to personal computers and PLCs for serial communication. It can display medium pressure, temperature, instantaneous flow rate, cumulative standard flow rate, battery voltage, etc.

Thermistor

Overview >>>

Assembly of thermistors utilizes the characteristic that the resistance of a substance changes with temperature changesUsed to measure temperature. When the resistance changes, the working instrument will display the temperature value corresponding to the resistance value.

Usually used in conjunction with display instruments, recording instruments, electronic computers, etc. Directly measure the temperature of liquid, steam, and gas media, as well as the surface of circular bodies, within the range of -200 °C to 500 °C in various production processes.

Product features >>>

- Spring type temperature sensing element with good vibration resistance.
- no need for compensating wires, saving costs.
- High measurement accuracy.
- High mechanical strength and good pressure resistance.
- Imported film resistor components with reliable and stable performance.

Temperature measurement range and tolerance >>>

Temperature measurement range and tolerance				
Model number	Graduation	Measuring range	Accuracy level	Allowable deviation
WZP	Pt100	-200-+500	A-level	± (0.15+0.0021t)
			B-level	± (0.30+0.005
WZC	Cu50 Cu100	-50~+100	/	± (0.30+0.0061)

Model and specifications >>>

name	model	Graduation	Tested range	specifications	
Single platinum thermistor	WZP-101	Pt100	-200~500	Φ3	310
				Φ4	360
				Φ5	410
				Φ6	460
Double platinum thermistor	WZP_2-101				510
					560

Thermocouple

Overview >>>

The electrodes of armored thermocouples are composed of two different conductor materials. When there is a temperature difference between the measuring end and the reference end, a thermoelectric potential is generated, and the working instrument displays the temperature value corresponding to the thermoelectric potential.

Product features >>>

- Less thermal response time, reducing dynamic errors.
- Flexible installation and use.
- Large measurement range.
- High mechanical strength and good pressure resistance.

Technical parameters >>>

model	Graduation	Tolerance level			
		I		II	
		Allowable difference	Temperature measurement range ℃	Allowable difference	Temperature measurement range ℃
WRNK	K	±1.5℃	-40~+375	± 2.5℃	-40~+333
		±0.004|t|	375~1000	± 0.0075|t|	333~1200
WRMK	N	±1.5℃	-40~+375	±2.5℃	-40~+333
		±0.004|t|	375~1000	± 0.0075|t|	333~1200
WREK	E	±1.5℃	-40~+375	± 2.5℃	-40~+333
		±0.004|t|	375~800	± 0.0075|t|	333~900
WRFK	J	±1.5℃	-40~+375	± 2.5℃	-40~+333
		±0.004|t|	375~750	± 0.0075|t|	333~750
WRCK	T	±0.5℃	-40~+125	± 1℃	-40~+133
		±0.004|t|	125~350	± 0.0075|t|	133~350
WRPK	S	±1℃	0~+1100	± 1.5℃	0~600
		±[0.003(t-1100)]	1100~1600	± 0.0025|t|	600~1600

Bimetallic thermometer

Overview >>>

A bimetallic thermometer is an on-site detection instrument used to measure medium and low temperatures. It can directly measure the temperature of liquid, steam, and gas media within the range of -80 °C to+500 °C in various production processes.

Product features >>>

- On site temperature display, intuitive and convenient.
- Accuracy level: 1.0/1.5.
- safe and reliable, with a long service life.
- Multiple structural forms can meet different requirements.

Technical parameters >>>

W	S	S	□	□	□	□
Temperature instrument	Metal expansion plate	Bimetallic sheet	Nominal diameter of the dial	structural style	Installation method	Protection form
			3 ϕ60 4ϕ100 5ϕ150	0 axial type (straight type) 1 Radial (angular) 2135 ° (obtuse angle type) 5 hot sleeve axial type 6 hot sleeve radial type 7 hot sleeve universal type 8 Universal type (adjustable angle type)	0 No fixed device 1 movable external thread 2 movable internal threads 3 fixed threads 4 Fixed flanges 5-card sleeve thread 6-card sleeve flange	No (unmarked) ordinary type W protection type F anti-corrosion type

Pressure transmitter

Product features >>>

- Damping adjustable (electrical damping 0-6S)
- The minimum loop resistance 250Q required for communication is full size: range 0 ~ 125Pa to 0 ~ 40MPa
- Positive and negative transfer: positive transfer 500% , negative transfer 600%
- Output Signal: two-wire 24VDC power supply, 4 -20 madc output (can also be four-wire system 220 VAC power, 0-10 madc output)
- Explosion-proof: intrinsically safe IALLCT6, flameproof dIIBT4
- Good pressure resistance: general pressure resistance is 14 mpa. High static pressure withstand 32 mpa
- Corrosion Resistance: can provide 316L, Monel, Harrington alloy, tantalum and other materials of corrosion-resistant transmitter

Technical parameters >>>

Accuracy	0.1%，0.2%，0.25%，0.5%.
Dead Zone	None (0.1%)
Stability	The absolute value of the basic error not exceeding the maximum range within six months
Vibration effects	When the vibration frequency is 200Hz, the error is + 0.05%/g of the upper limit of the measurement range
Power effect	Less than 0.005%/V of the output range
Load effect	If the power supply is stable, the load has no effect
Use objects	Liquids, gases, and vapors
Measurement range	0-0.1 KPA to 0-40 mpa
Output signal	4-20mADC (specially for 4-wire 220VAC power supply 0-10mADC output)
Power supply	12-45 VDC is typically 24 VDC
Indicative table	Pointer type linear indication 0 ~ 100% scale and LCD display
Range and zero	External continuous adjustable
Temperature range	The operating temperature range of the amplifier is -29 ~ + 93 ° C (LT type: -25 ~ + 70 ° C)
	The measuring elements filled with silicone oil were -40 ~ + 104 ° C
	When high temperature silicon oil is filled into the flange type transmitter, it is: + 15 ~ +315 ° C
	Normal silicone oil: -40 ~+ 149 ° C
Static pressure	4,10,25,32 mpa
Volume uptake	< 0.16 cm3
Damping (stepresponse)	When filled with silicone oil, it can be adjusted continuously from 0.2 S to 1.67

Single/double flange pressure transmitter

Product features >>>

- High temperature and pressure resistant chip
- Designed with heat exchange fins, high temperature resistance, suitable for medium temperatures up to 300C
- Durable and well sealed aluminum alloy junction box for outdoor installation and use
- The sensor and pressure interface are all welded structures, resistant to impact and vibration
- Intrinsic safety explosion-proof optional
- Suitable for boilers, oil fields, injection molding, chemical, pharmaceutical, food, water supply networks, static pressure levels, municipal sewage, industrial wastewater, and industrial waste liquids

Technical parameters >>>

Range of measurement	0~0.02..10MPa
Type of pressure	Gauge pressure, absolute pressure
Power supply	24VDC、12VDC
Output signal	4~20mA、1~5V、0~5V
Compensation temperature	-10~70°C
Ambient temperature	-20~85°C
Medium temperature	-40~125°C
Zero temperature drift	±1.5%FS(Max.)
Sensitivity temperature drift	+1.5%FS(Max.)
Overload pressure	150%FS
Mechanical vibration	20g(20~5000Hz)
Impact	100g(11ms)
Comprehensive accuracy	0.1、0.3、0.5 级可选
Long-term stability	±0.2%FS/year
Response time	≤1 ms (up to 90% FS)
Insulation	100M2/250VDC
Material	Low copper aluminum alloy housing: diaphragm 316L
Media compatibility	Various media compatible with 316L stainless steel
Protection level	IP65

Pressure gauge

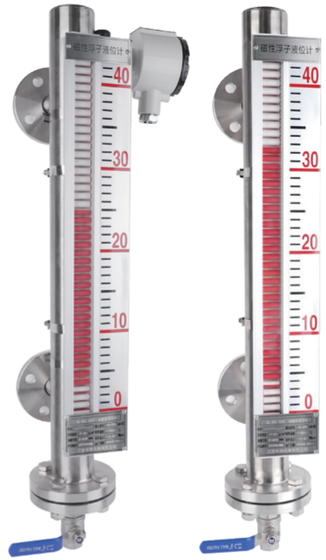
Overview >>>

- Pressure gauges are mainly used for measuring medium pressure in the production process of petroleum, chemical, power plant, metallurgy, soda,chemical fiber, dyeing, pharmaceutical, food, etc. , the overall structure of the series of instruments designed reasonable, delicate technology, with high measurement accuracy and long-lasting stability, so not only can be provided.
- In particular, the domestic users of the introduction of foreign advanced technology equipment in the same instrument localization, the ideal supporting products.

Technical parameters >>>

Accuracy Rating	Generalpressure gaugemeasurement range (MPA)	Bellowspressuregaugemeasuring range (KPa)
0.4	0~0.06	0~1.6
	0~0.1	0~2.5
	0~0.16	0~4
	0~0.25	0~6
	0~0.4	0~10
	0~0.6	0~16
	0~1	0~25
	0~1.6	-1.6~0
	0~2.5	-2.5~0
	0~4	-4~0
1.0	0~6	-6~0
	0~10	-10~0
	0~16	-16~0
1.5	0~25	-25~0
	0~40	-40~0
2.5	0~60	-0.8~0.8
	0~100	-1.2~1.2
	-0.1~0.06	-2~2
	-0.1~0.15	-3~3
	-0.1~0.3	-5~5
	-0.1~0.5	-8~8
	-0.1~0.9	-12~12
	-0.1~1.5	-20~20
	-0.1~2.4	
	-0.1~0	

Magnetic flap level gauge



Product features >>>

- It is suitable for the liquid level measurement of liquid medium in the container. Besides the field display, it can also be equipped with remote transmitter, liquid level controller and other functions
- The measurement range is large, not limited by the height of the container.
- Corrosion resistance, explosion-proof.
- The display component is completely isolated from the medium under test, so the sealing is good.
- Visual eye-catching display, display direction can be changed according to User Requirements Display Universal.
- Simple structure, easy installation, easy maintenance.

Technical parameters >>>

Measurement range	300~15000mm
Accuracy	±10mm，±16mm
Diameter of flipcolumn	10mm.16mm
Job stress	≤2.5 mpa (more than 2.5 mpa can be designed separately) corrosion-resistant Type 1.0 mpa
Operating temperature	-90 ° C ~ 480 ° C
Medium density	≥0.45g/cm³
Medium density difference	≥0.15g/m³(measurement boundary)
Medium temperature	-20+250°CC
Medium viscosity	≤0.4 pa · s heating jacket can be used for high viscosity medium or easy crystallization medium at low temperature Liquid level gauge
Connecting flange	The standard of HG20592 ~ 20635-97 flange issued in 1988 is adopted GB, ANSI, DIN, etc.) Connecting flange size: DN20. PN 1.0(metric)
Technicalrequire ments	1.high viscosity or low temperature easyto product medium can choose heating jacket type level meter
	2.Side-mounted liquid level gauge with intermediate strut flange when ordering length > 4000mm
	3.Bottom-mounted or top mounted liquid level gauges with flanges > 80mm Note: special requirements may be specified when ordering,

Radar level gauge

Product features >>>

- Millimeter-wave radar, measuring accuracy up to ± 2 mm, measuring the minimum blind area of 0.05 m
- Multi-lens antenna, smaller transmitting angle, more concentrated energy, stronger echo signal, under the same working condition, it has higher reliability than other radar products.
- It has better penetrability and can be used under the conditions of adhesion and condensation.
- The dynamic signal range is larger and the measurement is more stable for low permittivity medium.
- Millimeter Wave Radar adopts FMCW mode, non-contact design, small size,low power consumption, anti-jamming ability, strong force;
- The whole equipment does not need a separate power supply or wiring cable, can be self-powered, strong adaptability:

Technical parameters >>>

Measurement medium	Liquids do not corrode
Measurement range	0.05m~30m
Process connection	G$1^1/_2$A / $1^1/_2$NPT thread
Process temperature	-40~130°C
Process pressure	-0.1~2 MPa
Antenna size	34.5mm lens antenna
Antenna material	PTFE
Precision	± 1mm
Protection level	IP67
Center frequency	80GHz
Firing angle	7°
Power supply	Two-wire/DC24V four-wire/DC12 ~ 24V four-wire/AC220V
The shell	Aluminum/plastic/stainless steel
Signal output	2-wire/4 ~ 20mA/Hart Protocol 4-wire/RS485 Modbus

Ultrasonic level gauge

Product features >>>

- Non contact measurement: Ultrasonic level gauges do not require direct contact with the measured medium, which can avoid the risk of sensor erosion or contamination by the medium and reduce maintenance workload.
- Remote detection: Ultrasonic level gauges can achieve remote detection and maintain high accuracy, suitable for level detection in large storage tanks, deep wells, and high-rise equipment.
- Fast response: With the characteristic of fast response, it can monitor the current medium liquid level in real time, suitable for control systems with high real-time requirements.
- Multi medium applicability: Ultrasonic level gauges can be widely used for liquids with different densities, viscosities, colors, and other characteristics, including water, petroleum, chemicals, food, etc., and can provide accurate and reliable measurement results.

Technical parameters >>>

Measurement range	0 ～15m（selected according to actual measuring range）
Blind area	0.45m ～ 0.6m
Ranging accuracy	±0.25-5%（standard condition）
Ranging Resolution	1mm
Stress	Normal pressure
Gauges display	Comes with LCD display
Analog output	4 ～20mA
Supply voltage	DC24V
Ambient temperature	−20°C ～ +60°C
Protection level	IP65

RF admittance level gauge

Product features >>>

- Calibration simple: can use any two-point warehouse high one-time automatic completion of calibration.
- Strong Adaptability: the special anti-impact, anti-wear rod sheathing material can be used in high temperature, high pressure, strong corrosion,strong adhesion, strong impact, strong wear, dust environment reliable work.
- No Maintenance: as the sensor structure is simple, no moving parts, so once put into operation, no maintenance.
- No Drift: no drift due to changes in temperature or density of the medium.
- Widely used: liquid, solid, interface mixtures, materials can be used.

Technical parameters >>>

Power supply	220VAC 50Hz or 24VDC (24VDC is recommended)
Relay contacts	2 groups SPDT, 5A 220VAC;
Material	Sensor Bar: SUS304/316
	Insulation Sheath: PP or Teflon
Sensitivity	0.5pf~750pf
Operating temperature	Operating temperature range: -184 ° C ~260 ° C
	Temperature resistance of circuit part: -40 ° C ~ 80 ° C
Connectingthread	G 1”，1” NPT or 1” PF
Delaytime	0-30 seconds adjustable
Temperature range	Controller ambient temperature: -30-60 °C
Working temperature of the electricbox of the sensor	—30 ～70°C
Working temperature of sensorproberod	—150 ～240°C
Humidity range	Relative Humidity: 0-90%
Damping	The time constant is adjustable between0 and 20 seconds, adjusting the step size by 1 second
Transmission distance	Sensors and control instruments can transmit signals up to 1000m
Applicable object	High temperature, high pressure, flammable, explosive, toxic, corrosive and other working conditions, on the liquid, slurry, powder, particles, bulk materials and so on. Two-phase liquid interface measurement: such as oil water interface, etc.

Single/double flange liquid level gauge

Product features >>>

- High-quality sensors have high sensitivity, fast response, accurate reflection of fluid or static fluid level, small changes, high measurement accuracy.
- It can be used in all kinds of dangerous places.
- With anti-blocking design, can achieve the level of paste medium measurement.
- 100% isometric scale, LED, LCD three indicators head, field reading is very convenient.
- 4-20 MADC two-wire signal transmission, anti-interference ability, long transmission distance.
- The pressure sensor can directly sense the pressure of the measured liquid level, and is not affected by the bubbling and deposition of the medium.

Technical parameters >>>

Precision	0.25%F·S；0.5%F·S
Measurement range	0~1~150(m)
Storage temperature	-40°C~100°C
Use temperature	0°C~70°C
Temperature effect	<0.02%/°C
Humidity	≤95%RH
Field display	0 ~ 100% isometric scale 31/2led 31/2LCD
Load capacity	≤750Ω
conducting cable material	ϕ8 polytetrafluoroethylene；ϕ8polyvinyl chloride
Output	2-wire system 4~20mA DC
Suitable media	Compatible with 316 stainless steel for liquids and semi-liquids
Zero temperature coefficient	Less than 0.02%/°C
Full range temperature coefficient	Less than 0.02%/°C
Structural materials	Isolation diaphragm: 316 stainless steel corrugated diaphragm
	Sensor housing:1Gr18Ni9Ti stainless steel
Relay case	97X84X147 epoxy resin spray

Flow totalizer

Product features >>>

- Open and small signal excision. 8 compensation points and parameters.
- 4-bit instantaneous flow display and 6-bit or 9-bit cumulative flow display.
- Frequency input can be ultra-low-frequency flow calculation and instantaneous flow display.
- It can clear the cumulative flow value and the cumulative flow value.
- Programmable quantitative integration flow, batch, quantitative control.
- Control outputs for instantaneous and cumulative flow.

Technical parameters >>>

Input signal	Standard linear signal, PT100 thermistor, frequency signal.
And variable delivery output	0~10mA or 4~20mA。
	(0~10mA、4~20mA)With DC current (0 ~ 10mA, 4 ~ 20mA)
Input method	DC voltage(0~5V、1~5V、0~75mV、0~200mV)
	Frequency input
Flow mode	The main input signal is proportional to the instantaneous flow rate, and the main input signal is pro-
	portional to the instantaneous flow rate;The input signal is proportional to the instantaneous flow rate
	and has the small signal excision function;The main input signal and the instantaneous flow are open
	mode, with small signal cut-off function
Mode of adjustment	No relay output
	Two relay outputs, one for instantaneous flow control and the other forcumulative flow control
	Four relay outputs are available for instantaneous or cumulative flow control
Compensation	Normal flow mode, no temperature or pressure compensation
	Saturated steam uses voltage or current signals for pressure compensation
	Saturated steam uses voltage or current signals for temperature compensation
	Saturated steam uses PT100 thermistors for temperature compensation
	Superheated steam usesvoltage or current signals to compensate for temperature and pressure
	Superheated steam usesvoltage or current signals for pressure compensation and R100 thermistors for
	temperature compensation
	There is no temperature or pressure compensation, and the conversion factor is displayed

PID controller

Product features >>>

- A variety of analog input or frequency input.
- The process quantity, the given value and the control quantity are displayed in triple.
- PID regulator positive and negative action selection, hand automatic two-way undisturbed two-way switch.
- When the fault occurs, 0% , 100% or the upper limit and lower limit can be selected for the analog output of the control quantity and process quantity.
- Tracking the zero and full of the input signal can be calibrated.
- Open and small signal excision can be performed.
- Valve position feedback signal optional (a variety of analog inputs) .

Technical parameters >>>

Input method	With thermocouples (e, K, s, b, J, T, R, N)
	Distribution of heat resistance (PT100, CU50, CU100, BA1, BA2, G)
	With DC current(0~10mA、4~20mA)
	With DC voltage(0~5V、1-5V、0~20mV、0~75mV、0~200mV)
	Equipped with remote pressure resistance value and linear resistance value(0~400Ω)
	Frequency input(0~10KHz)
	Special input (such as open, small signal cut, please specify order)
And variable delivery output	No-feed output; variable output 0 ~ 10ma; variable output 4 ~ 20ma;
	Variable output 0 ~ 5v; variable output 1 ~ 5V: : special signal delivery output
Timing function	No timing function; with timing function
Communication interface	No 24V DC power output; with 24V DC power output (can do two-wire transmitter power supply)
External 24v DC powersupply	No communication interface; with RS485 or RS232 communication interface
Power supply	220V.AC; 85 ~ 260VAC; 18 ~ 36VDC or 18 ~36VAC
Continuous PID mode	PID4 ~ 20mA output (reaction) , PID0 ~ 10mA output (reaction) , PID0 ~ 5v output(reaction)
	PID1 ~ 5v output (reaction) , PID0 ~ 10V output (reaction) ;
	Positive effect (1-5 one ofwhich, order note)1-6 one of which + relay (order note relaytype and quantity)
Intermittent PID mode	Built-in silicon-controlled (bi-directional 41A, 2KW) output
	Built-in silicon-controlled(bi-directional 41A, 2KW) output (can add 2 or 3 relays, order note) ;
	External thyristor (siliconor silicon) ; external thyristor (silicon or silicon)(can add 2 or 3 relays, order note) ;
	Using three-phase zero interpolation method thyristor trigger (trigger current up to 500mA or more) ;
	Three-phase zero crossing thyristor triggerplus 1 or 2 relays (order indicated)
	SSR cluster relay output (12V) plus two relay alarms (SSB technical parameters provided by the user)

Digital display meter

Product features >>>

- The panel operation is simple and quick, the key combination can quickly modify the parameters
- Higher display accuracy: 0.3% (long-term stability)
- Reliable distribution protection: current limit 30mA
- Reliable output protection: Contactor Spark Protection
- Wide range of adaptations: large lag, thermal inertia, overshoot, pure time scaling
- Communication is Standard Modbus (RTU mode)
- Fuzzy PID control algorithm: no overshoot, undershoot

Technical parameters >>>

Pressure Range	0-0.1...0.6...1.6...2.5...10...25...40..60...160MPa
Overload capacity	150%
Accuracy Rating	1.0%
Electricity	24VDC,220VAC,380VAV optional(see product identification)
Alarm Point setting	Full range optional
Output signal	Relay switch signal
Load capacity	380V 3A 220V 5A 24V 5A
Sampling rate	5 times per second
Use temperature	-20°C~80°C
Measurement medium	304 stainless steel compatible media
Wiring protection	Reverse polarity and short circuit protection
Install interfaces	M20*1.5 G1/2 G1/4
Out-of-line definition	Power line: Red and black output line: Blue and white

Pneumatic control valve

Product features >>>

- The utility model relates to a right angle rotary structure, comprising a V-type valve body, a pneumatic actuator, a positioner and other accessories;
- There is an inherent flow characteristic of approximately equal percentage;
- Dual bearing structure, low starting torque, good sensitivity and speed Excellent shearing ability.
- Suitable for various regulating occasions, with large rated flow coefficient, adjustable ratio, sealing effect, good, sensitive regulating performance, small size, vertical horizontal installation.
- Applicable to control the gas, steam, liquid and other media.

Technical parameters >>>

Nominal diameter	DN15~300mm
Nominal pressure	1.6~6.4Mpa(if need high pressure working condition also can design and manufacture)
Body material	Carbon Steel (C) , stainless steel 304(P) , stainless steel 316(R)
Sealing material	Polytetrafluoroethylene (f) , metal hard seal (h) , cemented carbide (y)
Medium temperature	W2 : -20~150°C； W3 : -20~250°C ； W4 : -29~425°C
Connection mode	Flange, internal thread, butt welding
Spool type	Single seat (p) sleeve (m)
Control accuracy	0.3%~1%
Input signal	4~20mA、0~10V、1~5V
Flow characteristics	Equal percentage characteristic, equal linear characteristic, fast opening characteristic
Pneumatic actuators	Zha series, ZHB series, imported actuator series
Control mode	Single action is often closed and single action is often open
Stroke (mm)	10、16、25、40、60、100
Notes	Other special sealing material or special temperature can also be according to customer requirements design selection.

Pneumatic switch ball valve

Product features >>>

- For automatic process lines, as a liquid and gas (including corrosive) working environment, in the pipeline of the emergency cut-off device, the implementation of the pneumatic control.
- With the top-mounted structure, the connecting bolt of the valve body is reduced under the condition of high pressure and large diameter, and the reliability of the valve is enhanced.
- The sealing surface of disc and seat is made of iron-base alloy or sitalite cobalt-base hard alloy. It is wear-resistant, high temperature-resistant, corrosion-resistant and abrasion-resistant with long service life.
- The valve stem has good corrosion resistance and abrasion resistance after conditioning and surface nitriding treatment.

Technical parameters >>>

Job stress	1.6,2.5,4.0,6.3,10.0 mpa Class 150LB and 300LB:
Temperature range	-60°C to +160°C;
Carbon Steel	-40°C to +160°C; (higher temperature range can be based entirely on the choice of sealing material)
Explosion-proofversion	(Ex)-40°C to +60°C;
Diameter Range	DN15 to DN200;
Service life	An average of 8000 cycles
Rotation angle	Lock the ball at 90 degrees (± 3 degrees)
Scope ofapplication	Gas distribution pipelines, gas combustion equipment, automatic fire extinguishing systems, boiler rooms andheating stations, compressors and pumping stations of industrial enterprises Air conditioning and ventilation.

Product practical application display


Application site of gas turbine flowmeter

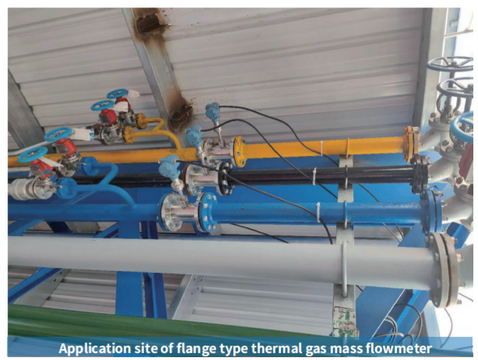

Application site of plug-in thermal gas mass flowmeter


Application site of spiral vortex flowmeter


Application site of electromagnetic flowmeter


Application site of split type thermal gas mass flowmeter


Application site of split type electromagnetic flowmeter


Application site of flange type thermal gas mass flowmeter