

Excellence in Innovation
Service with Dedication

» WUXIWOHUAN

Precision Instruments·Environmental Insight

Smart IoT·Automated Control



Wuxi Wohuan Instrument Technology Co., Ltd.

 www.whinstrument.com

 +86-510-83738168 +86 181 1537 2079

 Jindonglai Technology Park, No. 9 Huayun Road,
Binhu District, Wuxi, Jiangsu, China

WUXI WOHUAN INSTRUMENT TECHNOLOGY CO., LTD.

Corporate Culture 02

Company Profile 03

Vortex Flow Meter 04

Liquid Turbine Flow Meter 08

Electromagnetic Flow Meter 11

Ultrasonic Flow Meter 15

Heat Meter/ Energy Meter 18

Thermal Mass Flow Meter (Gases) 19

Metal Tube Rotameter 21

Gas Flow Meter 25

Orifice Plate Flow Meter 27

Single-Crystal Silicon Smart Transmitter 28

Intelligent Zirconia Oxygen Analyzer 30

Pressure/Level Transmitter Series 32

LevelTransmitters/Gas Detection & Analysis Series 35

Gas Detection /Temperature Transmitters Series 36

Intelligent Digital Display Series 37

Mission

Safe, Green & Smart Solutions —
Integrated Instrumentation & Automation Systems

Philosophy

Excellence in Innovation | Service with Dedication

COMPANY PROFILE

Wuxi Wohuan Instrument Technology Co., Ltd., a high-tech enterprise based in Wuxi's Binhu District, specializes in digital platforms, smart engineering data centers, safety monitoring instruments and environmental analyzers. Committed to enhancing smart city services, we leverage BIM, big data and cloud platforms to deliver secure, reliable monitoring solutions through IoT-integrated data centers, driving China's industrial software development and digital economy growth.

With extensive expertise in high-end instrumentation R&D and manufacturing, we provide advanced sensor technologies (level/flow/pressure) and comprehensive solutions for military, environmental and industrial applications. Combining high-performance products with cost-effectiveness, we maintain standardized customer service and technical support to ensure long-term partnerships.

From basic industrial processes to complex military systems, Wohuan delivers optimal solutions and premium products for diverse applications.

Core Values

Striving Every Wohuan member demonstrates perseverance in work, life and learning, growing with the company and taking pride in our collective achievements.

Serving We remain committed to providing timely, efficient and professional services to clients while contributing to society for a better tomorrow.

Improving Continuous product innovation, service optimization and corporate advancement drive our daily efforts at Wohuan.

Core Philosophy

As a professional measurement instrument manufacturer, every Wohuan employee upholds our operating principle: "Think as creators, innovate as experts, and take pride as pioneers." We strive relentlessly with the ultimate goal of advancing global development and industry progress.



WHLUGB Vortex Flow Meter

The intelligent vortex flow meter is mainly used for flow measurement of medium fluids in industrial pipelines, including gases, liquids, steam and other media. Its features include small pressure loss, large measuring range, and high accuracy. The measured volumetric flow rate is almost unaffected by fluid density, pressure, temperature, viscosity and other parameters. With no moving mechanical parts, the vortex flow meter offers high reliability and low maintenance. The instrument parameters remain stable for long-term operation. Equipped with a piezoelectric stress sensor, it delivers high reliability and can operate within a temperature range of -20°C to +450°C. Providing both analog standard signals and digital pulse signal outputs, it can be easily integrated with digital systems like computers, making it an advanced and ideal flow measurement instrument.

1. Integral Vortex Flow Meter (Class 1.0 High Accuracy)

Product Description



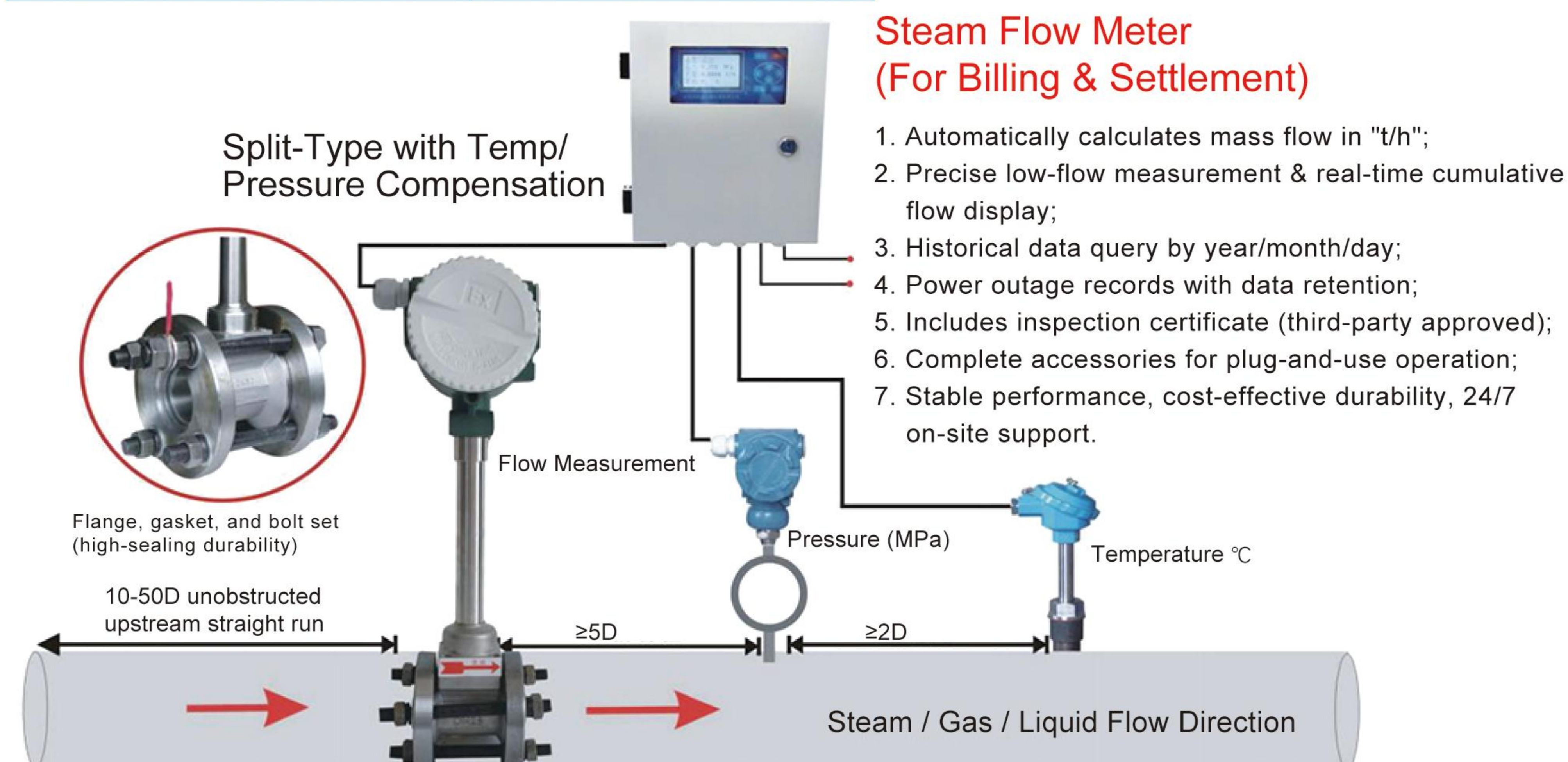
Temperature & pressure compensated
integral type (Wafer flange)



Temperature & pressure compensated
integral type (Flange connection)

2. Split-Type Vortex Flow Meter (For power plants/fiscal metering)

Vortex Flow Meter Technical Specifications & Parameters



Vortex Flow Meter Technical Specifications & Parameters

Measured Medium: Saturated steam
Medium Temperature: -40°C ~ + 250°C
Medium Pressure: 1.6MPa / 2.5MPa / 4.0MPa (Customizable for >4.0MPa)
Accuracy: Class 1.0 / Class 1.5
Range Ratio: 1:8~1:30 (Air) • 1:8~1:40 (Water)
Flow Range: Liquid: 0.4~7.0 m/s • Gas: 4.0~60.0 m/s • Steam: 5.0~70.0 m/s
Sizes (Φ): 25/40/50/65/80/100/125/150/200/250/300 mm
Vibration Resistance: ≤0.2g (LUGB type)
Protection Rating: IP65
Explosion Proof Rating: (ia)IICT6
Ambient Temperature: -40°C~+55°C (Non-explosive) / -20°C~+55°C (Explosive)
Humidity: ≤85% RH
Atmospheric Pressure: 86~106 kPa
Power Supply: Non-explosive (Pulse+12VDC 20mA / Current+24VDC 20mA
Output Signals: Frequency Pulse: 2~3000Hz (Low≤1V / High≥6V); 2-wire 4~20mA (Isolated, Load≤500Ω)

Vortex Flow Meter Selection Guide (Compliant with JB/T9294-1999 Standard)

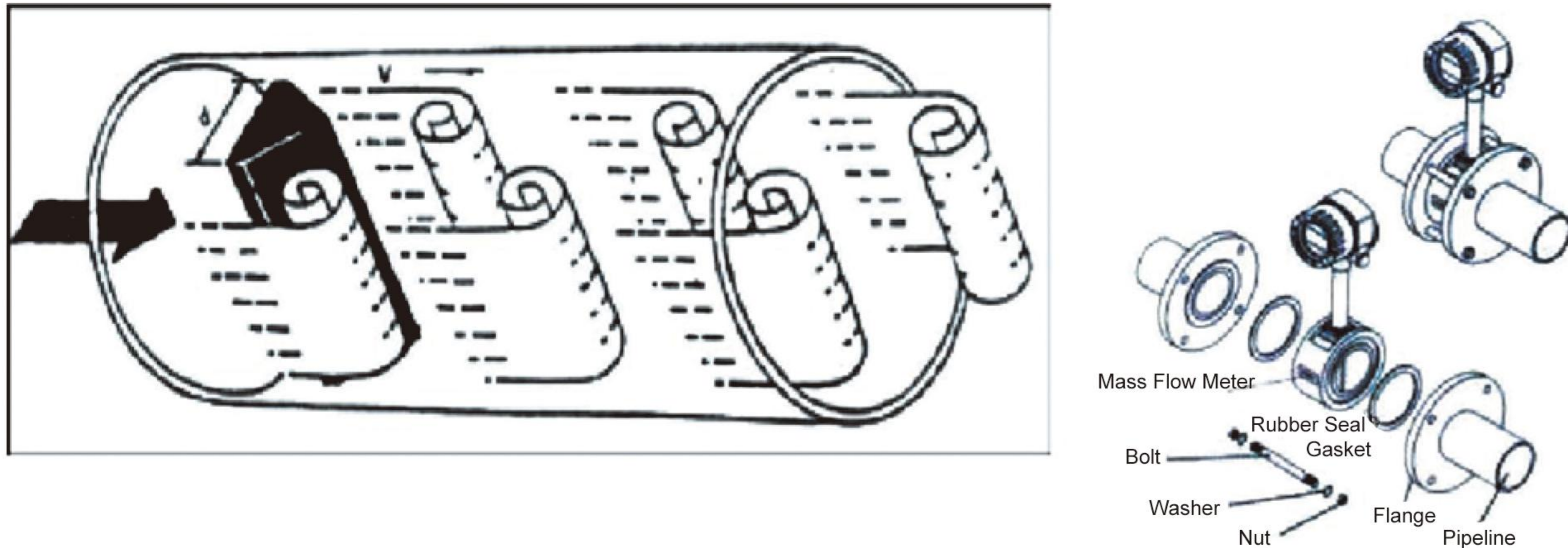
Sensor Selection Table

WHLUGB Series Vortex Flow Meter Selection Guide

	X	Model Explanation
WHLUGB		Vortex Flow Meter
Connection Type	A	Flange connection
	B	Wafer flange
	C	Simple insertion
	D	Ball valve insertion
Measurement Medium	2	Liquid
	3	Gas
	4	Steam
Nominal Diameter	25	DN25
	... ..	Unit: mm
	300	DN300
Environment	P	Standard type
	B	Explosion-proof type
Compensation Type	P	With integrated pressure compensation
	T	With integrated temperature compensation
	D	With integrated temperature & pressure compensation
Output Signal	1	24VDC power, pulse output
	2	24VDC power, 4-20mA current output with LCD display
	3	24VDC power, RS-485 communication with LCD display
	4	Battery powered, no temp/pressure compensation, with LCD display
	5	Temp/pressure compensated, 24VDC, 4-20mA current output with LCD
	6	Temp/pressure compensated, battery powered with LCD
Selection Example	e.g.: LUGE24-25-P2 - Full-bore capacitive vortex flow meter, wafer flange connection, for steam, DN25 diameter, standard 4-20mA current output	

Working Principle

When a non-streamlined vortex generator (blocking body) is placed in the fluid, two rows of regular vortices are alternately generated from both sides of the vortex generator. These vortices are called Karman vortex streets, as shown in the figure.



Vortex flow meters are our company's main product. These temperature and pressure compensated steam flow meters come with complete accessories and can be put into immediate use with simple installation and power connection. They are technically recommended for power plants and user cost accounting/trade settlement applications, capable of accurate steam mass flow measurement (t/h) with daily data recording, historical data review and power outage tracking functions. The system features proprietary password protection to prevent unauthorized modification of internal data.

Operating Condition Flow Meter Range Table

Sensor Bore Size (mm)	Liquid		Gas	
	Measurement Range(m³/h)	Output Frequency Range(Hz)	Measurement Range(m³/h)	Output Frequency Range(Hz)
15	0.5~5	35~600	3~13	300~1240
20	0.6~10	29~420	6~30	220~1250
25	1.2~16	25~336	8.8~52	190~1140
32	1.8~20	18~264	10~150	156~1080
40	2~40	10~200	27~205	140~1040
50	3~60	8~160	35~380	94~1020
65	4~85	6~120	60~700	94~910
80	6.5~130	4.1~82	86~1100	55~690
100	15~220	4.7~69	133~1700	42~536
125	20~350	3.2~57	150~2800	38~475
150	30~450	2.8~43	347~4000	33~380
200	45~800	2~31	560~8000	22~315
250	65~1250	1.5~25	890~11000	18~221
300	95~2000	1.2~24	1360~18000	16~213
□300□	100~1500	5.5~87	1560~15600	85~880
□400□	180~3000	5.587	2750~27000	85~880
□500□	300~4500	5.5~87	4300~43000	85~880
□600□	450~6500	5.5~88	6100~61000	85~880
□800□	750~1000	5.5~88	110001000	85~880
□1000□	1200~17000	5.8~88	17000~10000	85~880
□□1000□	Customizable		Customizable	

Flange Wafer Standard Field Display Dimensions

Nominal Diameter	Pressure Rating MPa	Standard L(mm)	Standard L1(mm)	D mm	D ₁ mm	H mm	H ₁ mm	d ₁ mm	d ₂ mm	n Number of Holes
DN15	4	70	95	55	100	366	393	78	14	3
DN20		70	95	55	100	366	393	78	14	3
DN25		70	95	55	100	366	393	78	14	3
DN32		70	95	55	100	366	393	78	14	3
DN40		85	108	80	140	378	405	106	18	4
DN50		85	108	90	145	387	418	112	18	4
DN65	1.6	85	108	105	165	402	438	130	18	4
DN80		85	108	120	180	417	453	145	18	6
DN100		85	108	140	210	437	478	175	18	6
DN125		85	115	165	235	462	503	200	18	8
DN150		100	128	194	270	489	533	230	22	8
DN200		100	128	248	325	541	588	285	22	8
DN250		115	142	300	375	592	638	330	22	10
DN300		130	158	350	425	642	688	380	22	10

Above dimensions are for wafer type without temp/pressure compensation. For compensated versions: DN15-DN32 require +15mm length (L/L1); medium temp (100~250°C) require +30mm height (1 cooling fin); high temp (≥250°C) require +60mm height (2 cooling fins).

Flange Wafer Standard Field Display Dimensions

Nominal Diameter	Pressure Rating MPa	L (mm)	D mm	H mm	d ₁ mm	d ₂ mm	n Number of Holes
DN10	4	170	90	395	60	14	4
DN15		170	95	397	65	14	4
DN20		170	105	402	75	14	4
DN25		170	115	407	85	14	4
DN32		170	140	420	100	18	4
DN40		170	150	425	110	18	4
DN50	1.6	170	165	432	125	18	4
DN65		190	185	443	145	18	8
DN80		190	200	450	160	18	8
DN100		200	220	460	180	18	8
DN125		200	250	475	210	18	8
DN150		200	285	493	240	22	8
DN200		200	340	520	295	22	12
DN250		240	405	553	355	26	12
DN300		240	460	580	410	26	12

Notes: Medium temp (100~250°C): Height +30mm (1 cooling fin); High temp (≥250°C): Height +60mm (2 cooling fins).

Flange Wafer Standard Field Display Dimensions

Nominal Diameter mm	Pressure Rating MPa	Ball Valve Insertion L mm	Simple Insertion L mm
DN250	1.6	680	255
DN300		705	280
DN400		755	330
DN500		805	380
DN600		855	430
DN800-2000		905~1555	530~1130

Notes: Other special dimensions available per agreement.

WHLWGY Liquid Turbine Flow Meter

Product Description

The sensor is used with matching display instruments for measuring liquids in closed pipelines that are non-corrosive to stainless steel (1Cr₁₈Ni₉Ti, 2Cr₁₃), Al₂O₃, and hard alloys, and contain no fibers or particulate impurities. When paired with specialized display instruments, it enables quantitative control and over-range alarm functions.

The explosion-proof model (ExmIIIT6) can be used in hazardous environments.

The sensor is suitable for media with viscosity <5×10⁻⁶m²/s at operating temperature. For liquids with viscosity >5×10⁻⁶ m²/s, on-site calibration with actual fluid is required.



Working Principle

When fluid flows through the sensor housing, the turbine blades (positioned at a specific angle to the flow direction) generate rotational torque from fluid impact. After overcoming frictional and fluid resistance torques, the blades rotate at a stabilized speed proportional to flow velocity under defined conditions.

The ferromagnetic blades, situated within the magnetic field of the signal detector (comprising permanent magnets and coils), periodically alter magnetic flux by cutting magnetic lines during rotation. This induces electrical pulse signals in the coils, which are amplified and shaped into continuous rectangular pulse waves for transmission to display instruments, showing instantaneous flow rate or total volume. Within a specified flow range, the pulse frequency (f) is proportional to the instantaneous flow rate (Q), expressed by: $Q = 3600 \times f/k$

where:

f = Pulse frequency [Hz]

k = Sensor coefficient [1/m³] (provided in calibration certificate). For [1/L] units: $Q=3.6 \times f/k$

Q = Volumetric flow rate (operating conditions) [m³/h]

3600 = Conversion factor

Each sensor's coefficient (k) is calibrated by our company and documented in the certification. Inputting this k-value into the paired display instrument enables instantaneous/cumulative flow measurement.

Basic Parameters: (See Table Below)

Medium Type	WHLWGY	Diameter	Connection	Explosion-proof	Accuracy	Material	Flow Range (m³/h)
Model	WHLWGY	Basic/Pulse (Round head, HSM head)					
	WHLWGYA	4-20mA output/No display/Power: DC24V					
	WHLWGYB	With display/Battery powered					
	WHLWGYC	Field display/4-20mA output/Power: DC24V					
	WHLWGYD	Field display/4-20mA output/RS485/Power: DC24V					
Nominal Diameter	4	.....					
	6	.....					
	10	.....					
	15	.....					
	20	.....					
	25	.....					
	32	.....					
	40	.....					
	50	.....					
	65	.....					
	80	.....					
	100	.....					
	125	.....					
	150	.....					
	200	.....					
Connection Type			F: Flange; M: Thread; K: Clamp; C: Insertion				
Explosion-proof			0: Non-explosion-proof; 1: Explosion-proof				
Accuracy			A: Class 1.0; B: Class 0.5; C: Class 0.2				
Material			1: 304 Stainless Steel; 2: 316L Stainless Steel				

Field display type, 4-20mA output, 24V power supply, 50mm diameter, non-explosion-proof, Class 0.5 accuracy;

Flange connection: 304 material;

Model: WHLWGYC - 50F0B1;

Flange Dimension Reference Table

Model	Nominal Diameter (mm)	L (mm)	H (mm)	G1/2	L (mm)	D (mm)	d (mm)	Number of Holes
WHLWGY-4	4	275	145	G1/2	215			
WHLWGY-6	6	275	145	G1/2	215			
WHLWGY-10	10	400	145	G1	350			
WHLWGY-15	15	75	173	G1				
WHLWGY-20	20	85	173	G5/4				
WHLWGY-25	25	100	173	G11/2				
WHLWGY-32	32	140	175	G2				
WHLWGY-40	40	140	178					
WHLWGY-50	50	150	252			Φ125	Φ18	4
WHLWGY-65	65	170	278			Φ145	Φ18	4
WHLWGY-80	80	200	287			Φ160	Φ18	8
WHLWGY-100	100	220	322			Φ180	Φ22	8
WHLWGY-125	125	250	347			Φ210	Φ26	8
WHLWGY-150	150	300	367			Φ250	Φ26	8
WHLWGY-200	200	360	415			Φ295	Φ26	12

- ◆ Sensor can be installed horizontally or vertically (vertical installation requires upward flow). Liquid must fully fill pipe (no bubbles). Flow direction must match sensor arrow. Upstream: $\geq 20 \times$ nominal diameter straight pipe. Downstream: $\geq 5 \times$ nominal diameter straight pipe. Pipe interior must be smooth/clean (no dents/scaling). Align pipeline axes. Gaskets must not protrude into pipe.
- ◆ Keep sensor away from electric/magnetic fields (use shielding if needed). To maintain normal liquid transfer during maintenance, it is recommended to install a bypass pipeline at the sensor installation location.
- ◆ For outdoor sensor installation, ensure waterproofing of amplifiers and connectors. When the fluid contains impurities, install a filter (typically 2-60 mesh) based on flow conditions.
- ◆ Install a gas eliminator when the fluid contains free gas. Ensure full pipeline sealing.
- ◆ User must confirm medium corrosiveness to prevent sensor damage.

Operation and Adjustment

- ◆ Keep the measured liquid clean and free of fibers and particles during use.
- ◆ When starting to use the sensor, first slowly fill the sensor with liquid before opening the outlet valve. Never expose the sensor to high-speed fluid impact when no liquid is present.
- ◆ The maintenance cycle for the sensor is generally six months. During inspection and cleaning, be careful not to damage components in the measuring chamber, especially the impeller. Pay attention to the positional relationship between the guide parts and impeller during assembly.
- ◆ When the sensor is not in use, clean the internal liquid and install protective covers on both ends of the sensor to prevent dust from entering, then store in a dry place.
- ◆ Filters should be cleaned regularly when in use. When not in use, clean the internal liquid and store with dust covers in a dry place, same as the sensor.
- ◆ The sensor's transmission cables can be installed overhead or underground (use steel pipes when buried underground).
- ◆ Before installing the sensor, first connect it to the display or oscilloscope, power on, and blow air or manually rotate the impeller to make it spin quickly and observe whether there is any display. Install the sensor only when there is a display. If there is no display, check all relevant parts and troubleshoot.

WHLDE Electromagnetic Flow Meter

Product Description

The WHLDE electromagnetic flow meter is suitable for measuring the volume flow of conductive liquids and slurries in closed pipelines, including clean water, wastewater, various acid/alkali/salt solutions, mud, ore pulp, paper pulp, and food-grade liquids.

- ◆ Compliance Standard: Design, production, and testing of WHLDE electromagnetic flow meter comply with "JJG-1033-2007 Electromagnetic Flow Meter".
- ◆ Measured Fluids: Conductive liquids, slurries
- ◆ Accuracy: $\pm 0.25\%$, $\pm 0.50\%$, $\pm 1.0\%$ (selectable based on requirements)
- ◆ Connection: Flange type, Clamp type
- ◆ Pressure Rating: 0.25Mpa, 0.6Mpa, 1.0Mpa, 1.6Mpa, 2.5Mpa, 4.0Mpa, 6.4Mpa, 10Mpa, 16Mpa, 25Mpa, 40Mpa, 63Mpa
- ◆ Medium Temperature: $\leq 60^\circ\text{C}$, $\leq 120^\circ\text{C}$, $\leq 150^\circ\text{C}$
- ◆ Diameter: DN10-2200
- ◆ 316L, Hastelloy (B, C), Titanium, Tantalum, Platinum
- ◆ Liner Materials: Rubber (Neoprene, Polyurethane), F4, F46, PFA
- ◆ Measuring Tube: Stainless steel
- ◆ Flange: Carbon steel (standard), Stainless steel
- ◆ Body: Carbon steel (standard), Stainless steel
- ◆ Housing: Carbon steel (standard), Stainless steel
- ◆ Display Head: Die-cast aluminum
- ◆ Power Supply: 220VAC, 24VDC, Battery
- ◆ Output Signals: 4-20mA, Pulse, Frequency
- ◆ Communication Interfaces: RS-232, RS-485
- ◆ Protocols: HART, Modbus, Profibus
- ◆ Additional Functions: Power-off timing, GPRS wireless communication



Integrated Type (Local Display)

Remote Type with dedicated shielded cable, available as: IP68 waterproof type (submersible up to 5 meters with guaranteed lifespan), remote display automatic meter reading type, resistant to strong acids, alkalis, sulfuric acid, nitric acid, industrial wastewater, etc.

Flow Velocity Range in Flow Measurement

For clean media, the economical flow velocity range is 1.5~3 m/s. For crystallizing or scaling solutions, appropriately increase the velocity to 3~4 m/s to achieve self-cleaning and prevent adhesion/deposition - vertical installation is preferred. For abrasive fluids like ore slurry, reduce velocity to 1~2 m/s to minimize liner/electrode wear. In practice, flow velocities rarely exceed 7 m/s (exceeding 10 m/s is extremely rare except for research applications). Selecting pipe diameter based on economical velocity significantly ensures proper operation and extends service life.

Protection Level Selection

IP65: Spray-proof type, allows water jets from any direction (30kPa pressure, 12.5L/min flow rate, 3m distance).

IP68: Submersible type, can operate underwater long-term.

Select protection level based on actual conditions: choose IP68 for sensors installed below ground level or in flood-prone areas; choose IP65 for above-ground installations.

Mounting Type Selection

Choose split-type for sites with complex/poor installation conditions.



Split-Type (Remote Transmission)

Dimensions and Installation

Flow meter dimensions, flange-type sensor dimensions and pressure ratings, see Figure 1 and table below

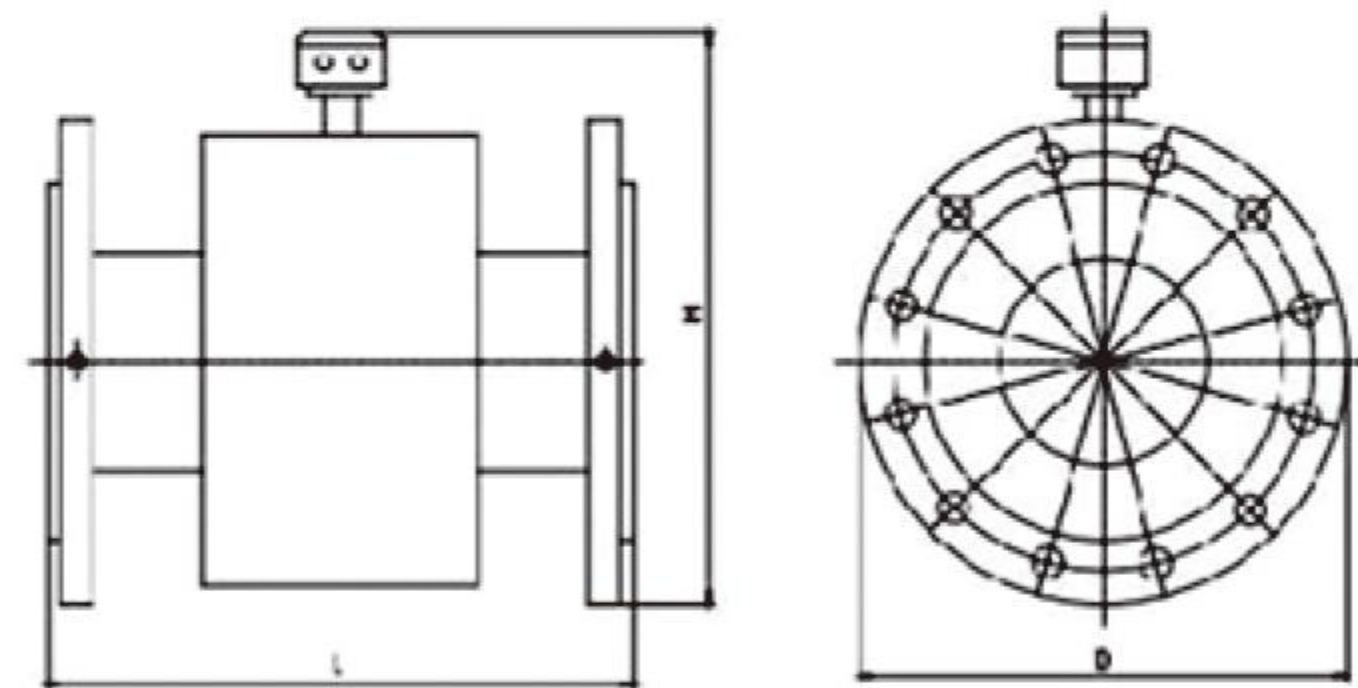


Figure 1
Flange-type sensor dimensional drawing
(DN6mm-DN3000mm)

Flange Dimensions

Connection flange and installation dimensions,

see Figure 2. Flange Standards:

4.0Mpa(DN6mm-DN50mm)GB/T9119-2000

1.6Mpa(DN65mm~DN250mm)JB/T81-94

1.0Mpa(DN300mm-DN1000mm)JB/T81-94

0.6Mpa(DN1200mm-DN3000mm)JB/T81-94

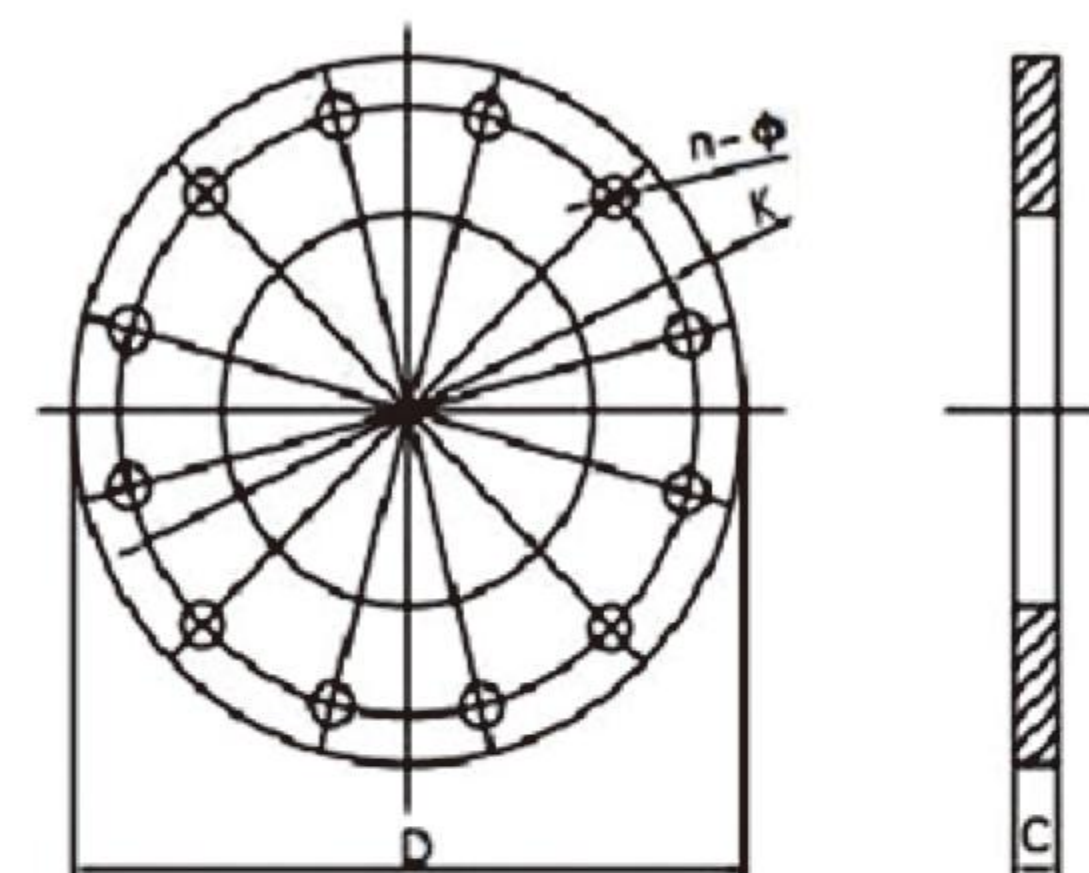


Figure 2 Flange dimensional drawing.

Nominal Diameter (mm)	Nominal Pressure (MPa)	Body Length (with liner)	Overall Dimensions		Approx. Weight (kg)
			D	H	
6	4.0	200	90	220	6
10		200	90	220	6
15		200	95	220	8
20		200	105	220	10
25		200	115	223	12
32		200	140	240	13
40	1.6	200	150	250	14
50		200	165	263	15
65		250	185	283	18
80		250	200	290	20
100		250	235	318	25
125		250	270	350	28
150	1.0	300	300	380	30
200		350	340	430	50
250		450	405	495	70
300		500	460	547	95
350		550	520	602	120
400		600	580	665	140
450	1.0	600	640	720	160
500		600	715	783	200
600		600	840	897	280
700		700	895	982	350
800		800	1015	1092	400
900		900	1115	1192	480
1000	0.6	1000	1230	1299	550
1200		1200	1450	1488	660
1200		1200	1405	1488	680
1400		1400	1630	1700	750
1600		1600	1830	1924	850
1800		1800	2045	2134	980
2000		2000	2265	2344	1200
2200		2200	2475	2549	1600
2400		2400	2685	2754	2000
2600		2600	2905	2964	2400
2800		2800	2905	3169	2700

Maximum and minimum flow rates must comply with the values in the following table

Inner Diameter mm	10	15	20	25	32	40	50	65
Qmin (m³/h)	0.0238	0.0636	0.12	0.176	0.29	0.452	0.7	1.19
Qmax (m³/h)	4.24	9.54	16.96	26.5	43.42	67.85	106	179
Inner Diameter mm	80	100	125	150	200	250	300	350
Qmin (m³/h)	1.8	2.28	4.41	6.36	11.3	17.6	25.4	34.6
Qmax (m³/h)	271	424	662	954	1690	2650	3810	5190
Inner Diameter mm	400	450	500	550	600	700	800	900
Qmin (m³/h)	45.2	57.2	77.6	85.8	101	138	180	229
Qmax (m³/h)	6780	8570	10600	12800	15200	20700	27100	34300
Inner Diameter mm	1000	1100	1200	1400	1600	1800	2000	2200
Qmin (m³/h)	282	342	407	554.1	732.7	916	1131	1368.4
Qmax (m³/h)	42400	51300	6100	83121	108566	137404	169635	205258

Electrode Material Selection

The electrode material should be selected based on the corrosiveness of the measured liquid. Refer to relevant anti-corrosion manuals, and conduct tests for special fluids.

Material	Corrosion Resistance
316L	Applicable: 1. Domestic water, industrial water, raw well water, urban wastewater 2. Weakly corrosive acids, alkalis, salt solutions
Hastelloy C	Applicable: 1. Non-oxidizing acids like hydrochloric acid (<10% concentration) 2. Sodium hydroxide (<50%), all concentrations of ammonium hydroxide 3. Phosphoric acid, organic acids Not applicable: Nitric acid
Hastelloy B	Applicable: 1. Mixed acids like chromic/sulfuric acid mixtures 2. Oxidizing salts like Fe ³⁺ , Cu ²⁺ , seawater Not applicable: Hydrochloric acid
Titanium (Ti)	Applicable: 1. Salts: (1) Chlorides (sodium/magnesium/aluminum/calcium/ammonium/iron, etc.) (2) Sodium/potassium/ammonium salts, hypochlorites, seawater 2. Alkalis (<50% concentration): potassium/ammonium/barium hydroxides Not applicable: Hydrochloric, sulfuric, phosphoric, hydrofluoric acids
Tantalum (Ta)	Applicable: 1. Hydrochloric acid (<40%), dilute/conc. sulfuric acid (excluding fuming) 2. Chlorine dioxide, ferric chloride, hypochlorous acid, sodium cyanide, lead acetate 3. Oxidizing acids like nitric acid (including fuming) Not applicable: Alkalis, hydrofluoric acid
Platinum (Pt)	Applicable: Nearly all acids, alkalis, salts (including fuming sulfuric/nitric acids) Not applicable: Pure water, ammonium salts

Liner Material Selection

The liner material should be selected based on the corrosiveness, abrasiveness, and temperature of the measured medium.

Liner Material	Name	Symbol	Properties	Max. Temp.	Suitable Liquids	Suitable Diameter
Rubber	Neoprene	CR	Moderately wear-resistant, with-stands dilute acids/alkalis/salts	<80℃	Tap water, industrial water, seawater	DN50-2200
	Polyurethane Rubber	PU	Excellent wear resistance, poor acid/alkali resistance	<60℃	Pulp, ore slurry, and other slurries	DN25-500
Fluoroplastics	Polytetrafluoroethylene	F4/PTFE	Chemically stable, resists to boiling HCl, H ₂ SO ₄ , concentrated alkalis, wastewater	<180℃	Strong corrosive acids/alkalis/salts	DN25-1200
	Tetrafluoroethylene-Hexafluoropropylene (FEP, Teflon FEP)	F46/FEP	Lower chem. resist. than F4	<120℃	Strong corrosive acids/alkalis/salts	DN115-200
	Tetrafluoroethylene-Ethylene	F40/ETFE	Lower chem. resist. than F4	<120℃	Strong corrosive acids/alkalis/salts	DN250-2200
Plastics	Polyethylene (PE)	PO	Chemically stable	<60℃	Wastewater	DN50-2200
	Polyphenylene sulfide (PPS)	PPS		<110℃	Hot water	DN50-2200

Selection

Specification Code			Description
Manufacturer	WH		Wuxi Wohuan
Instrument Type	LDE		Electromagnetic Flow Meter
Diameter Code	-xxx		E.g.: Code 100 = DN100
Configuration	A	.....	Integral
	F	.....	Remote
	C	.....	Insertion
	R	.....	Thermal
	W	.....	Sanitary
	K	.....	Clamp
	J	.....	Wafer
Electrode Material	A	.....	316L SS
	B	.....	Hastelloy (HB/HC)
	C	.....	Titanium
	D	.....	Tantalum
	E	.....	Platinum
Liner Material	1	.....	CR Rubber
	2	.....	Polyethylene PO
	3	.....	Polytetrafluoroethylene PTFE
	4	.....	F4
	5	.....	PFA
	6	.....	Polyurethane Rubber
Power Supply	0	.....	220V AC
	1	.....	24V DC
	2	.....	Battery
	3	.....	220AC/24VDC
Output Signal Communication	0	.....	4-20mA, Pulse, Frequency
	1	.....	Rs232
	2	.....	Rs485
	3	.....	Hart
	4	.....	4-20mA/RS485
	A	.....	0.6
Rated Pressure (MPa)	B	.....	1.0
	C	.....	1.6
	D	.....	2.5
	E	.....	4.0
	F	.....	6.4

Example: WHLDE-80F-A434C
Description: Wuxi Wohuan electromagnetic flow meter, DN80, remote type, 316L electrode, PTFE liner, dual power supply (220V AC/24V DC), dual output (4-20mA/RS485), rated pressure 1.6MPa.

WHTUF Ultrasonic Flow Meter

The ultrasonic flow meter adopts a two-wire (loop-powered) design, making it easier to integrate with systems while offering excellent cost performance. Its dual-path sensor achieves ±0.5% measurement accuracy, making it an ideal choice for measuring various conductive or non-conductive liquids.

Widely applied in process control, production measurement, and trade settlement, it has been extensively used in water supply/drainage, metallurgy, chemical, energy, and heating industries.

Display & Operation	Two-line LCD touch screen with keypad operation
Power Supply	12~30VDC
Protection Rating	IP68
Number of Channels	2 channels
Output Signals	Current, pulse/frequency output
Communication Interfaces	IR infrared interface, RS485/USART
Supported Protocols	1.HART 2.MODBUS 3.M-BUS 4.CJ188 5.Haifeng ASCII 6.Protocols used by Huizhong
Measurement Accuracy	±0.5%
Diameter Range	DN15~300
Process Connection	Flange connection (GB/T 9119-2000 standard)
Pressure Rating	PN16
Process Temperature	-30~ +90℃
Materials	Carbon steel, stainless steel
Pressure Loss	None
Straight Pipe Requirements	Upstream: 5D, Downstream: 3D (D = pipe diameter)
Moving Parts	None (maintenance-free)



Model Selection Code

WHTUF-	A: Integral B: Remote C: Insertion D: Clamp-on E: Portable	- DN 15~300	- Pipe Material 1: 304 SS 2: 316 SS 3: Carbon steel	- HART Protocol Module 1: Without 2: Optional
--------	--	----------------	--	---

Example: WHTUF-A-DN200-2-1
Description: Dual-path two-wire ultrasonic flow meter, Integral type, DN200 diameter, 316 stainless steel material, without HART protocol module.

The main unit is designed for wall-mounted installation and is suitable for most non-specialized applications. Different insertion sensors are available for pipe diameters DN50-DN6000mm, allowing installation without water supply interruption.

WHTUF-C Wall-mounted Insertion Type

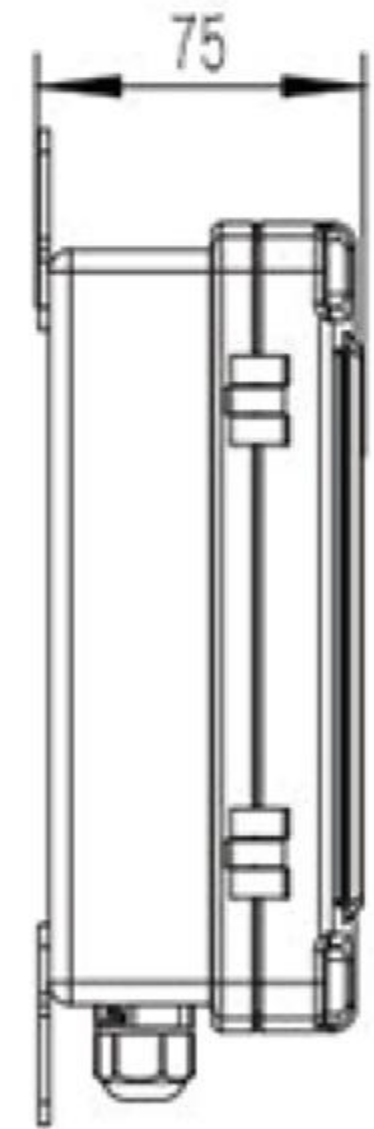
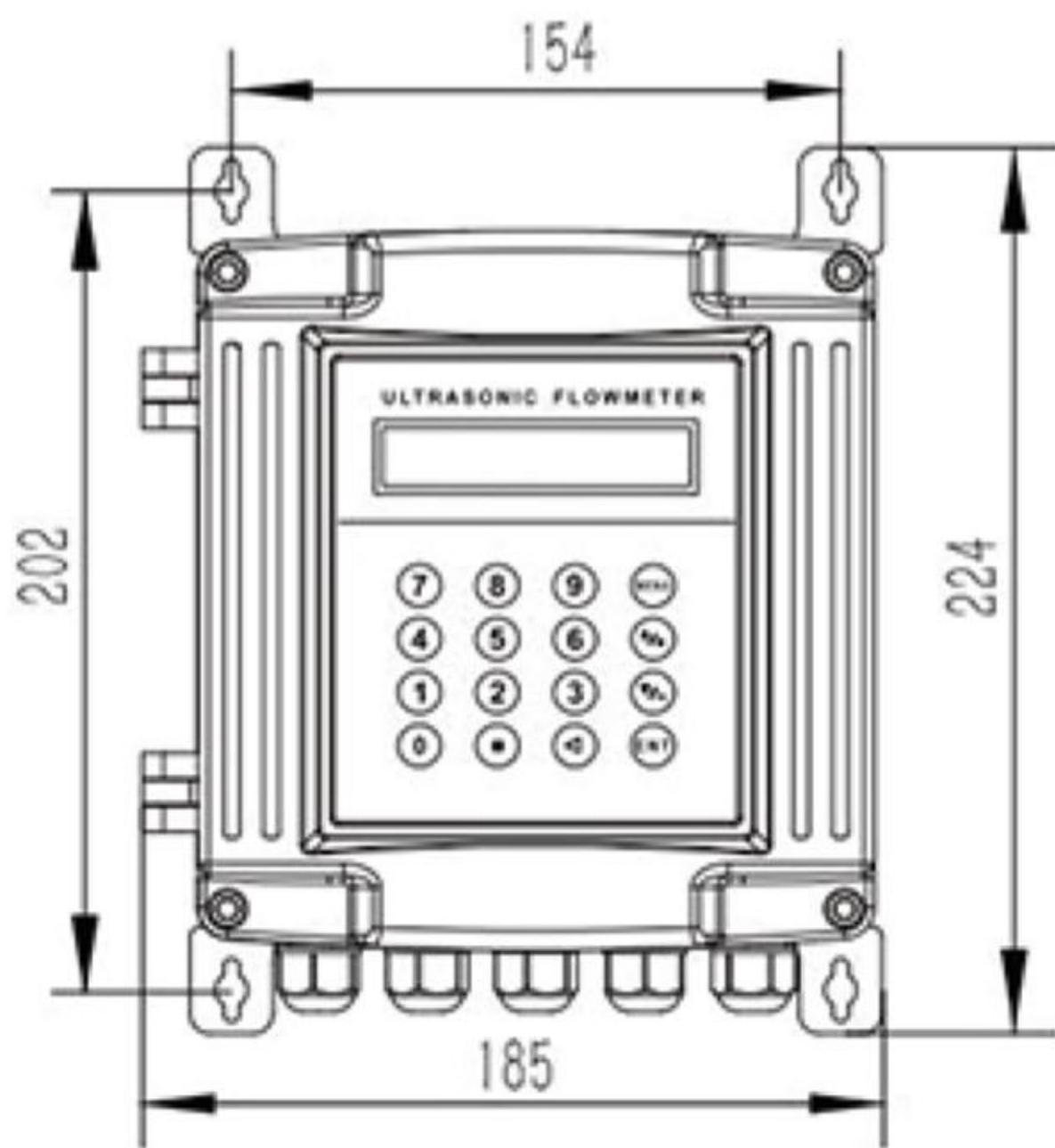


Operating Environment

	Main Unit	Sensor
Protection Rating	IP65	IP68
Humidity	≤85%RH	
Temperature	-20℃~60℃	

Basic Parameters

Accuracy	±1%
Flow Velocity Range	0~±10m/s (bidirectional measurement)
Pipe Diameter	DN50~DN6000
Fluid Temperature	-30℃~ 160℃
Fluid Types	Water, seawater, wastewater, acid/alkali solutions, alcohol, beer, various oils and other single-phase homogeneous liquids that can transmit ultrasonic waves
Pipe Materials	Steel, stainless steel, cast iron, copper, PVC, aluminum, fiberglass and all dense pipelines (liners allowed)
Signal Output	1× 4-20mA current output (impedance 0~1KΩ, accuracy 0.1%) 1× OCT pulse output (pulse width 6~1000ms) 1× Relay output
Signal Input	3× 4-20mA current inputs (can function as data logger) Connects to 3-wire PT100 platinum resistor for heat measurement
Communication Interface	Isolated RS485 serial interface (MODBUS protocol supported)
Data Storage	SD card for timed storage of set parameters and measurement results (optional)
Power Supply	DC 8-36V or AC 85~264V



Both the main unit and sensor are installed on the measurement pipeline with protection class IP68. Clamp-on sensors are installed on the pipe surface. Different sensors are available for pipe diameters: DN15~DN6000.



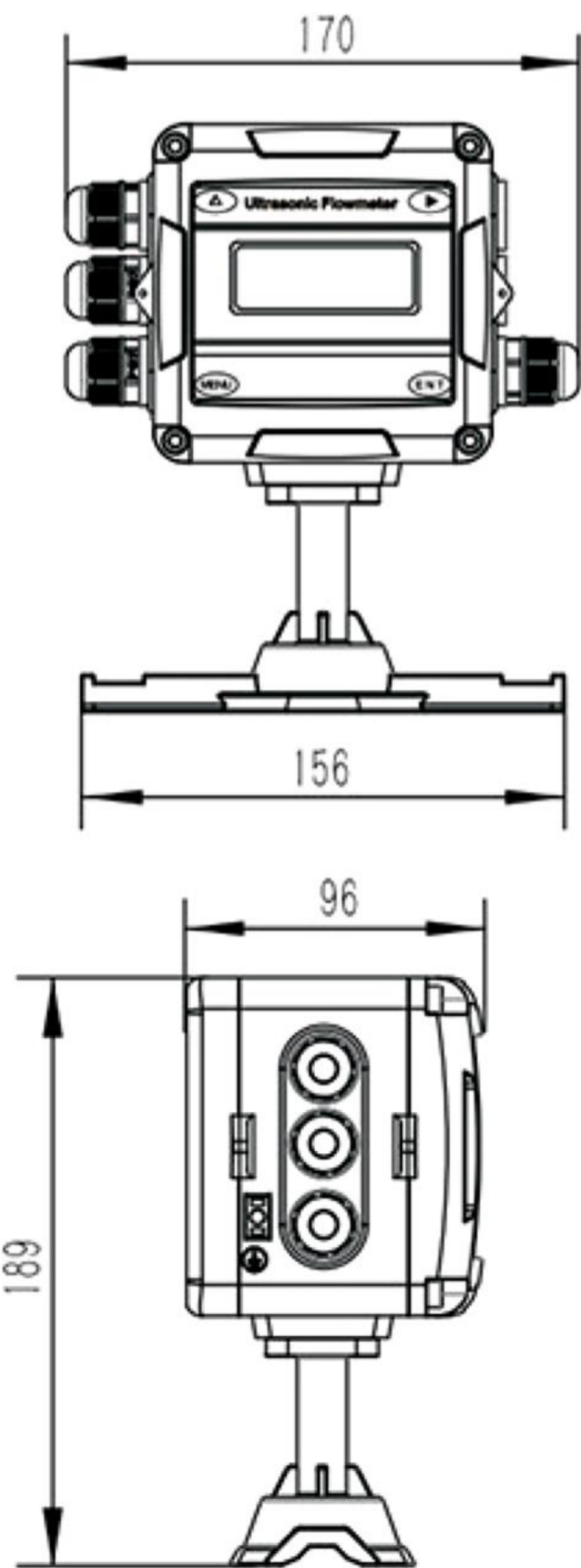
WHTUF-D Integral Clamp-on Type

Operating Environment

	Main Unit	Sensor
Protection Class	IP68	IP68
Temperature	-20℃~ 60℃	-30℃~ 160℃

Basic Parameters

Accuracy	±1%
Flow Velocity Range	0~±10m/s (bidirectional measurement)
Pipe Diameter	DN15~DN6000
Fluid Temperature	-30℃~ 160℃
Fluid Types	Water, seawater, wastewater, acid/alkali solutions, alcohol, beer, various oils and other single-phase homogeneous liquids that can transmit ultrasonic waves
Pipe Materials	Steel, stainless steel, cast iron, copper, PVC, aluminum, fiberglass and all dense pipelines (liners allowed)
Signal Output	1× 4-20mA current output (impedance 0~1KΩ, accuracy 0.1%) 1× OCT pulse output (pulse width 6~1000ms) 1× Relay output
Signal Input	3× 4-20mA current inputs (can function as data logger) Connects to 3-wire PT100 platinum resistor for heat measurement
Communication Interface	Isolated RS485 serial interface (MODBUS protocol supported)
Power Supply	DC 8~36V or AC 10~30V AC 85~264V (optional waterproof adapter)



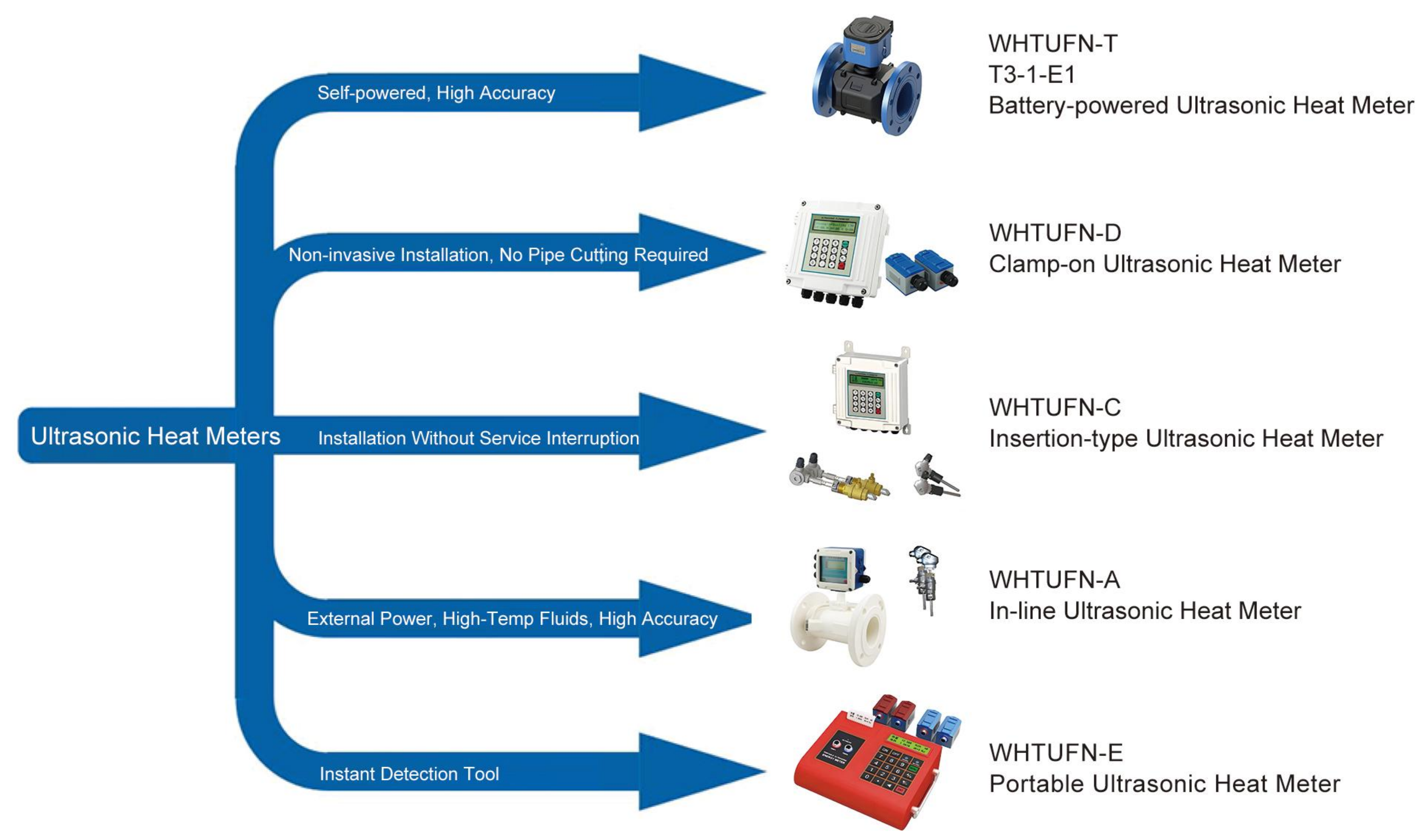
Unit: mm

WHTUFN Heat Meter / Energy Meter

Technical Specifications

Electromagnetic Thermal Converter Parameters

- ◆ Power Supply : 220VAC(110VAC~245VAC),24VDC
 - ◆ Power Consumption: ≤20W (system)
 - ◆ Accuracy Class: Class 1 or 2 (system)
 - ◆ Protection Rating: IP65
 - ◆ Ambient Temp. Class: A
 - ◆ Temp. Resolution: 0.01℃
 - ◆ Optional Temp. Range: -30℃~ 180℃
 - ◆ Temp. Difference Range: 1℃~ 90℃
 - ◆ Max Flow Reading (m³): 999999999 (10-digit)
 - ◆ Max Heat Reading (Mwh): 999999999 (10-digit)
 - ◆ Heat Units: kJ, MJ, GJ, kwh, Mwh (selectable)
 - ◆ Analog Output:4~20mADC/600Ω load (switchable between heat/flow parameters)
 - ◆ Pulse Output: Max 5000Hz, width 0.1ms~999.9ms (switchable between heat/flow parameters)
 - ◆ Communication: RS-485 (RS-232/M-BUS/HART optional)
- 



WHRs Thermal Mass Flow Meter (Gases)

Overview

The thermal mass flow meter operates on the thermal dispersion principle, utilizing the constant temperature differential method for precise gas measurement. It features compact size, high digitalization, easy installation, and accurate measurement.

The sensor consists of two reference-grade platinum RTD temperature sensors. During operation, one sensor continuously measures medium temperature (T1); the other self-heats to a higher temperature (T2) to detect flow velocity (velocity sensor). The temperature difference $\Delta T = T2 - T1$ ($T2 > T1$). When fluid flows, gas molecules collide with the sensor and carry away heat from T2, causing T2 temperature to drop. To maintain constant ΔT , the power current to T2 must increase. Faster flow carries away more heat, establishing a fixed functional relationship between flow velocity and additional heating power - this is the constant temperature differential principle.

Technical Parameters

The thermal mass flow meter has the following technical advantages:

- ◆ True mass flow measurement: Requires no temperature or pressure compensation for gas flow measurement, providing convenient and accurate results. Measures both mass flow and standard volumetric flow.
- ◆ Wide range ratio: Capable of measuring gas flow velocities from 0.1 Nm/s to 120 Nm/s, suitable for gas leak detection.
- ◆ Excellent vibration resistance & long service life: The sensor has no moving parts or pressure-sensing components, ensuring measurement accuracy is unaffected by vibration.
- ◆ Easy installation & maintenance: Allows installation and maintenance without production shutdown (special customization required).
- ◆ Digital design: Fully digital circuit measurement ensures accuracy and easy maintenance.
- ◆ RS-485 or HART communication: Enables factory automation and integration.



Performance	Technical Specifications	
Configuration	A: Insertion type	B: In-line type
Measured Media	Common stable gases (Cannot measure unstable media like acetylene, boron trichloride, etc.)	
Pipe Diameter Range	DN50~4000mm	DN6~2000mm
Flow Velocity Range	0.1~100Nm/s	
Accuracy	±1%~2.5%	
Operating Temperature	Sensor:-40~+450℃	Converter: -20~+45℃
Operating Pressure	Medium pressure ≤2.5MPa	Medium pressure ≤1.6MPa
Power Supply	DC 24V (Power >18W)	
Response Time	≤1s	
Output Signals	4-20mA (optically isolated, max load 500Ω), RS-485 (optically isolated)	
Alarm	1-2 normally open contacts	
Supply Type	Integrated structure	
Pipe Material	Carbon steel, stainless steel, plastic, etc.	
On-site Display	4-line English LCD	
Display Content	Mass flow, standard volumetric flow, total flow, standard time, cumulative operation time, standard velocity, etc.	
Protection Rating	IP65	
Sensor Material	Stainless steel	Stainless steel & carbon steel

Thermal Gas Range Table

Diameter	Basic Range (Air) (Nm³/h)	Extended Range (Air) (Nm³/h)	Oxygen Basic Range (Nm³/h)	Combustible Gas Basic Range (Nm³/h)
10	0.5-28	0.03-30	0.5-14	0.5-5
15	0.5-65	0.07-65	0.5-32	0.5-10
20	0.5-100	0.12-110	0.5-55	0.5-20
25	0.5-175	0.18-180	0.5-89	0.5-28
32	0.5-290	0.3-290	0.5-144	0.5-45
40	0.5-450	0.5-450	0.5-226	0.5-70
50	1-600	0.5-700	0.7-352	0.7-110
65	1.5-1000	1-1200	1.2-600	1.2-185
80	2-1500	1.5-1800	2-900	2-280
100	3-2300	3-2800	3-1420	3-470
125	4.5-3500	4-4400	4.5-2210	4.5-700
150	6.5-5200	6-6300	6.5-3200	6.5-940
200	12-9000	12-11500	12-5650	12-1880
250	18-14500	18-17500	18-8830	18-2820
300	25-21000	25-25000	25-12720	25-4060
350	35-28000	35-34500	35-17000	35-5600
400	45-36500	45-45000	45-22600	45-7200
450	60-46500	60-57000	60-29000	60-9200
500	70-57000	70-70000	70-35300	70-11280
600	100-81000	100-101000	100-50600	100-16300
700	140-110000	140-138000	140-69000	140-22100
800	180-150000	180-180000	180-90000	180-29000
900	230-185000	230-230000	230-115000	230-36500
1000	290-230000	290-280000	290-140000	290-45500
2000	1150-900000	1150-1130000	1150-560000	1150-185000

Standard flow rate: Flow rate at 20°C and 101.325 kPa.

Note: Instantaneous flow units selectable as Nm³/h, Nm³/min, L/h, L/min, t/h, t/min, kg/h, kg/min.

Conversion Between Actual and Standard Flow Rates:

$$Q_{std} = \frac{0.101325+p}{0.101325} * \frac{273.15+20}{273.15+t} * Q_{act}$$

Velocity Formula $V=Q/(\pi*(\frac{D}{2}/1000)^2)3600$
V: Standard velocity (Nm/s)
Q: Standard flow (Nm³/h)
D: Pipe diameter (mm)

Qstd : Standard flow (Nm³/h)
Qact : Actual flow (m³/h)
t: Medium temperature (°C)
P: Medium pressure (gauge, kPa)

WHLZ Metal Tube Rotameter

Overview

The WHLZ series metal tube rotameter features simple structure, reliable operation, high accuracy, and wide applicability. It is extensively used for flow measurement and control of liquids/gases in defense, chemical, petroleum, metallurgical, power, environmental, and medical industries.

Our electronically-transmitted models eliminate linkage drive mechanisms, adopting proprietary non-contact intelligent transmitters with MSP-core CPUs, significantly improving reliability, stability, and precision.

- ◆ Materials: 304SS, 316SS, 316LSS, 304SS with F46 lining, titanium, Hastelloy C
- ◆ Connections: Flanges (HG20592-20615~7-2000, GB, ANSI, DIN, JIS, etc.), threaded, hose, sanitary clamp, or custom
- ◆ Type: Vertical, horizontal, bottom-inlet/side-outlet, side-inlet/side-outlet, etc.
- ◆ Power: 24VDC, AC220V, high-capacity battery
- ◆ Output: 2-wire 4-20mA (1-5V), alarm contacts, HART protocol
- ◆ Explosion-proof: Intrinsic safety ExiaIICT3-T6 (Cert: GYB101238), Flameproof ExdIIBT3-T6 (Cert: GYB101359X)
- ◆ Housing: Aluminum alloy, explosion-proof alloy, 304SS, 316L



LZ-15 Metal Tube Rotameter



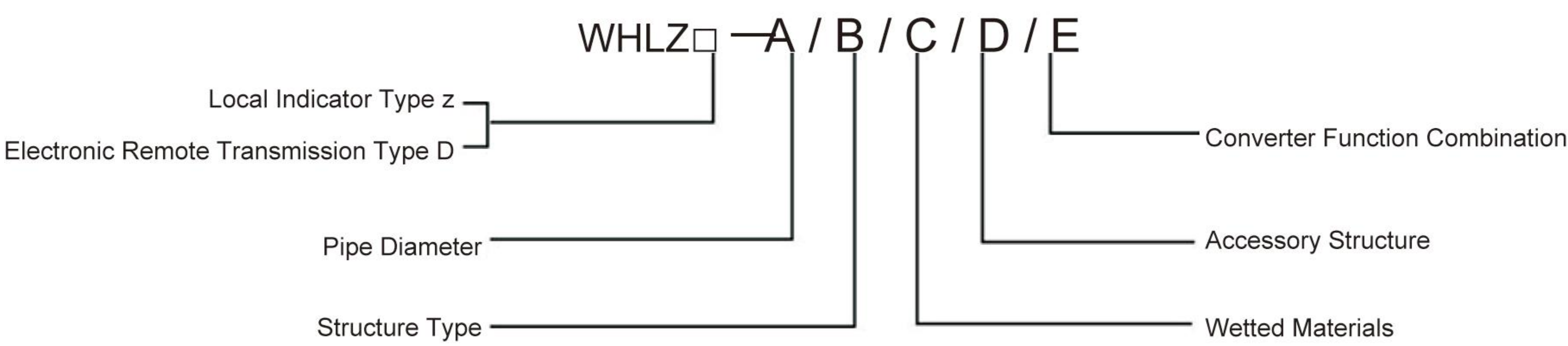
LZ-25 Metal Tube Rotameter

Technical Specifications

- ◆ Measurement Range:Water: 2.5~150,000 L/h; Air: 0.07~2000 m³/h (at 0.101325 MPa, 20°C)
- ◆ Accuracy Class: 1.5, 2.5 (PTFE lined)
- ◆ Range Ratio: 10:1 (or special 5:1)
- ◆ Nominal Pressure: DN15~50: ≤4.0 MPa; DN65~150: ≤1.6 MPa
- ◆ Medium Temperature: -80°C~200°C (F46 lined: 0°C~80°C)
- ◆ Liquid Viscosity: DN15: <5 mPa·s; DN25~150: ≤250 mPa·s
- ◆ Output: 4-20mA two-wire
 - Purely resistive load <680Ω
 - Linearity <0.5%
 - Temperature effect <5 mA/K
- ◆ Ambient Temperature: -25°C~55°C
- ◆ Total Height: DN15~DN150 (typically 250mm)

Product Selection

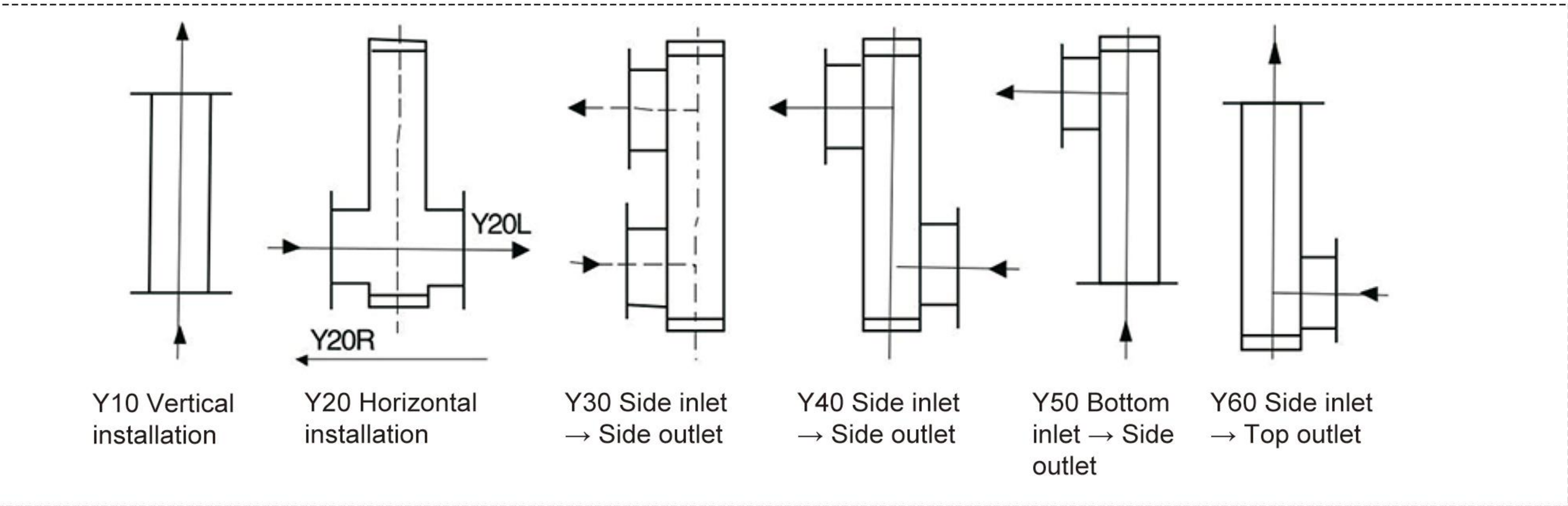
Selection Options



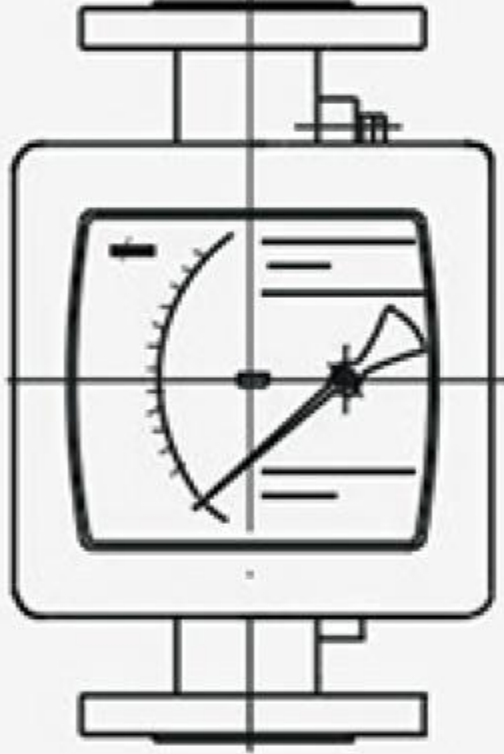
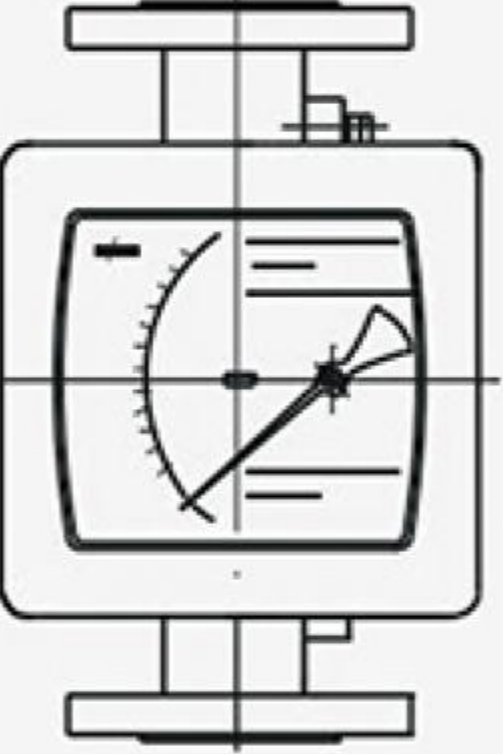
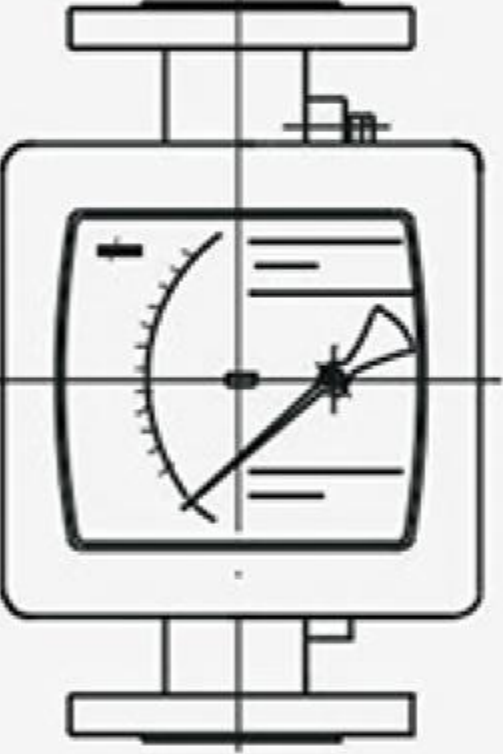
Instructions

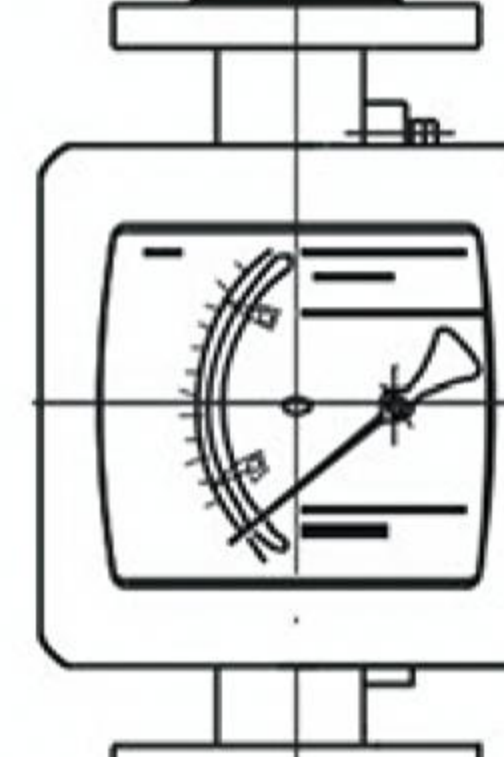
A Nominal Diameter	B Structure Type (Flow Direction)	C Measuring Tube Materials	D Accessory Structures	E Converter Function Combinations
DN	AY10-Bottom inlet → Top outlet	1RR1-304SS	1Z-Damping Type	1. ESK-24V DC, 2-wire 4-20mA output
15	BY20L-Left → Right (Horizontal)	2RR0-316SS	2T-Jacket Type	2. Intrinsically safe (Exib II CT3-T6)
20	CY20R-Right inlet → Left outlet (Horizontal)	3RRL-316L	3F-Corrosion-Resistant	3. K1-24V DC, with upper limit alarm output
25	DY30-Same-side inlet/outlet	4RP-304+PTFE	4G-High-Temperature	4. K2-24V DC, with lower limit alarm output
32	EY40-Opposite-side inlet/outlet	5Ti-Pure Titanium Alloy	5Y-High-Pressure	5. K12-24V DC, with dual-limit alarm output
40	FY50-Bottom inlet → Side outlet	6HC-Hastelloy C		6. JSB-Lithium battery + LCD
50	Side inlet → Top outlet			7. JSC- 220V AC + LCD
65				8. JSD- 220V AC + LCD
80				4-20mA standard current signal output
100				9.JSE- 24V DC power supply, LCD
125				4-20mA standard current signal output
150				10.Exd- Flameproof + 24V DC + LCD
				4-20mA standard current signal output
				With HART communication protocol

Flow Direction Guide



Meter Types & Models

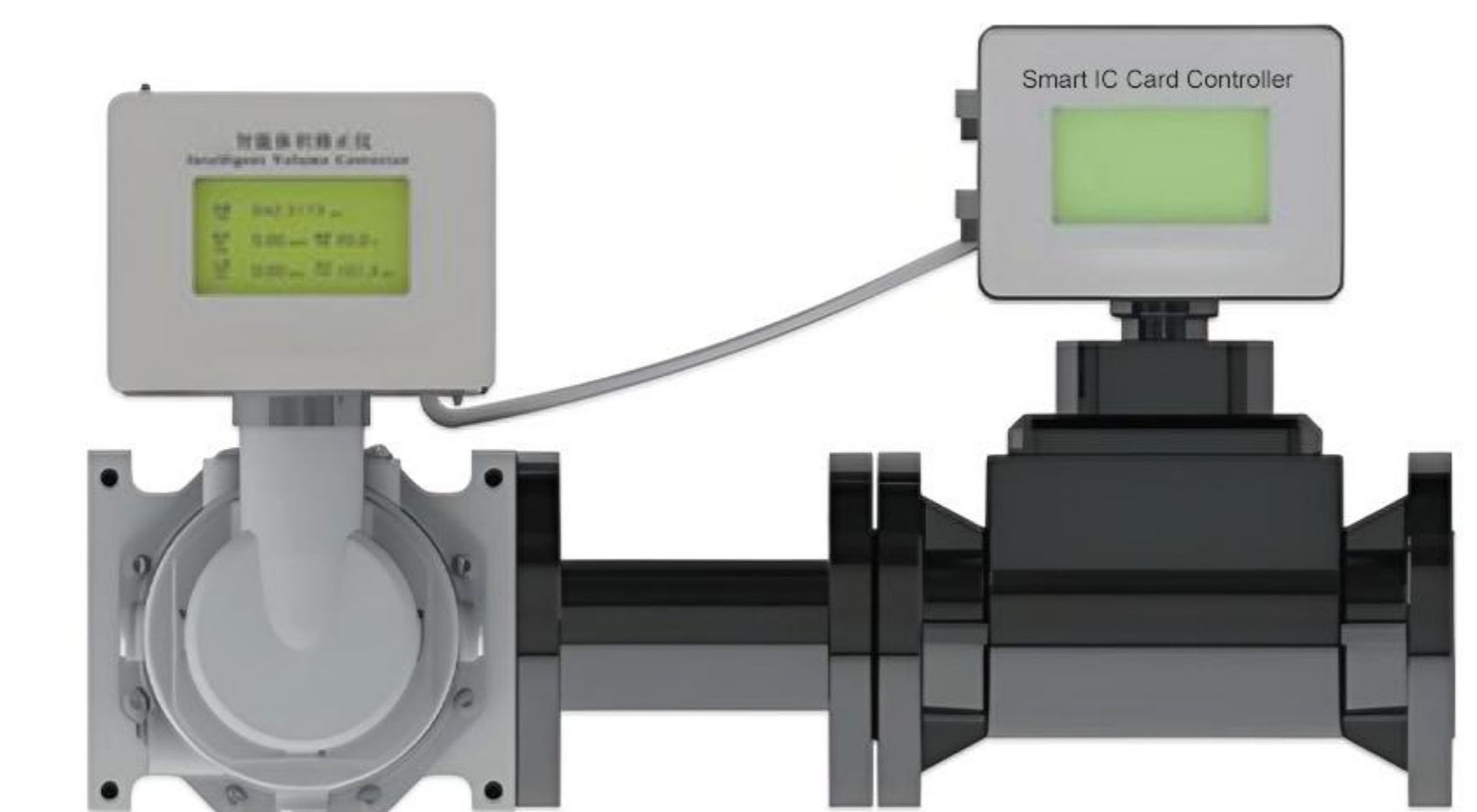
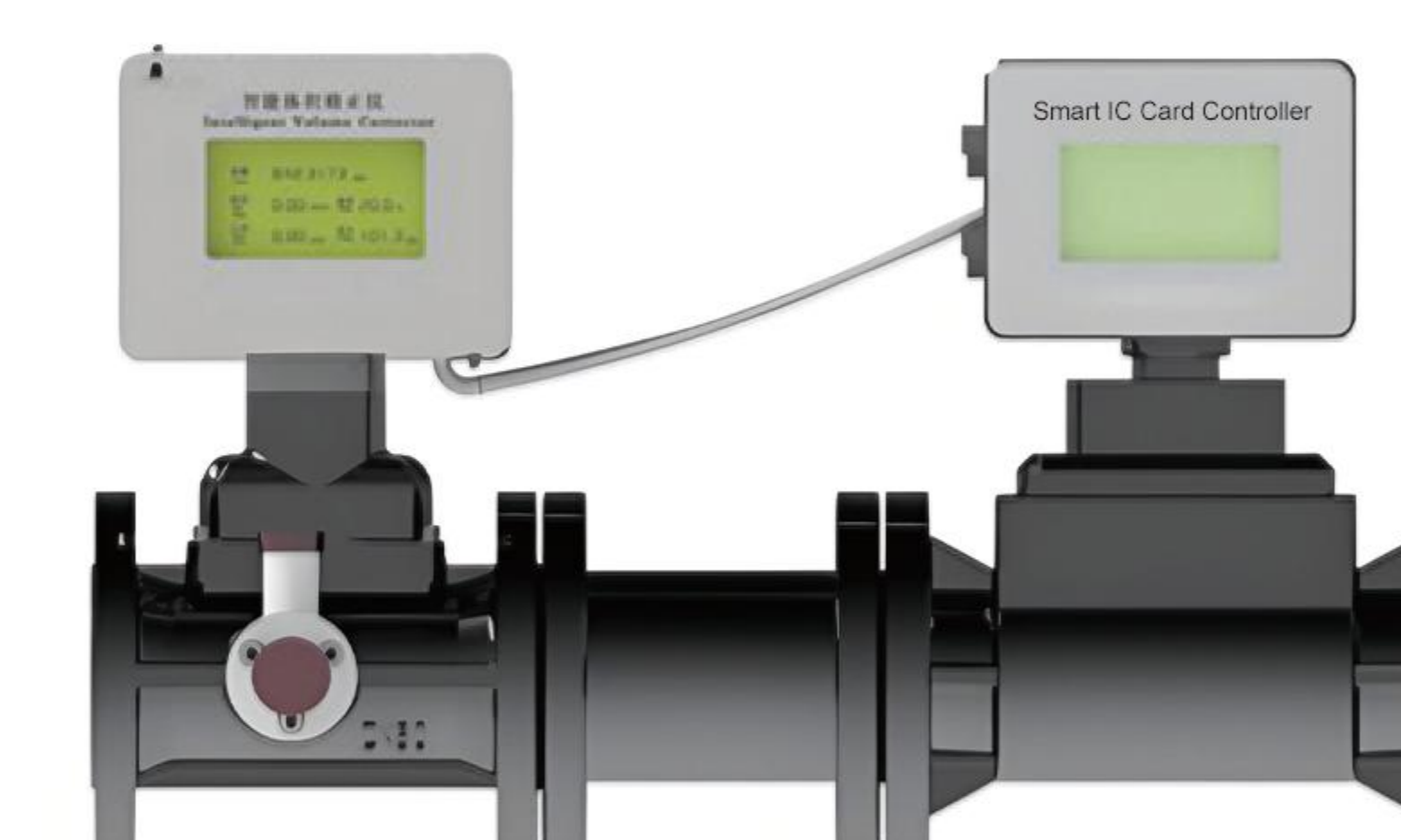
Model	Local Type LZZ	Remote Type LZD-.../ESK	Smart Type LZD-.../JSE(BC)
Display	 Pointer	 Pointer	 Pointer + LCD
Functions	On-site instantaneous flow	On-site instantaneous flow display 4~20mA or 1~5V output Power: 24V DC (Exib) or 220V AC	Pointer + Lcd display Instantaneous & cumulative flow Output:4-20mA/1-5V Power supply: 24V DC or 220V AC or battery powered (no output)

Model	Alarm Type LZD-.../K12	Flameproof Type LZD-.../Exd	HART Type LZD-.../HART
Display	 Pointer display	 LCD + pointer display	 LCD & pointer display
Functions	On-site instantaneous flow display withup to 2 alarm contact outputs	Field pointer & LCD display Instantaneous & cumulative flow 4 - 20mA or 1 - 5V output Power: 24V DC Flameproof (Exd)	Field pointer & LCD display Instantaneous & cumulative flow 4 - 20mA or 1 - 5V output Incorporates HART protocol Power: 24V DC Flameproof (Exd)

WHL Gas Flow Meter

WHLWQD Series Gas Turbine Flow Meter

WHLQ Series Gas Roots Flow Meter



Accuracy Class

Within measuring range: Class 1.0 and Class 1.5
 Class 1.0: $\pm 1.0\%$ for $Q_t \sim Q_{max}$, $\pm 2.0\%$ for $Q_{min} \sim Q_t$
 Class 1.5: $\pm 1.5\%$ for $Q_t \sim Q_{max}$, $\pm 3.0\%$ for $Q_{min} \sim Q_t$
 (Where $Q_t = 0.2Q_{max}$)

Diameter Range

DN15mm-DN300mm;
 Power Supply: 24V DC / Lithium Battery (Dual power)

Accuracy Class

Within measuring range: Class 1.0 and Class 1.5
 Class 1.0: $\pm 1.0\%$ for $Q_t \sim Q_{max}$, $\pm 2.0\%$ for $Q_{min} \sim Q_t$
 Class 1.5: $\pm 1.5\%$ for $Q_t \sim Q_{max}$, $\pm 3.0\%$ for $Q_{min} \sim Q_t$
 (Where $Q_t = 0.2Q_{max}$)

Diameter Range

DN15mm-DN300mm;
 Power Supply: 24V DC / Lithium Battery (Dual power)

WHLUXB Series Vortex Precession Flow Meter

WHUAX Series Gas Ultrasonic Flow Meter



Accuracy Class

Within measuring range: Class 1.0 and Class 1.5
 Class 1.0: $\pm 1\%$ ($0.2Q_{max} \sim Q_{max}$), $\pm 2\%$ ($Q_{min} \sim 0.2Q_{max}$)
 Class 1.5: $\pm 1.5\%$ ($0.2Q_{max} \sim Q_{max}$), $\pm 3\%$ ($Q_{min} \sim 0.2Q_{max}$)

Diameter Range

DN15mm-DN300mm;
 Power Supply: 24V DC / Lithium Battery (Dual power)

Accuracy Class

Within measuring range: Class 1.0
 Class 1.0: $0.1Q_{max} \sim Q_{max}$: $\pm 1.0\%$ error, $\pm 0.2\%$ repeatability
 Class 1.5: $Q_{min} \sim 0.1Q_{max}$: $\pm 2.0\%$ error, $\pm 0.4\%$ repeatability

Diameter Range

DN15mm-DN300mm;
 Power Supply: 24V DC / Lithium Battery (Dual power)

Intelligent Metal Tube Rotameter

The WHLZ series intelligent metal tube rotameter adopts advanced MSP-series CPUs as its core processor, featuring a large LCD screen that displays real-time instantaneous flow and cumulative flow. It can be conveniently connected to computers to form flow measurement and control systems.

1. LCD Display Functions:

Upper row: 4-digit instantaneous flow display

Lower row: 8-digit cumulative flow display (automatically adjusts decimal position)

Auto-reset when cumulative flow reaches 99,999,999

Reset Procedure:

- Press and hold "ENTER"+"DOT" keys (or " $\uparrow$ "+" $\downarrow$ " on touchpad) until "0000.00" appears

- Features power-off memory function

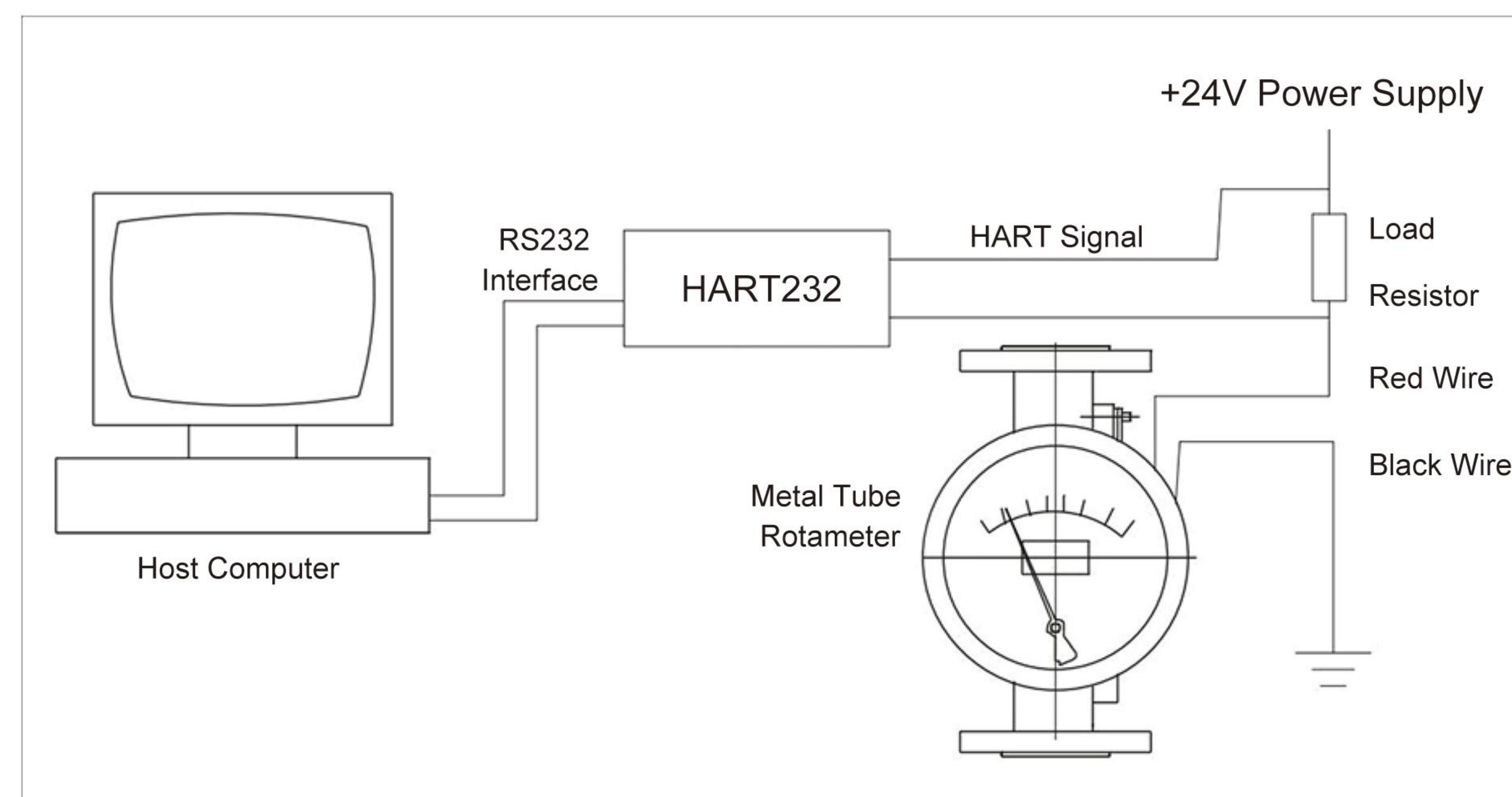
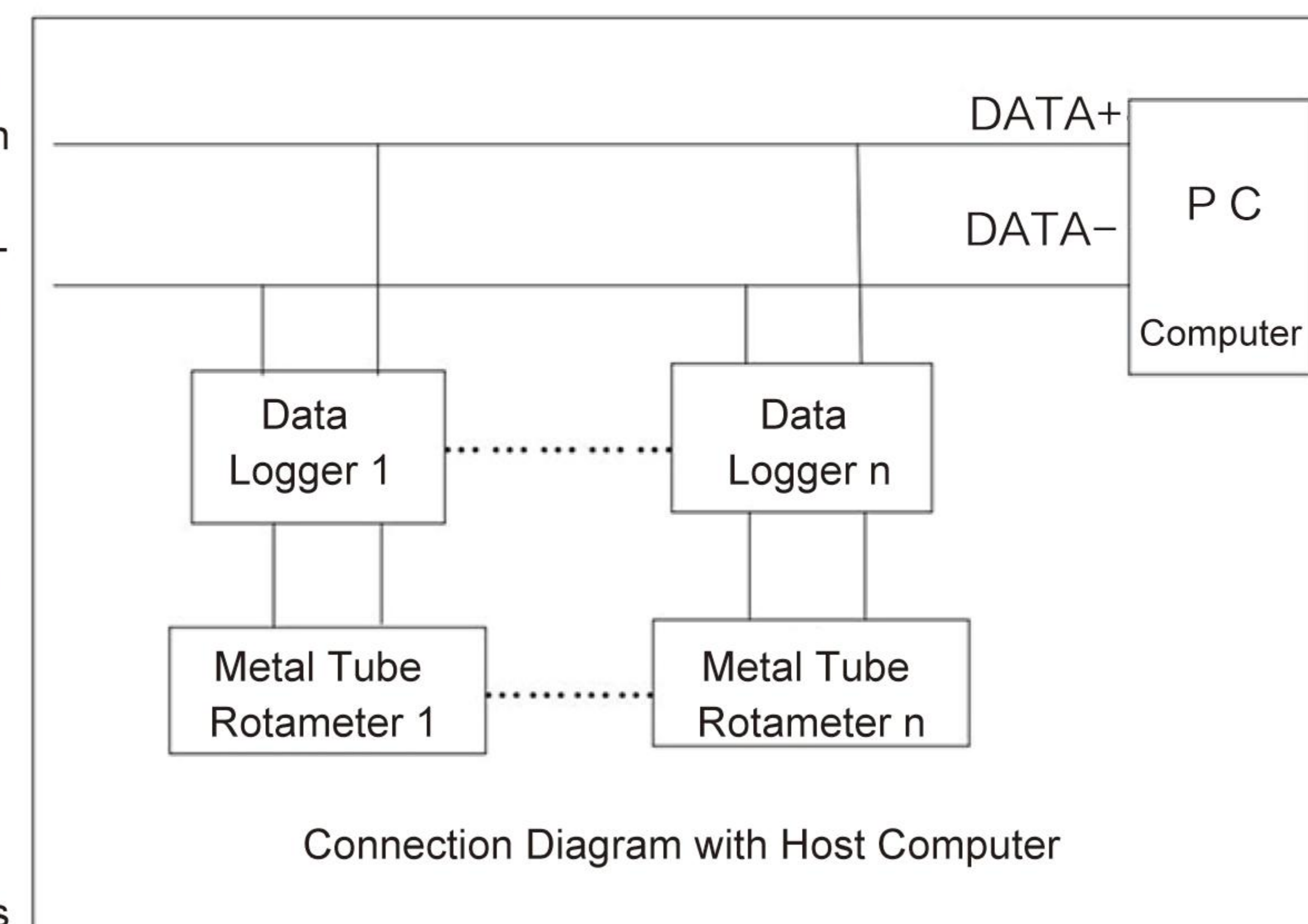
Wiring:

- Red/Blue wire $\rightarrow$ 24V DC+

- Black wire $\rightarrow$ 2-wire transmitter input "+"

2. HART communication model: This series combines 2-wire 4~20mA output with HART digital signals. Parameters can be adjusted via handheld communicators or host computers.

The LCD can be configured to display: instantaneous flow + current percentage; or instantaneous flow + cumulative flow, etc.



WHLGK Gas Flow Meter



Accuracy Class

Class 1.0: $\pm 1.0\%$ ($Q_t \sim Q_{\max}$) / $\pm 2.0\%$ ($Q_{\min} \sim Q_t$)
 Class 1.5: $\pm 1.5\%$ ($Q_t \sim Q_{\max}$) / $\pm 2.0\%$ ($Q_{\min} \sim Q_t$)
 (Where $Q_t = 0.2Q_{\max}$)

Diameter Range

DN15mm-DN300mm;
 Power Supply: 24V DC + Lithium Battery (Dual)

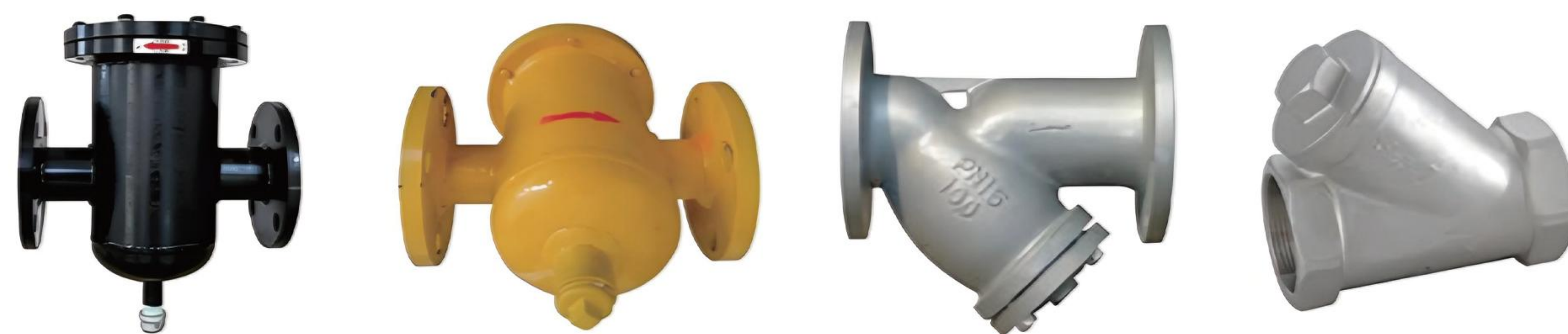
WHLGC Series IC Card Controller



Performance Overview

Standard working pressure: $\leq 0.4\text{MPa}$
 Maximum nominal diameter: DN200mm
 Customizable options:
 - Max working pressure: up to 6.0MPa
 - Max diameter: up to DN500mm

WHQG Series Gas Filters



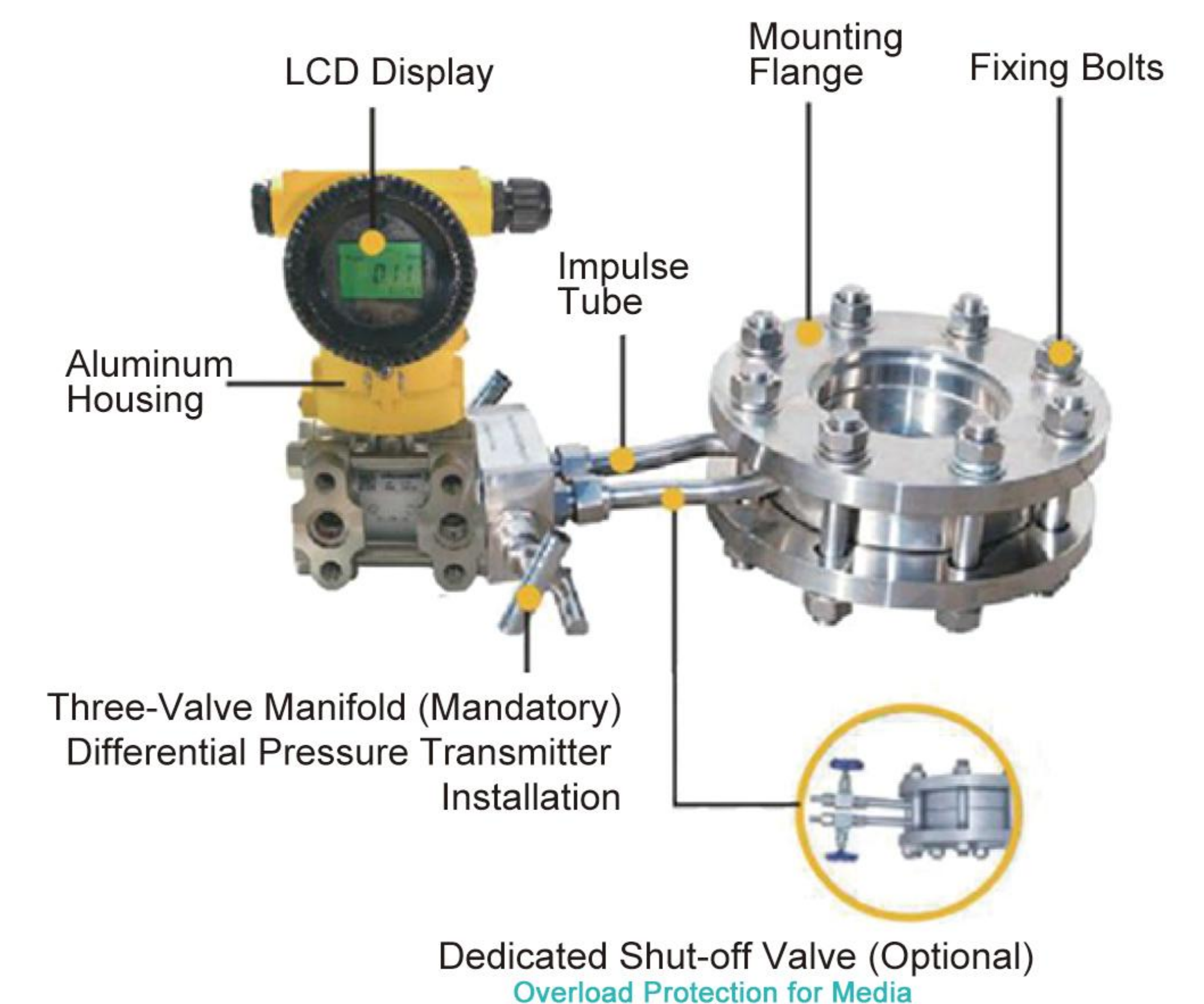
Axial Flow Filter

Y-Type Filter

WHKB Orifice Plate Flow Meter

Overview

The orifice flow meter has a long history with complete test data. Its simple, moving-part-free design ensures stable, reliable operation and high accuracy. With extensive experience in design/manufacturing/application, high standardization, and good linearity, it often requires no flow calibration. It complies with GB2624-93 standards and dominates 75-85% of flow meter market due to proven reliability and flexible international-standard applications. It is extensively used in steam boilers, petroleum, chemical, steel, electric power, water conservancy, papermaking, pharmaceutical, food and synthetic fiber industries.



Principle and Structure

The fluid flowing through the pipeline forms a local contraction at the orifice plate's throttling point, accelerating the flow velocity and reducing static pressure, thereby creating a pressure drop (differential pressure) before and after the standard orifice plate. The greater the medium's flow rate, the larger the pressure difference generated across the orifice plate. Therefore, fluid flow can be measured by detecting this differential pressure. This measurement method is based on the principles of the flow continuity equation (law of mass conservation) and Bernoulli's equation (law of energy conservation).

Main Technical Parameters

Nominal Diameter: DN20-DN1000
 Design Standard: GB/T 2624-93 (National Standard)
 Inspection Standard: JJG 640-94 (National Verification Regulation)
 Basic Accuracy: $\pm 0.5\%$, $\pm 1\%$, $\pm 1.5\%$
 Flow Range: $\geq 1:15$
 Nominal Pressure: 0.6, 1.0, 1.6, 2.5, 4.0, 6.4, 10 (MPa)
 Measured Media: Saturated steam, superheated steam, water, air, natural gas, other mixed media
 Medium Temperature Range: -10°C to $+450^{\circ}\text{C}$
 Power Supply: Intelligent flow totalizer: 220V AC; Flow transmitter: 24V DC (supplied by totalizer)
 Output Signal: 4-20mA DC or RS485 communication
 Explosion-proof Rating: Intrinsically safe (Ex ib IIC T5)

Installation Requirements

- 1) The flange must be disassembled and welded onto the pipeline separately to protect meter.
- 2) Ensure the orifice plate center, flange axis, pipeline axis and gasket are concentric.
- 3) Install orifice correctly: flat side upstream, beveled side downstream.
- 4) Connect transmitter properly: H=upstream, L=downstream.
- 5) Verify zero reading with no flow. Calibrate if deviation $> 0.1\%$.
- 6) Operation: Close balance valve, open high/low pressure needle valves and vent.

WH3051 Single-Crystal Silicon Smart Transmitter

WH3051 Differential Pressure Transmitter

Product Overview

The WH3051 differential pressure transmitter measures level, density, pressure/differential pressure, and flow of liquids, gases, or steam, converting these into 4~20mA DC HART current signal output. The WH3051 can also communicate with the WHT375 handheld terminal or WHM100 remote controller for parameter configuration and process monitoring.

Standard Specifications

Calibrated range based on standard zero point, 316L stainless steel diaphragm, silicone oil fill fluid.



Model & Specification Code Table

Model	Spec Code		Description
WH3051			Differential Pressure Transmitter
Accuracy	C		Basic Error:±0.075%
	B		Basic Error: ±0.1%
Range	C		0-200Pa~6kPa
	B		0-400Pa~40kPa
	D		0-2.5kPa~250kPa
	E		0-20kPa~2MPa
Static Pressure Sensor	0		None
	1		40MPa
	2		10MPa
Diaphragm Material	A		316L SS Silicone oil
	B		316L SS Fluorinated oil
	C		Hastelloy C Silicone oil
	D		Hastelloy C Fluorinated oil
	E		316L SS Gold-plated
	F		316L SS Gold-plated
	G		316L SS with FEP coating Silicone oil
	T		Tantalum Silicone oil
Rated Working Pressure	1		16MPa
	2		25MPa
	3		40MPa
Relief valve	N		No relief valve
	B		Relief valve mounted on back flange face
Wetted Seal Material	N		Nitrile rubber (NBR)
	F		Fluorocarbon rubber (FKM)
	P		Polytetrafluoroethylene (PTFE)

Model & Specification Code Table

Model	Spec Code		Description
Special Functions	N		None
	O		Oil-free treatment (For O2 measurement: Fluorinated oil fill fluid, FKM seals, <6MPa, <60°C)
	P		Lightning protection
Mounting Bracket	C		None
	B		Stainless steel
	D		Zinc-plated carbon steel
Process Connection	C0		Mounting plate with 1/4" internal thread
	C1		1/2" NPT internal thread stainless steel oval flange
	C2		M20×1.5 external thread stainless steel T-fitting with M20×1.5 adapter to Ø14 welded tube
	C3		NPT 1/4-M20×1.5 adapter with Ø14 welded tube
	C4		NPT 1/2-M20×1.5 adapter with Ø14 welded tube
Electrical Connection	M		Standard product: ISO M20×1.5 internal thread
	A		ANSI NPT 1/2(F) internal thread
Display Type	L		LCD (-20 °C)
	S		Low-temperature LCD (-30 °C)
	E		OLED (-40 °C)
Explosion-proof Option	N		Standard
	i		Intrinsically safe (NEPSI)
	d		Flameproof (NEPSI)
Tag Plate	N		None
	1		Tag plates integrated into nameplate
	2		Hanging stainless steel tag
User Manual	C		Chinese
	E		English

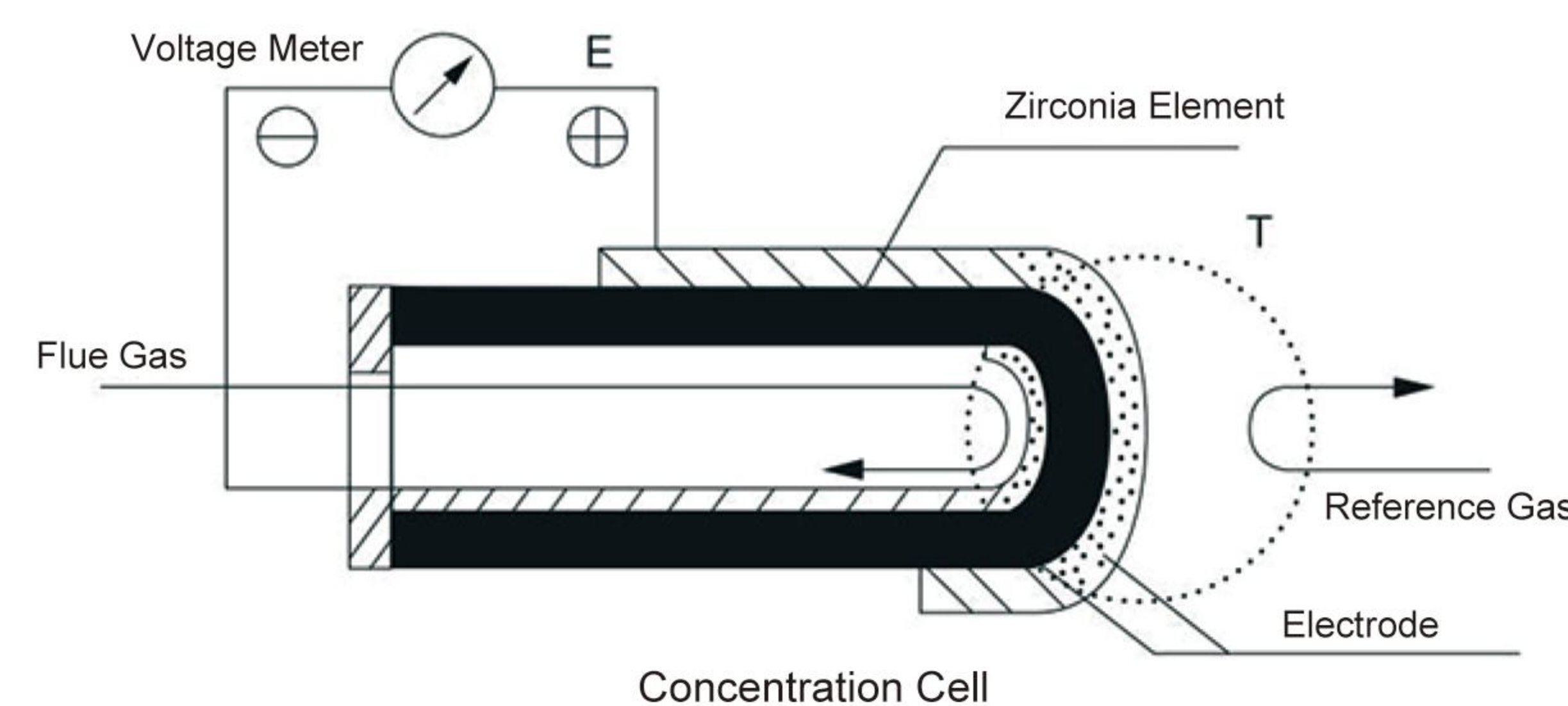
Example: WH3051-BC2A1BNNBC1MLN1C
[WH3051]: Differential pressure transmitter
[B][B]: Basic error ±0.1%
[C]: Range 0-200Pa~6kPa
[2]: Static pressure sensor 10MPa
[A]: Wetted parts: 316L SS diaphragm, silicone oil fill
[1]: Rated working pressure 16MPa
[B]: Vent valve mounted on rear flange face
[N]: Wetted seals: NBR (Nitrile rubber)
[N]: Special functions: None
[B]: Mounting bracket: Stainless steel
[C1]: Connection: 1/2" NPT internal thread, stainless steel oval flange
[M]: Electrical interface: M20×1.5 internal thread
[L]: LCD display
[N]: Standard type (non-explosion-proof transmitter)
[1]: Tag number marked on the nameplate
[C]: User manual in Chinese
Note: If any code item requires special customization (non-standard), it may be denoted as X or Y, with corresponding explanations provided for X or Y.

WH-ZOY Intelligent Zirconia Oxygen Analyzer



Working Principle

1. Zirconia (ZrO_2) is a metal oxide that acts as a solid electrolyte at high temperatures, conducting oxygen ions. The measured gas (flue gas) enters the inner side of the zirconia tube through a probe filter, while the reference gas (air) flows naturally to the outer side. When oxygen concentrations differ between the inner and outer sides, an oxygen concentration potential is generated across the zirconia tube. (See diagram below)



The oxygen concentration potential can be expressed by the Nernst equation as follows:

$$E_z = \frac{RT}{nF} \ln \frac{P_A}{P_O}$$

Where:

Oxygen concentration cell EMF (unit: mV)

Ideal gas constant ($8.314 \text{ J} \cdot \text{K}^{-1} \cdot \text{mol}^{-1}$)

Absolute operating temperature ($K = 273.16 + T^\circ\text{C}$)

Number of electrons involved in the reaction ($n = 4$)

Faraday constant ($96,500 \text{ C/mol}$)

Reference gas (air) concentration (taken as 20.6%)

Measured gas (flue gas) concentration (unit: %)

Under fixed reference gas, the zirconia probe's output voltage (E_z) depends solely on its temperature and the measured gas concentration.

2. The ZOY oxygen transmitter converts the probe's output signal (E_z) into a linear current signal proportional to the flue gas oxygen content.

Technical Specifications

Basic Error: $\pm 2\%$ FS (Class 1 accuracy)

Range: 0–5% O_2 ; 0–10% O_2 ; 0–20% O_2 ; 0–25% O_2

Zero Offset Adjustment: -20 mV to +20 mV

Flue Gas Temp.: ZOY-4: $< 700^\circ\text{C}$ (Low-temp type)

ZOY-5: $700\text{--}1000^\circ\text{C}$ (High-temp type)

Output Signal: Expandable dual isolated outputs: 0–10 mA DC & 4–20 mA DC, optically isolated, direct computer interface

Load Capacity: 0–1.2 k Ω or 0–600 Ω

Operating Conditions: 0–50 $^\circ\text{C}$, $< 90\%$ RH

Power Supply: 220 V $\pm 10\%$, 50 Hz

Power Consumption: Transmitter: $\sim 8 \text{ W}$, Heater furnace: $\sim 50 \text{ W}$ (avg.)

Response Time: $\leq 3 \text{ sec}$ (90%)

Probe Heater Warm-up: $\sim 20 \text{ min}$

Probe Lifespan: Zirconia tube: 1 year (per GB11169-89), main body: > 5 years

Installation of Zirconia Probe

(1) Selection of Installation Point

The flue gas temperature at the installation point must be below 600°C . Generally, lower flue gas temperatures result in longer probe service life, while higher temperatures shorten it. The probe should not be installed in stagnant areas of flue gas flow nor in locations with extremely high flow velocity (such as expansion chambers of bypass ducts).

The installation point should have minimal flue gas leakage and allow easy maintenance access. For small and medium boilers, the optimal location is between the superheater and economizer, as flue gas flows from furnace to steam drum, passing through superheater, economizer, and air preheater before being discharged via chimney. Locating the probe too close to the furnace outlet exposes it to excessive temperatures and high-velocity gas flow, causing erosion of the stainless steel housing and reduced service life. Conversely, installing too far downstream may result in artificially high oxygen readings due to air leakage, failing to accurately reflect actual furnace conditions.

(2) Probe Mounting Flange on Boiler Wall:

Fabricate a steel transition bracket (see Fig.1) that can be either welded to the boiler outer wall or embedded in the wall, ensuring airtight and secure fixation. The opposite flange must match the detector's mounting holes. For $\Phi 12 \text{ mm}$ mounting holes, four $\Phi 12 \text{ mm}$ holes shall be evenly distributed on a $\Phi 130 \text{ mm}$ pitch circle on the transition flange. Secure it to the detector's mounting flange using four M10 $\times$ 40 screws. To prevent gas leakage, a rubber-fiber gasket shall be installed between the two flanges.

Probe Installation

The probe's reference gas is supplied by natural air convection, requiring horizontal installation with reference and calibration gas ports facing downward. A rubber-fiber gasket must be installed between the probe flange and transition flange to prevent air leakage into the flue that could compromise measurement accuracy.

The probe tip must extend at least 150mm beyond the boiler inner wall, with the porous ceramic filter positioned opposite the flue gas flow direction (the filter orientation is adjustable) to prevent direct gas impingement and extend service life.

When inserting the probe into the flue, advance it gradually at 10–20cm/min to prevent zirconia tube cracking (see Figure 2).

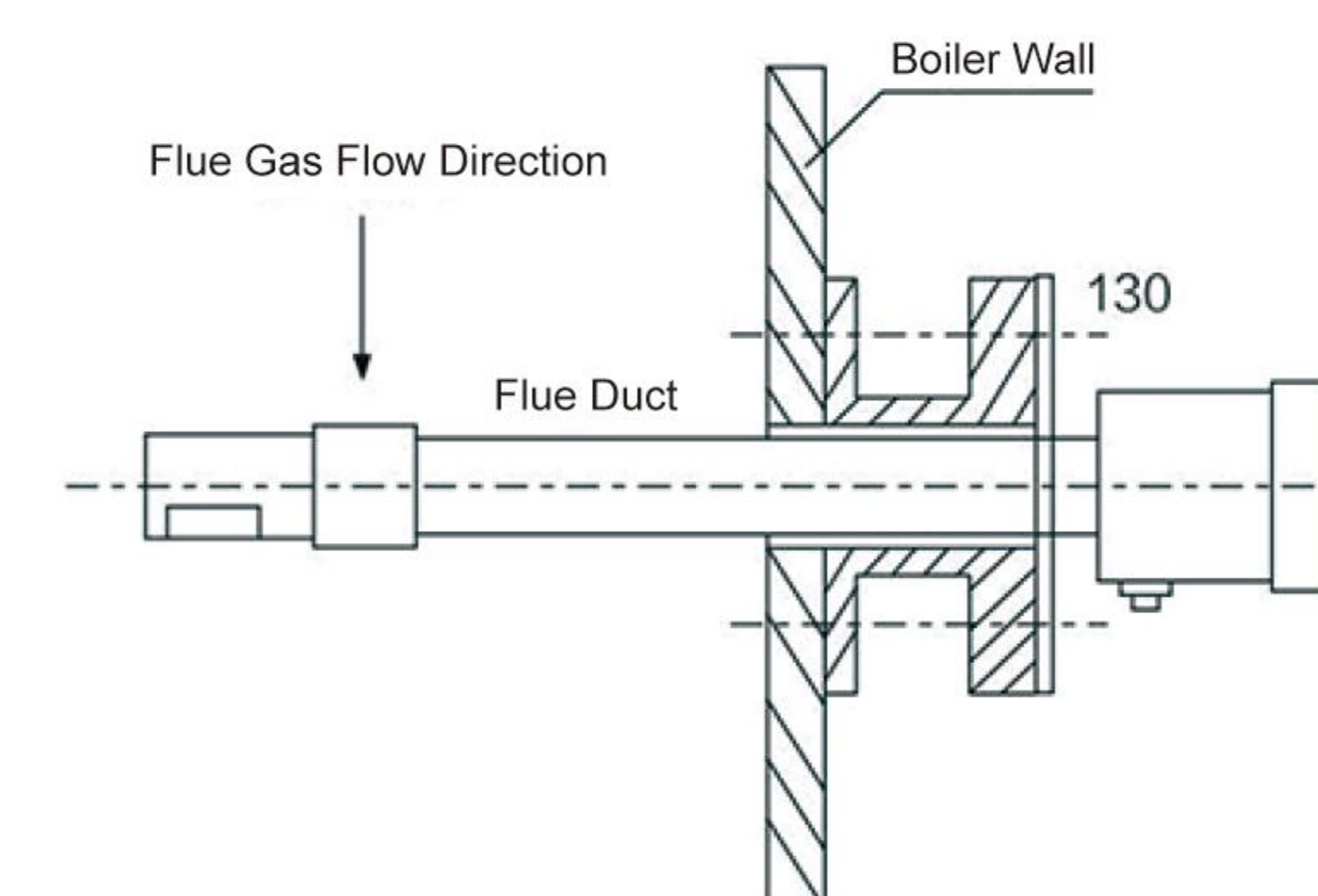


Figure 1 Probe Installation

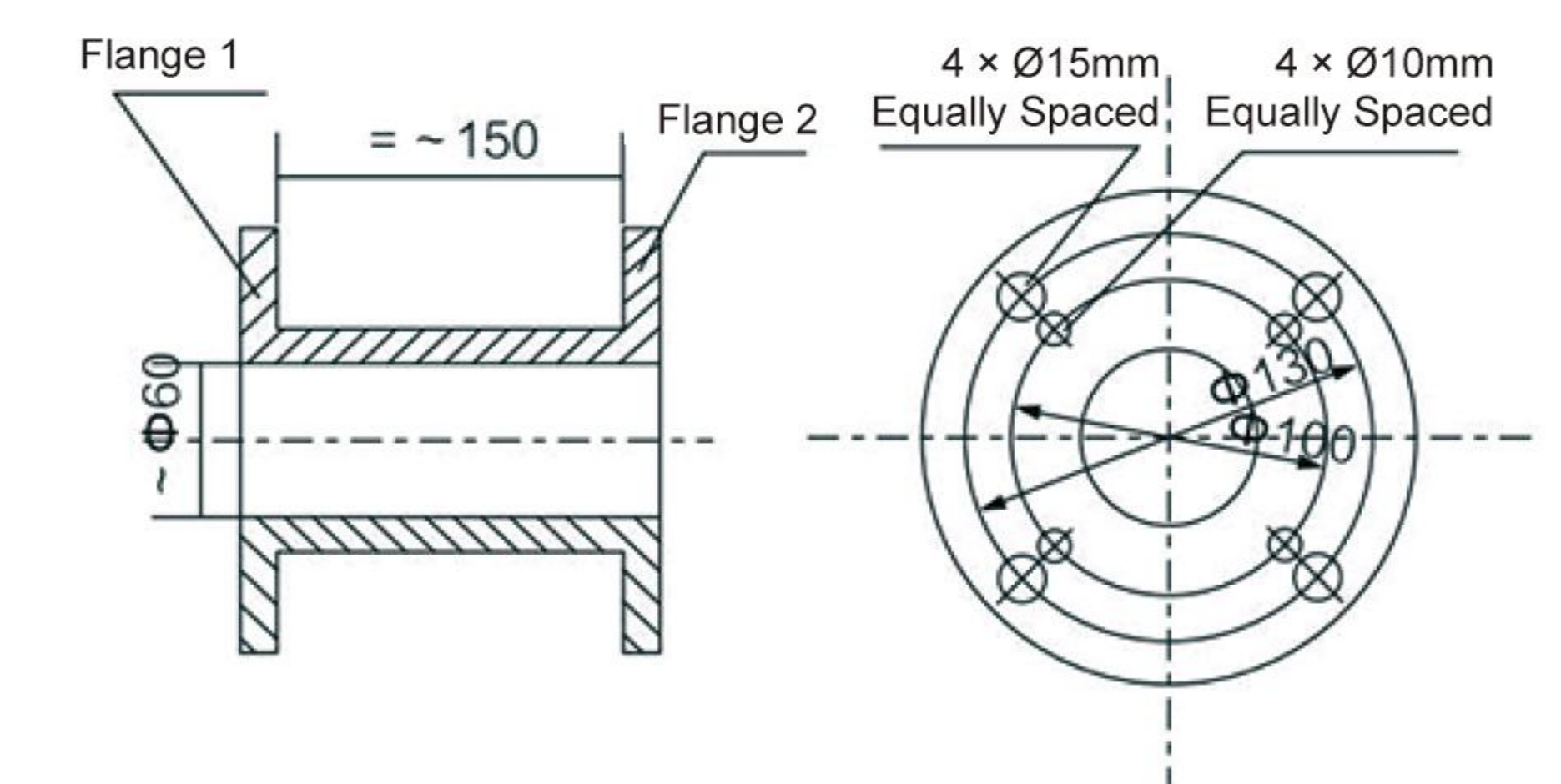


Figure 2 Transition Bracket Flange

Pressure/Level Transmitter Series

WH-800 Pressure Transmitter



Measuring Range: -0.1 MPa~ 100 MPa
Power Supply: 12~36 VDC
Accuracy: 0.25% F.S.
Long-term Stability: $\pm 0.1\%$ F.S./year
Output: 4~20mA
Response Frequency: 500Hz
Overload Pressure: 200%F.S.
Operating Temperature: -20~85°C
Protection Level: IP65
Process Connection: Threaded Connection
Measured Medium: Gas, Liquid
(Customizable for corrosive media)

WH-801 Pressure Transmitter



Measurement Range: -0.1 MPa~100MPa
Power Supply: 12~36VDC
Accuracy: Class 0.2, Class 0.5
Long-term Stability: $\pm 0.2\%$ F.S./year
Output: 4~20mA
Response Frequency: 500Hz
Overload Pressure: 200%F.S.
Operating Temperature: -20~70°C
Protection Level: IP65
Process Connection: Threaded Connection
Measured Media: Gas, Liquid
(Customizable for corrosive media)

WH-807 Armored Level Transmitter



Measurement Range: 0~500mH₂O
Power Supply: 12~36VDC
Accuracy: Class 0.25, Class 0.5
Long-term Drift: $\pm 0.1\%$ FS/year
Analog Output: 4~20mA (2-wire)
Response Frequency: 500Hz
Overload Pressure: 200%F.S.
Operating Temperature: -10 to 120°C
Protection Level: IP68
Process Connection: Threaded Connection
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-DR Capacitive Level Transmitter



Measurement Range: 0~20m
Power Supply: 12~36VDC
Accuracy: $\pm 0.1\%$ FS
Long-term Stability: $\pm 0.2\%$ F.S./year
Output Signal: 4~20mA
Response Frequency: 500Hz
Overload Pressure: 200%F.S.
Operating Temperature: -20~150°C
Protection Level: IP68
Process Connection: Threaded/Flanged
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-3051 Differential Pressure Transmitter



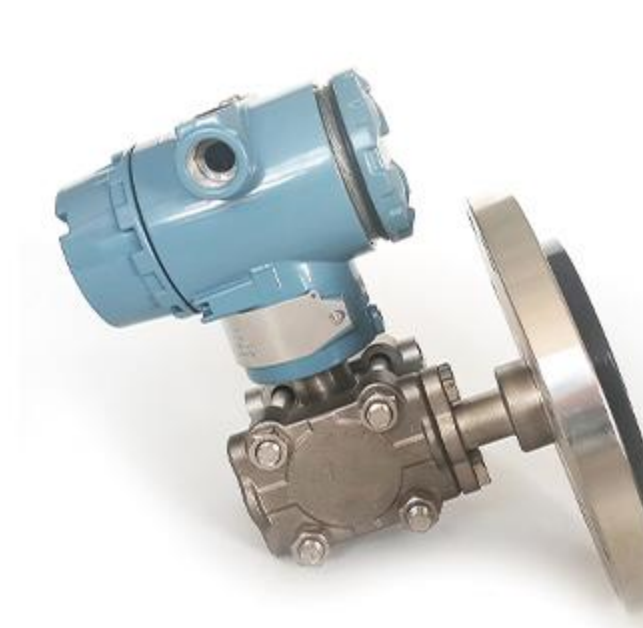
Measuring Range: -0.1MPa~60MPa
Power Supply: 12~ 36VD
Accuracy: 0.075% F.S.
Long-term Stability: $\pm 0.1\%$ F.S./year
Output Signal: 4~20mA with HART® protocol
Response Frequency: 500Hz
Overload Pressure: 200%F.S.
Operating Temperature: -20~100°C
Protection Level: IP65
Process Connection: Threaded Connection
Compatible Media: Gas, Liquid
(Customizable for corrosive media)

WH-802 Air Pressure Transmitter



Measuring Range: -20kPa~50kPa
Power Supply: 12~36VDC
Accuracy: $\pm 0.5\%$ F.S.
Long-term Stability: $\pm 0.2\%$ F.S./year
Output Signal: 4~20mA
Load Capacity: $\leq 500\Omega$
Overload Capacity: 200%F.S.
Operating Temperature: -20~70°C
Ambient Humidity: 0 ~ 40% RH
Connection: 8mm barbed nozzle (standard)
Media Compatibility: Gas

WH-3051LG1 Single Flange Differential Pressure Transmitter



Measurement Range: 0~32MPa
Power Supply: 12~36VDC
Accuracy: 0.075% F.S.
Long-term Stability: $\pm 0.1\%$ F.S./year
Output Signal: 4~20mA with HART
Pressure Sensor Core: Monocrystalline Silicon
Overload Pressure: 200%F.S.
Operating Temperature: -20~100°C
Protection Level: IP65
Process Connection: DN50 (standard)
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-3051LG2 Dual Flange Differential Pressure Transmitter



Measurement Range: 0~32MPa
Power Supply: 12~36VDC
Accuracy: 0.075% F.S.
Long-term Stability: $\pm 0.1\%$ F.S./year
Output Signal: 4~20mA with HART
Pressure Sensor Core: Monocrystalline Silicon
Overload Pressure: 200%F.S.
Operating Temperature: -20~100°C
Protection Level: IP65
Process Connection: DN50 (standard)
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-803 Pressure Transmitter



Measurement Range: -0.1MPa to 100MPa
Power Supply: 12~36VDC
Accuracy: $\pm 0.075\%$ FS
Long-term Stability: $\pm 0.1\%$ F.S./year
Output: 4~20mA with HART
Response Frequency: 500Hz
Overload Pressure: 200%F.S.
Operating Temperature: -20 to 70°C
Protection Level: IP65
Process Connection: Threaded Connection
Media Compatibility: Gases & Liquids
(Customizable for corrosive media)

WH-804 Hydrostatic Level Transmitter



Measurement Range: 0~500mH₂O
Power Supply: 12~36VDC
Accuracy: Class 0.25, Class 0.5
Long-term Stability: $\pm 0.1\%$ F.S./year
Output: 4~20mA
Response Frequency: 500Hz
Operating Temperature: -10 to 70°C
Protection Level: IP68
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-CF Magnetic Level Transmitter



Measurement Range: 200mm~20,000mm
Power Supply: 24VDC
Accuracy: $\pm 10\text{mm}$
Output: 4~20mA
Working Pressure: $\leq 6.5\text{ MPa}$
Operating Temperature: $\leq 350^\circ\text{C}$
Protection Rating: IP65
Mounting: Top/Side mounted
Process Connection: DN25 (standard)
Media Density: $\geq 0.45\text{g/cm}^3$
Wetted Materials: 304SS/ 316LSS, PP/ PTFE-lined
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-CZSS Magnetostrictive Level Transmitter



Measurement Range: 150~20000mm
Power Supply: 24VDC $\pm 10\%$
Accuracy: $\pm 1\text{mm}$
Long-term Stability: $\pm 0.2\%$ F.S./year
Output: 4~20mA/HART
Dead Zone: Upper: 51mm/ Lower: 36mm
Output Ripple: $\leq 10\text{mV}$
Working Pressure: $\leq 4\text{MPa}$
Temp. Range: -20~80°C
Protection Rating: IP65
Process Connection: Threaded/Flanged
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-805 Hydrostatic Level Transmitter



Measurement Range: 0~500mH₂O
Power Supply: 12~36VDC
Accuracy: Class 0.25, Class 0.5
Long-term Drift: $\pm 0.1\%$ FS/year
Analog Output: 4~20mA (2-wire)
Response Frequency: 500Hz
Operating Temperature: -10 to 70°C
Protection Level: IP68
Process Connection: Threaded Connection
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-806 Hydrostatic Level Transmitter



Measurement Range: 0~500mH₂O
Power Supply: 12~36VDC
Accuracy: Class 0.25, Class 0.5
Long-term Drift: $\pm 0.1\%$ FS/year
Analog Output: 4~20mA (2-wire)
Response Frequency: 500Hz
Operating Temperature: -10 to 120°C
Protection Level: IP68
Process Connection: Threaded Connection
Media Compatibility: Liquids
(Customizable for corrosive media)

WH-YCM Intelligent Tuning Fork Density Meter



Density Range: 0~3g/cm
Concentration Range: 0~100%
Power Supply: 24VDC
Accuracy: $\pm 0.1\%$ F.S.
Long-term Stability: $\pm 0.1\%$ F.S./year
Output: 4~20mA/HART
Working Pressure: $\leq 1\text{MPa}$
Operating Temp: -20~80°C
Protection Rating: IP65
Process Connection: Flange
Installation Methods: In-line/Pipeline, Side-mounted, U-tube
Measured Media: Liquids, Slurries
(Customizable for corrosive media)

WH-3051M Online Density/Concentration Meter



Density Range: 0~3g/cm
Concentration Range: 0~100%
Power Supply: 24VDC
Accuracy: $\pm 0.2\%$ F.S.
Long-term Stability: $\pm 0.2\%$ F.S./year
Output: 4~20mA/HART
Working Pressure: $\leq 1\text{MPa}$
Operating Temp.: -20~80°C
Protection Rating: IP65
Process Connection: Flange
Installation Methods: In-line/Pipeline, Side-mounted, U-tube
Measured Media: Liquids, Slurries
(Customizable for corrosive media)

WHCSB-21 Ultrasonic Level Transmitter



Application: General liquid level measurement across industries, especially for water treatment.
 Measuring Range: (0~5)m / (0~10)m / (0~15)m
 Process connection: M66x2 / Bracket / Flange
 Probe Material: ABS (open type)
 Process Temp.: (-40~70)°C
 Process Pressure: (-0.02~0.1) MPa
 Accuracy: ±0.2% FS
 Output: 4~20mA
 Power Supply: -2-wire: 24V DC
 -4-wire: 24V DC / 220V AC
 Explosion-proof Rating: Exd IIC T4 Gb

WHCSB-22 Ultrasonic Level Transmitter



Application: Corrosive liquid level measurement, especially water treatment.
 Measuring Range: (0~5)m / (0~10)m / (0~15)m
 Process Connection: M66x2 / Bracket / Flange
 Probe Material: PVDF/PTFE (enclosed type)
 Process Temp.: (-40~70)°C
 Process Pressure: (-0.02~0.1) MPa
 Accuracy: ±0.2% FS
 Output: 4~20mA/ HART
 Power Supply: -2-wire: 24V DC
 -4-wire: 24VDC/220V AC
 Explosion-proof Rating: Exd IIC T4 Gb

WH-LD11 Radar Level Transmitter



Application: Highly corrosive liquids
 Measuring Range: 20m
 Process Connection: Threaded/Flanged
 Media Temperature: -40~120°C
 Process Pressure: -0.1~0.3MPa
 Accuracy: ±2mm
 Frequency: 26GHz
 Protection: IP67
 Explosion-proof: Exd IIC T4 Gb
 Output: 4~20mA/HART
 RS485/Modbus (2-wire/4-wire)

WH-LD12 Radar Level Transmitter



Application: Liquids, slurries, water treatment
 Measuring Range: 30m
 Process Connection: Threaded/Flanged
 Media Temperature: -40~250°C
 Process Pressure: -0.1~4.0MPa
 Accuracy: ±2mm
 Frequency: 26GHz
 Protection: IP67
 Explosion-proof: Exd IIC T4 Gb
 Output: 4~20mA/HART (two-wire/four-wire)
 RS485/Modbus

WH-LD14 Radar Level Transmitter



Applications: Solid powders, bulk solids, high-dust environments
 Measuring Range: 70m
 Process Connection: Threaded/Flanged
 Media Temperature: -40~120°C
 Process pressure: normal pressure
 Accuracy: ±5mm
 Frequency: 26GHz
 Protection: IP67
 Explosion-proof: Exd IIC T4 Gb
 Output: 4~20mA/HART (two-wire/four-wire)
 RS485/Modbus

WH-LD56 Radar Level Transmitter



Applications: Low-dielectric or surface-agitated liquids
 Measuring Range: 6m
 Process Connection: Thread/ Flange
 Media Temperature: -40~120°C
 Process Pressure: -0.1~2.0MPa
 Accuracy: ±3mm
 Frequency: 100MHZ~1.8GHZ
 Protection: IP67
 Explosion-proof: Exd IIC T4 Gb
 Output: 4~20mA/HART (two-wire/four-wire)
 RS485/Modbus

WH-LD71 Radar Level Transmitter



Applications: Corrosive liquids, slurries & high-vapor liquids, powders & ashes
 Measuring Range: 70m
 Process Connection: Bracket / Flange
 Media Temperature: -40~120°C
 Process Pressure: Atmospheric Pressure
 Accuracy: ±2mm
 Frequency: 120GHZ
 Protection: IP67
 Explosion-proof: Exd IIC T4 GbA
 Output: 4~20mA/HART (two-wire/four-wire)
 RS485/Modbus

WH-LD72 Radar Level Transmitter



Applications: Corrosive liquids, slurries & high-vapor liquids, powders & ashes
 Measuring Range: 150m
 Process Connection: Flange
 Media Temperature: -40~120°C
 Process Pressure: Atmospheric Pressure
 Accuracy: ±2mm
 Frequency: 120GHZ
 Protection: IP67
 Explosion-proof: Exd IIC T4 Gb
 Output: 4~20mA/HART (two-wire/four-wire)
 RS485/Modbus

Level Transmitter Series

WHSPK RF Admittance Level Switch

Power Supply: 24VDC/220VAC
 Power Rating: 3W/5A
 Output: 2 relay outputs
 Sensitivity: 0.3pF~750pF
 Delay Time: Adjustable 0~30 sec
 Ambient Temperature: -40~80°C
 Protection: IP67
 Probe Connection: 1" NPT thread/Flange
 Probe Temp. Resistance: -180~2500°C
 Media Compatibility: Liquids, Solid powders
 (Customizable for corrosive/high temp/high pressure media)



WHZXK Rotary Paddle Level Switch

Power Supply: DC 24V / AC 110V 50Hz / 220V 50Hz / AC 24V (selectable)
 Power Consumption: Max 2W
 Media Temperature: -20°C~+80°C
 Output: Micro switch
 Rotation Speed: 1 RPM
 Process Connection: G3/4" (customizable)
 Torque: Approx. 1.0 kg *cm
 Media Density: >0.23 g/cm³
 Material: SUS304/316
 Operating Pressure: 0~0.2 MPa



WHYCK Tuning Fork Level Switch

Power Supply: 25~240VAC/20~200VDC
 Power Consumption: <2W
 Media Temperature: -40°C~+150°C
 Response Time: Approx. 1 sec
 Output: Relay
 Sensitivity: Adjustable 0~30
 Process Connection: Threaded/Flanged
 Probe Material: SUS304/316
 Output Delay: Adjustable 1~20 sec
 Media Density: Powders >0.18 g/cm³, Liquids >0.7 g/cm³
 Operating Pressure: <2MPa (<4MPa special order)
 Application: Mildly corrosive media, normal viscosity fluids



Gas Detection & Analysis Series

WH-2000A Combustible (Toxic) Gas Detector



Channels: Hardwired: 1~8 channels,
 Bus: 1~255 channels
 Power Supply: 220VAC
 Input Signal: 3-wire 4~20mA, RS485
 Control Output: 2x 250VAC/2A
 Signal Transmission: ≤1000m
 Power Consumption: ≤5W
 Dimensions: 300x300x110mm
 Operating Temperature: -20~70°C
 Humidity: 0~70% RH
 Mounting: Wall-mounted

WH-2000T Combustible (Toxic) Gas Detector



Power Supply: 24VAC
 Input Signal: 3-wire 4~20mA, RS485
 Accuracy: +5% F.S.
 Long-term Stability: +3% F.S./year
 Response Time: 20~60 sec (gas-dependent)
 Control Output: 1x 250VAC/2A
 Operating Temp.: 0~50°C
 Humidity: 0~85% RH
 Mounting: Wall-mounted
 Explosion-proof: Exd IIC T6
 Detection Technology: Catalytic Bead /
 Electrochemical / IR / PID
 Detectable Gases: Natural Gas, Gasoline, O₂,
 CO, H₂S, Cl₂, NH₃, etc.

WH-3000 Portable Gas Detector & Alarm



Power: Charge (3-6h)/ Battery
Accuracy: $\pm 5\%$ F.S.
Long-term Stability: $\pm 3\%$ F.S./year
Response Time: 20-60 sec (gas-dependent)
Alarm Modes: Sound/Light/Vibration
Dimensions: 108x61x40mm
Operating Temp.: 0-50°C
Humidity: 0-85% RH
Detection Technology: Catalytic Bead / Electrochemical / IR / PID
Detectable Gases: Combustibles, O₂, CO, H₂S, Cl₂, NH₃, etc.

WH-NO_x/O₂-T Nitrogen Oxides Analyzer



Measurement Ranges:
-NO_x: 0~100 mg/m³(customizable)
-O₂: 0~21%(customizable)
Max Flue Gas Temp.: <800°C
Power Supply: 24VDC
Operating Temp.: -40°C~+105°C
Storage Temp.: -40°C~+125°C
Accuracy: -NO: ± 5 mg/m³
-O₂: $\pm 0.3\%$ FS

WH Series Intelligent Digital Display Instrument

Measurement Range: -1999~9999 digits
Power Supply: 220VAC
Accuracy: $\pm 0.5\%$ F.S.
Long-term Stability: $\pm 0.2\%$ F.S./year
Resolution: 0.001 / 0.01 / 0.1 / 1 (selectable)
Sampling Rate: 3 times / sec
Load Resistance: $\leq 500\Omega$
Operating Temp.: -20~70°C
Humidity: 0~70% RH
Display Types: Single/Dual display, Bar graph
Input Signals: Universal input (current/voltage/RTD/TC/frequency)
Dimensions (mm): 160x80 / 80x160 / 96x48 / 96x96 / 72x72 / 48x48
Outputs: 4~20mA, Alarm relays (2 or 4 channels), 24VDC loop power

WHXJ Series Intelligent Digital Display Instrument

Display Range: -1999~9999 digits
Power Supply: 220VAC
Accuracy: $\pm 0.5\%$ F.S.
Long-term Drift: $\leq \pm 0.2\%$ F.S./year
Resolution: Programmable (0.001/0.01/0.1/1)
Sampling Rate: 3 samples/sec
Load: $\leq 500\Omega$ (current output)
Operating Temp.: -20~70°C
Humidity: 0~70% RH non-condensing
Sizes: 160x80, 96x96
Display Modes: Single display, Dual display
Input Signal: Universal input (current, voltage, RTD, TC, frequency)
Output Signal: 4~20mA, 2-way relay alarm, 4-way relay alarm, 24VDC loop power

Temperature Transmitter Series

WH-WD-2000 Temperature Transmitter



WH-WD-2000 Temperature Transmitter
Measurement Range: -200~1800°C
Power Supply: 24VDC
Accuracy: $\pm 0.5\%$ F.S.
Long-term Stability: $\pm 0.2\%$ F.S./year
Output: 4~20mA
Load Resistance: $\leq 500\Omega$
Humidity: 0~90% RH
Process Connection: M20x1.5/M27 x2
Probe Diameter: $\phi 12$ mm
Insertion Length: 100~1000mm(customizable)

WH-WZR RTD/Thermocouple Temperature Sensor



Measurement Range: -200~1800°C
RTD Types: Pt100, Cu50, Cu100
Thermocouple Types: K, E, J, B, S, R, T, N
Accuracy: $\pm 0.25\%$ F.S.
Long-term Stability: $\pm 0.2\%$ F.S./year
Humidity: 0~90% RH
Process Connection: M27x2
Probe Diameter: $\phi 12$ mm
Insertion Length: 100~1000mm (customizable)
Media Compatibility: Gases, Liquids
(Corrosive media: special materials available)

WH-WSS Bimetallic Thermometer

Measurement Range: -80~500°C
Accuracy: $\pm 1\%$ F.S.
Long-term Stability: $\pm 0.5\%$ F.S./year
Humidity: 0~90% RH
Process Connection: M27x2/Flange
Probe Diameter: $\phi 12$ mm
Insertion Length: 100~1000mm(customizable)
Media Compatibility: Gases, Liquids
(Corrosive media: special materials available)



WH-WZJL Intelligent Paperless Recorder

Display Range: -1999~9999 digits
Power Supply: 220VAC
Accuracy: $\pm 0.5\%$ F.S.
Long-term Stability: $\pm 0.2\%$ F.S./year
Load Capacity: $\leq 500\Omega$
Operating Temp.: -20~70°C
Ambient Humidity: 0~70% RH
Dimensions (mm): 160x80/80x160/96x96
Display: LCD screen
Input Channels: 1~4 channels
Communication: RS232, RS485
Print Interface: RS232 direct PC printing
Input Signal: Universal input (current, voltage, RTD, TC, frequency)
Output Signal: 4~20mA, 2-relay alarm, 4-relay alarm, 24VDC loop power



WH-XHGL-20A Intelligent Signal Isolator

Power Supply: 220VAC/24VDC
Distributed Power: 24VDC
Response Time: <0.5s
Accuracy: $\pm 0.5\%$ F.S.
Long-term Stability: $\pm 0.2\%$ F.S./year
Output Signal: 4~20mA, 1~5V
Load Capacity: Current output: $\leq 500\Omega$, Voltage output: $\geq 500\Omega$
Operating Temperature: -20~70°C
Ambient Humidity: 0~70% RH
Channel Configurations: 2-in/2-out, 1-in/2-out
Input Signal: Universal (current/voltage/resistance/thermocouple/frequency)
Isolation Strength: Input-Output-Power-Ground: AC1000V (1min) / DC1000V (1min)

