



SILVER AUTOMATION INSTRUMENTS



忠诚： 忠于产品，忠于技术，忠于专业。
执行： 公司倡导全体员工为提升执行力而付出。
学习： 公司致力于建立全员学习型组织。
团队： 公司追求建设卓越人才聚合下的卓越团队。

企业简介

Company introduction

Silver Automation Instruments are dedicated to supplying Field Instruments, Silver Automation Instruments are expert in sales of industrial process instrumentation all over the world.

The main classifications are :

- Flow measurement
- Level measurement
- Temperature measurement
- Panel meters & chart recorders

Our products are widely used in chemical industry, environmental protection, metallurgy, pharmaceutical, paper making, water supply and treatment etc. The principle of our company is "Managing Our Company Creatively and Satisfying Our Customers".

Our manufacturing center is Hang Zhou Pangu, Pangu has passed ISO9001:2008 & ISO14001, qualified products have been provided for the Lean production & 6 Sigma quality management process , Pangu providing industrial process solution & field instrumentation all over the world have been over 20 years.





What We Can Provide...

Dedicated to Providing Industrial Process Instrumentation

We are leader in the instrumentation field, instrumentation are running stably & longer time. Our quality & Production ability is improving all the time. Stable running can decrease your running cost and maintenance charge.

Better Connect To Your Process

Factory test & Calibration process can decrease your factory energy consumption, our products are easy installation, wire & wireless configuration can promote your factory automation ability.

Better Information For Decision

Advanced diagnosis can predict and prevent abnormal conditions. Simple & task-oriented interface can improve staff & production efficiency/ Multi-parameters setting to enhance the ability of detection of the process.

Fast Delivery Time

Fast, accurate & timely manufacturing & delivering. Lean production can ensure our production upon your manufacturing and delivery time requirement.

Training Support

Certified Training courses are available in our Training Center or the place you require. Our emphasis is on the instrumentation debug and maintenance to decrease the running cost of factory and improve production ability.





Flow measurement

SHD Electromagnetic Flow meter

SHD Electromagnetic Flow meter can be used to measure all electrically conductive liquids such as sludges, slurries, sewage, milk, water and waste water.

- Type Optional: standard, type sanitary type, Insertion Type, Battery powered type;
- Size: 10mm~2200mm;
- Accuracy: 0.25%, 0.5%, 1.5% (Insertion type);
- Fluid Temperature: $-25^{\circ}\text{C} \sim 130^{\circ}\text{C}$;
- Velocity: 0.5 m/s~10m/s;
- Protection level: IP65/IP68;
- Electrodes: 316L / Hastelloy C2, B4/Tantalum/Titanium/Platinoidita;
- Liner: PTFE, PFA, Rubber;
- Communication: Hart / Modbus / Profibus/RS485;



STLU Vortex Flow meter

- STLU Vortex Flow meter is to measure liquid, gas, and steam;
- Type Optional: flange type, insertion type;
- Size: 10mm~2200mm;
- Accuracy: $\pm 1.0\%$, $\pm 1.0\%$, $\pm 3.0\%$;
- Velocity: Gas: 7-55m/s (7-50m/s for $\text{DN} \geq 200$) Liquid: 0.7~5.5 m/s;
- Output Signal: Pulse, 4~20mA, RS-485, Hart, Modbus;
- Power Supply: 24V DC; 3.6V Lithium Battery (Local display) or both together;
- Protection Grade: Flameproof Exd II BT3-6; Intrinsically Safe Exia II CT3-6;



HH5 Variable Area Flow meter

HH5 Metal Variable Area Flow Meter can be used to measure flow of liquid, gas and steam; it is a good choice to measure small flow.

- Two-wire LCD indicator; instant/accumulated display of flow rate;
- All-metal structure, fit for high temperature, high pressure and mediums with strong erosion;
- Multi-parameters calibration function;
- Hart Communication available;
- Material: 304, 316, 316L, PTFE liner optional;
- Broader ratio of flow rate : 10:1;
- Measuring Range: water (20°C) 1- 200000 l/h; Air (20°C , 0.1013 Mpa) 0.05-4000m³/h;
- Explosion-proof: Flameproof Exd II BT4; Intrinsically Safe Exia II CT3-6;
- Medium temperature: standard : $-80^{\circ}\text{C} \sim +200^{\circ}\text{C}$; PTFE : $0^{\circ}\text{C} \sim 85^{\circ}\text{C}$; High temperature: 400°C ;





LC Positive Displacement Flowmeter

LC positive displacement flowmeter designed for clean fluids. It is an ideal choice for use with fuel, diesel, lubricating oil, paint, epoxies, greases, polyurethane, additives, syrups, glue, hydraulic oil and any fluid compatible with the materials of construction.

- best suited for fluids with a viscosity range between 0.3 to 2000 centipoises;
- No require flow straighteners upstream or downstream;
- Accuracy: 0.2%, 0.5%;
- Type: mechanical type, pulse type, 4~20 mA output type;
- Explosion-proof: : Flameproof Exd II BT4

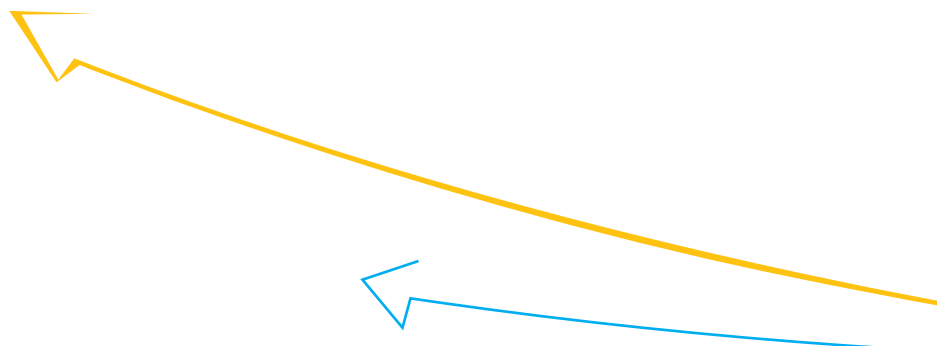


Mass Flowmeter

SH-CMF Mass flow meters offer the most accurate measurement available for virtually any process fluid, while exhibiting exceptionally low pressure drop. The meters offer direct mass flow, volume flow, density, and temperature measurement of liquids and slurries—without the need for additional equipment, manual calculations, or estimations.

- Mass flow accuracy: $\pm[0.2\% + (\text{zero stability} / \text{flow rate} \times 100\%)]$
- Mass flow repeatability : $\pm(1/2) * [0.2\% + (\text{zero stability} / \text{flow rate} \times 100\%)]$
- Density range : 0.2 g/cm~3.5g/cm
- Density accuracy : $\pm 0.002\text{g/cm}$
- Temperature range : - 60°C ~ +200°C
- Temperature accuracy : $\pm 1^\circ\text{C}$
- Output of current loop : 4~20mA
- Output of frequency/pulse: 0Hz ~ 10kHz
- Explosion-proof: Flameproof Exd II BT4; Intrinsically Safe Exia II CT4;

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SLW Liquid Turbine

Turbine Flow meter was widely applied in the following measured medium: petroleum, organic liquid, inorganic liquid, liquefied petroleum gas, nature gas, coal gas and flow in low temperature, etc.

- High accuracy: $\pm 0.5\%$, 0.2% ;
- Good repetitiveness: $0.05\% \sim 0.2\%$
- Output: Sensor: pulse frequency signal, low electrical level $\leq 0.8V$, high level $\geq 8V$; Transmitter: two wire, 4-20 mA DC current signal; Hart Protocol available;
- Explosion Proof: Basic type: non-explosion proof; explosion proof type: ExdII BT6



SGW Gas Turbine Flow meter

SGW series gas turbine flow meter is widely used for measurement of natural gas, coal gas, liquefied gas and light hydrocarbon gas, etc.

- Test temperature, pressure and flow of measured gas;
- automatic tracking and compensation of flow;
- Indication of gas total volume under standard status;
- Real-time query of temperature, pressure, time and date, etc.
- Accuracy: $\pm 1.5\%$, $\pm 1.0\%$ or $\pm 0.75\%$
- Size: DN25~300



Level measurement

Radar level meter & Guided wave radar level meter

Designed for distance, level and volume measurement of liquids, pastes and slurries.

- Type: 26G Pulse Radar, 6G pulse Radar, Guided wave radar
- Measuring range: 0.2...70 m
- Connection: G 1½, 1½ NPT, flange DN 50...150;
- Max. temperature: $400^{\circ}C$;
- Accuracy: ± 3 mm;
- Signal Output: (4~20mA)/Hart;
- Power supply: 2-wire(DC 24V); 4-wire(DC24V/AC220V)
- Display & Programming available;
- Protection Level: IP66 & IP67;



Ultrasonic Level meter

Level sensors detect the level of substances that flow, including liquids, slurries, granular materials, and powders.

- Type: 2-wire, 3-wire, 4-wire; compact & remote;
- Range: max 40m
- Housing material: Plastic & Aluminum;
- Wetted parts material: ABS&PVC; PTFE;
- Process connection: screw & flange
- Output: 4~20mA, Modbus, Profibus;
- Switch output available;
- Power supply: DC24V & AC 220V;



SH Capacitance Pressure transmitters

SH Series Digital Intelligent Pressure/Differential Pressure Transmitter is a multipurpose digitalized intelligent instrument, including capacitance pressure/differential pressure transmitter. It is made on the basis of the mature and dependable sensing technology, combining the advanced single-chip computer technology and sensor digital exchange technology.

- Type available: Gauge pressure, Absolute pressure, Differential pressure transmitters, diaphragm sealed type
- Measuring range : 0~0.06 kPa to 0~40Mpa
- No mechanical and movable parts, little maintenance work;
- Positive shift amount to 500%; negative shift 600%;
- Two-wire system 4~20mA DC; Smart HART protocol
- Diaphragm materials of wetted parts option (316L, TAN, HAS-C, MONEL, etc.)
- Explosion proof : explosion isolation d II BT4, intrinsically safe ia II CT6



Pressure Gauge

Pressure gauges are devices used for measuring the pressure of a gas or liquid.

Type Available:

- Common pressure gauge
- Stainless pressure gauge
- Liquid filled pressure gauge
- Freon pressure gauge
- Electric contact pressure gauge
- Diaphragm pressure gauge
- Membrane pressure gauge
- Bellows pressure gauge



SH316 & SH 308 Diffusive Silicone Pressure Transmitter

SH316 & SH 308 Series pressure transmitters choose import diffusive silicon type and ceramics type pressure sensor with high quality as sensitive components, and employ application-specific integrated module, through fine temperature shift, zero and non-linearity compensation, to realize accurate measurement and transmission of medium pressure change of liquid, gas and vapor, etc.

- Power : 24VDC output 4-20mA two-wire
- Ratio of Span: above 3:1
- Span Range : -100kPa~0~60MPa
- Intrinsically safe type ia II CT5
- Overpressure limit : double of upper-limit pressure
- Temperature Range : process : -20 ~ 60C
- Accuracy: +/-0.5%, +/-0.25%

Temperature measurement

Thermocouple

Assembly type thermocouple which is used in industry as the sensor measuring temperature is generally connected with display meter, recording meter and electronic regulator to directly measure temperature of liquid, vapor, gas and solid surface ranging from 0° C to 1800° C during various production processes.



Resistance Temperature Detectors

Resistance thermometers, also called resistance temperature detectors (RTDs), are sensors used to measure temperature by correlating the resistance of the RTD element with temperature.

As they are almost invariably made of platinum, they are often called platinum resistance thermometers (PRTs). They are slowly replacing the use of thermocouples in many industrial applications below 600 ° C, due to higher accuracy and repeatability



SBW Temperature Transmitters

SBW series integrated temperature transmitter uses thermocouple or thermal resistor as temperature sensitive element, it can measure temperature of all kinds of liquid, steam and gas medium from -200 to 1800 ° C, and transform thermocouple's or thermal resistance's signal to 4~20mA standard signal, simultaneously has real-time indication function on the spot.

- Range: - 200° C~1800° C
- Integrated structure, can display its real-time measuring value
- High accuracy, anti-interference, good long-term stability
- Signal is precise, can remote transmission (max.1000 meters)
- Explosive-proof: Exia II BT6, Exd II BT6



Head Temperature Transmitters

- Universally programmable with HART-protocol for various input signals;
- Two-wire technology, analogue output 4 to 20mA;
- Highly accurate in entire operating temperature range;
- Wide voltage supply range;
- Customer specific measurement range settings;
- Simple and user friendly software;
- Multi parametric backlight rotatable LCD display available;



WSS Bimetallic thermometer

Bimetallic thermometer is used for field testing of low or middle temperature (from -80°C to 500°C), Can directly measure the temperature of all kinds of liquid, steam and gas medium.

- Local indication
- Safe, reliable, and long service life
- Multiple structure form, can meet different demands
- Dial diameter: DN60, DN100, DN150
- Accuracy class: 1.0%, 1.5%
- Thermal response time: $\leq 40\text{s}$

Panel meter& Paperless Recorder



SHR Digital Panel Meter

Digital Panel Meters perform digital processing on or conversion and display of voltages, currents, other analog signals, and pulse signals. They can also compare input values to set values, transfer data, and perform other functions.

- Available Type :
- SHR-1100 (simple) single-circuit digital display
- SHR-1300 Easy Fuzzy PID Regulator
- SHR-5100 Single-loop Digital Display Controller
- SHR-5300 Artificial intelligence PID regulator
- SHR-5400 60-segment PID controller
- SHR-5500 manual operator
- SHR-5700 multi-loop digital display controller



Paperless Recorders

Paperless recorders enable electronic acquisition and storage of data, helping manufacturers address this issue in a cost-effective way.

- Using the latest large-scale integrated circuit;
- Using high-speed & high-performance 32-bit ARM microprocessor;
- Large capacity storage of FLASH memory chips to store historical data, which will never lose data in case of power-down;
- A variety of standard signals: standard current, standard voltage, frequency, millivolt, thermocouple, thermal resistance;
- Signal full-scale accuracy: $\pm 0.2\%$;
- Max 40 signal inputs;



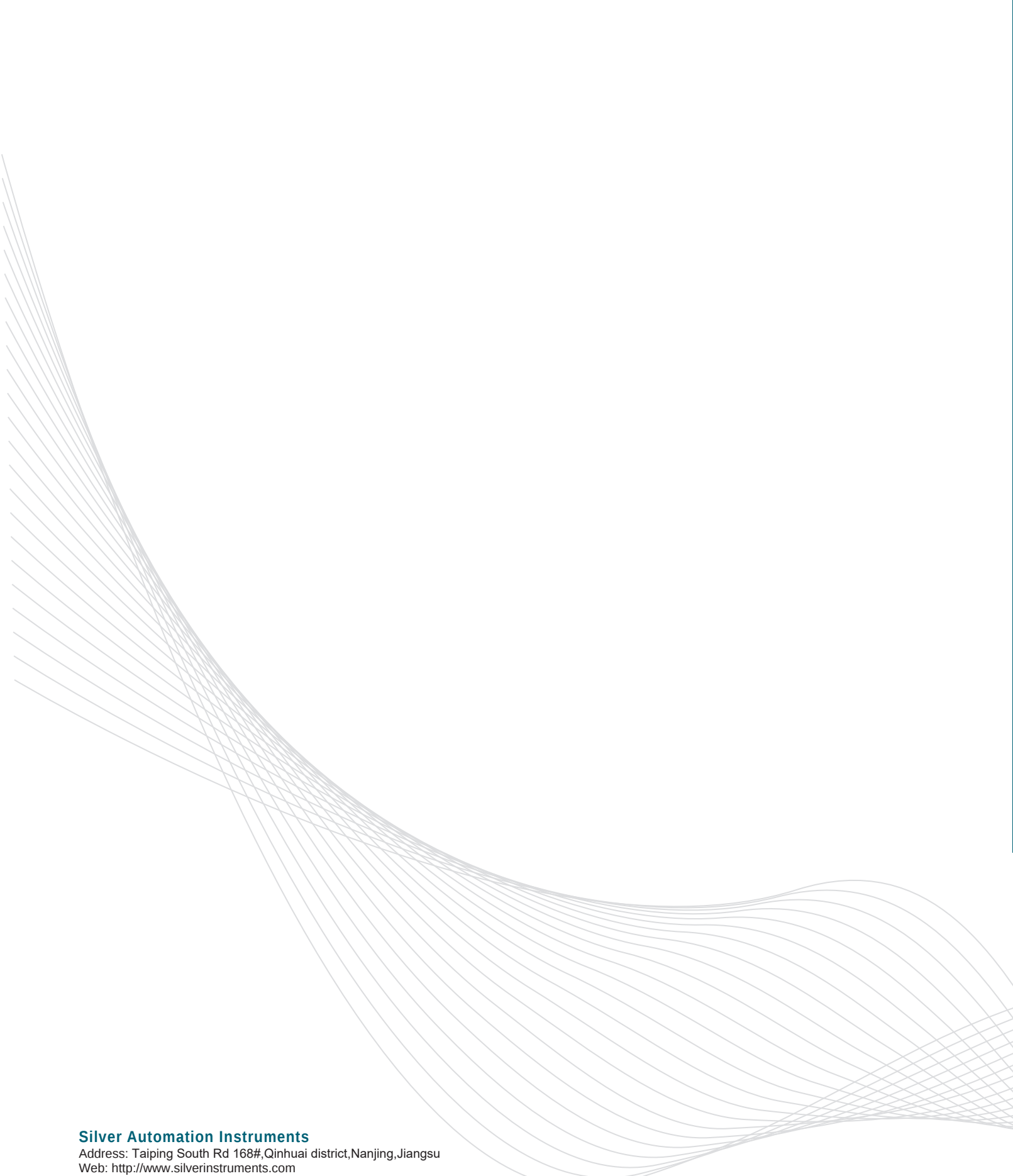
Calibration Instruments

Handheld Hart Communicator

HART® Intelligent Field Communicator can configure, check and maintenance all devices matched with HART® protocol.

HART375E Intelligent Field Communicator can support all instruments with HART® protocol, performing functions like range setup, loop test, process variable monitoring and field calibration.

HART375E Intelligent Field Communicator support not only the first primary device with HART® protocol (HART® net bridge and so on), but point to point and multi-point HART® protocol communication mode.

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