PRODUCTS GUIDE

Food Beverage, daily and Pharmaceutical

www.fine-tek.com

Solid / Liquid Level Measurement for Field Application
Pneumatic Vibrator/Air Hammer
Temperature Controller/ Counter /Digital Panel Meter

Your BEST Partner

FineTek has accumulated more than 30 years of technology and experience. Always focus in the fields of industrial sensing, measuring applications with innovative research and development technology. FineTek's professional capability and strict process management, qualifed by ISO9001 certification and other international professional certification, and provide all types of products that meet the needs of all fields.

INTRODUCTION

The F&B and, pharmaceutical and beverage industry have long relied on manual operation mode, in order to improve production efficiency and quality control, many food and beverage processing processes have begun to integrate towards automation standards.

One of the difficulties facing the food and beverage industry is that the nature of the processing in the factory is different, such as receiving, storage and processing of raw materials, while covering the distributed and centralized automation application procedures, and processing may be batch processing, continuous processing or both.

Applications: Storage tank, process tank, cleaning tank of beverage production process, tank temperature monitoring, filter flow monitoring, food machinery, factory automation machinery, CIP cleaning system, etc....

The US 3-A Sanitary Standards is an accredited important international sanitary standard. 3-A Sanitary Standards, Inc. (3-A SSI) was actually founded in 2002 by five founding members in the US, they are: American Dairy Products Institute (ADPI), International Association of Food Industry Suppliers (IAFIS), International Association for Food Protection (IAFP), International Dairy Foods Association (IDFA), and 3-A Administrative Symbol Council. 3-A SSI's leadership includes a representative of the Food and Drug Administration (FDA) and US Department of Agriculture, and the 3-A Steering Committee.

The mission of 3-A SSI is to provide the dairy product, food, beverage and pharmaceutical product with hygienic safety protection for the producers, equipment manufacturers and end consumers through the designation and use of the volunteer 3-A Sanitary Standards and 3-A Accepted Practices.

Food hygiene fittings are required to pass the certification of European Hygienic Engineering & Design Group (EHEDG), which is the organization jointly founded in 1989 by the equipment manufacturers, food industry, research institutes and public health authorities to promote food processing and packaging processes. The main objective of EHEDG is to enhance food safety by improving the hygienic design of machinery and equipment in the food manufacturing industry. EHEDG actively promotes the EU legislation for the hygienic design of machinery for the handling, processing and packaging of food products (EU Machinery Directive 2006/42 / EC, EN 1672-2 and EN ISO 14159 Hygiene Standards).

SANITARY FITTINGS


Blank Flange


Clamp Tee


Non-return Valva


Bend Tube

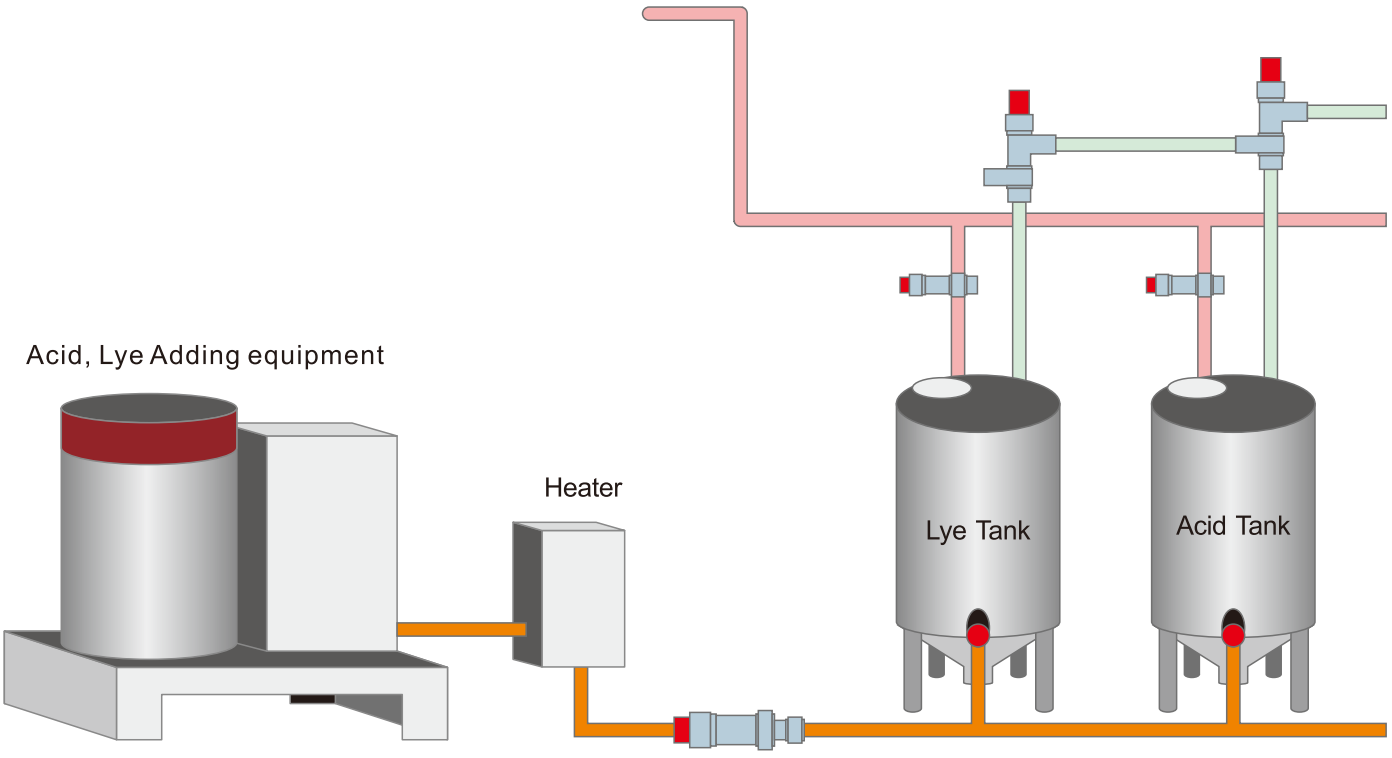

Connector

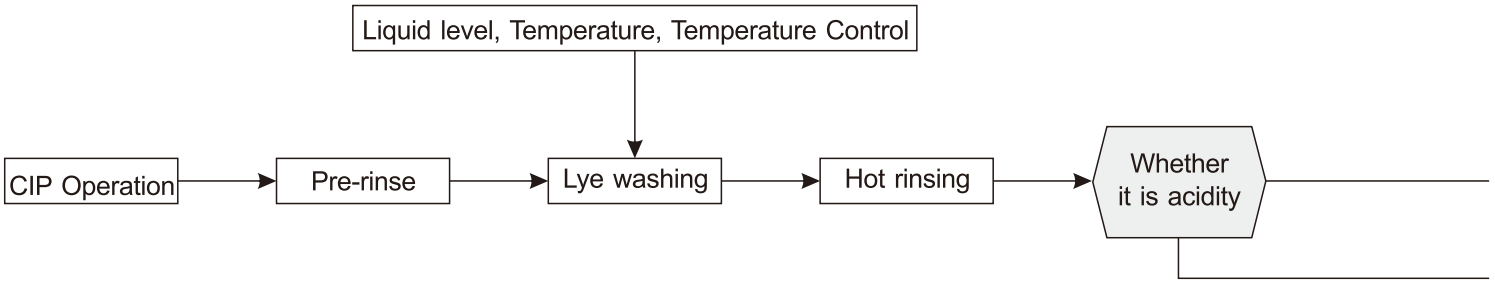
FineTek

CIP Cleaning System

CIP Basic Components
CIP Tank: The tank barrel to set up rinse water, cleaning fluid, disinfecting fluid
Pipeline: Pipeline connecting CIP tank and the equipment to be cleaned
Pump: Supply pump and Reflux pump
Valve: Sanitary non-return valve
Heat Exchanger
Liquid Level Control

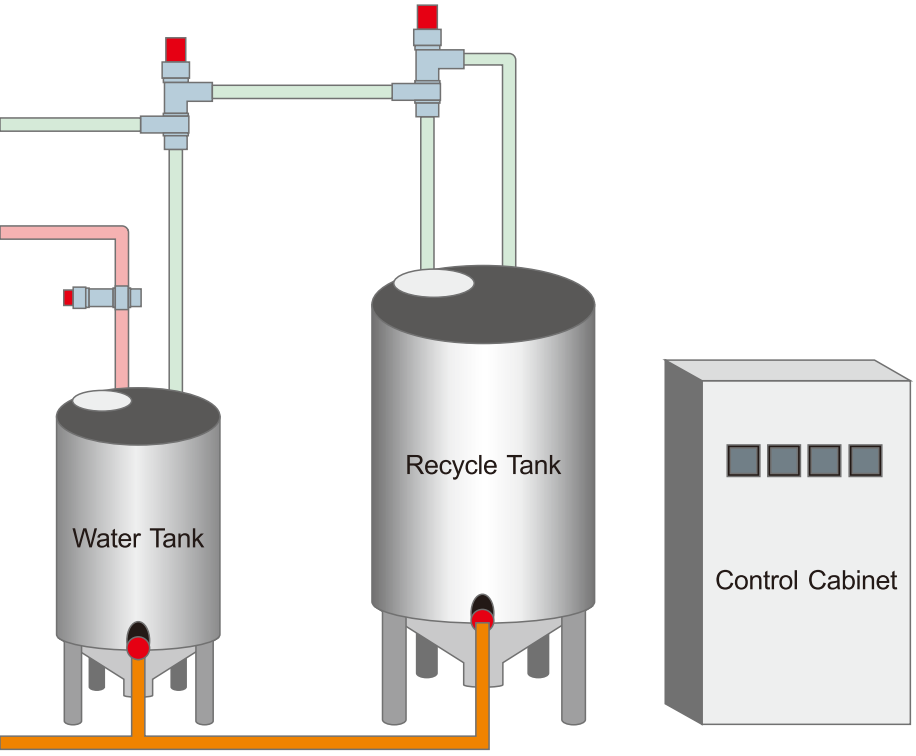
→ Water cleaning (Water rinsing leftovers)
→ Alkali cleaning (Lye cycle)
Cleaning Agents: Lye, specialty detergents
Concentration: 1~2%
Temperature: 70~90℃
→ Acid cleaning
Cleaning Agents: Nitric acids, specialty detergents
Concentration: 0.5~1.5%
Temperature: 60~80℃
→ Sterilization
Cleaning Agents: Water
Temperature: 90~95℃

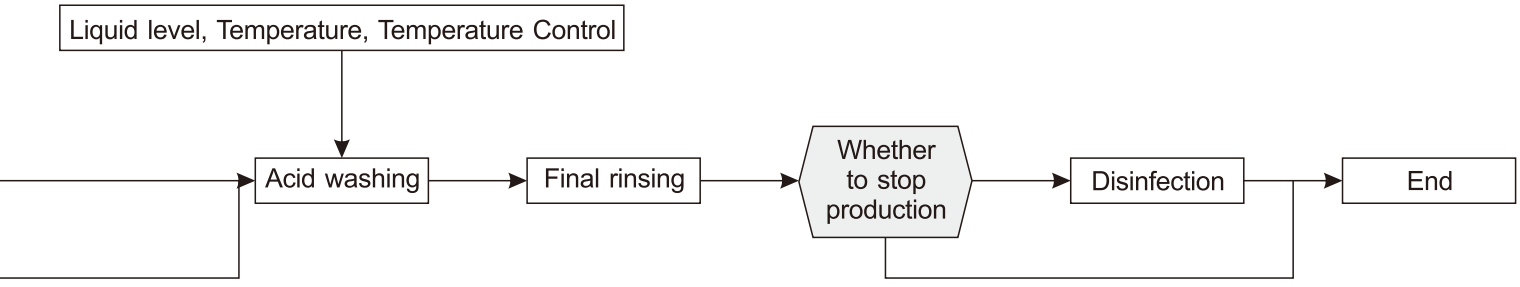




CIP Cleaning Characteristics

- → Automatic inspection of the CIP Liquid Storage Tank automatic liquid-level monitoring and replenish
- → Acid, lye liquid automatic filling and monitoring
- → Heating temperature and reflux temperature control
- → All automatic valve and pump on and off control
- → Operating status display
- → Malfunction automatic stop and warning





Level Measurement

FineTek offers a wide range of liquid level detection sensors, with a variety of wetted materials, and there is always an applicable product can be used from a single chemical to unclear mixture of liquid that is incapable of analyzing.

FG Magnetic float level transmitter

Suitable for use in continuous liquid level monitoring in all types of tanks. Use low-power consumption "Loop Power" signal technology. The enclosure can be with Explosion Protection Type ia also available, and the length can be completely customized according to customer's needs, up to 30 meters.

FC/FD Magnetic float level switch

Used for high and low positions control in the liquid tank with clear chemical properties of the liquid in the tank. Product body has a variety of materials (PVC, PP, PVDF, SUS304 / 316, etc.) can be selected and can do multiple liquid level control. The minimum specific gravity of the float can be applicable to 0.45 (comparing with water). The length can be set according to customer requirements (up to 6 meters).

EGS Sanitary magnetostrictive level transmitter

Suitable for liquid level control in the CIP Cleaning System, SIP Sterilization System, and pharmaceutical equipment. High resolution, high accuracy, easy installation and no regular calibration and it maintenance required. High stability and reliability and it can be connected with PC to do the remote monitoring. Operating temperature -40 ~ +125 ℃.

SIS Food grade sanitary intelling level switch

Used for high, low position alarm in production process tank or pipelines. The compact design to facilitate carrying and transporting, and can be quickly installed even in the area of narrow space or difficult operation. Suitable for use in the CIP and SIP cleaning applications, the surface roughness (Ra) level can be adjusted according to customer's needs, suitable for use in pharmaceutical and food processing industry applications.

EAX Ultrasonic level transmitter

Suitable for liquid level monitoring in the tank, it's a non-contact measuring device with long service life. The product is two wire output with HART, easy installation and measuring range is up to 12 meters with protection rating of IP67.

EC Pressure level transmitter

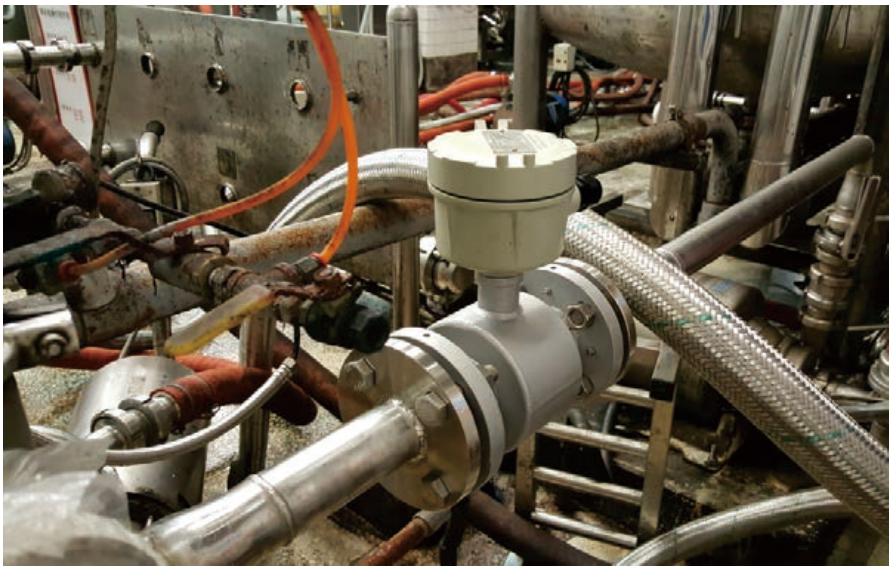
Used for high accuracy measurement of weak acid, lye liquid in the tank,the accuracy is up to 0.25%. Can be connected with the digital panel meters, recorder, computer, PLC program controller or alarm devices, etc with protection rating of IP65.

SPS Sanitary thermal dispersion flow switch

Used for testing whether the liquid is flowing in the pipeline, the length of the flow sensing probe can be designed and manufactured in line with the size of pipe diameter, therefore the product is suitable for large or small pipe diameter. Maximum operating pressure is up to 100 Bars with three output methods for the customer's choice.

Flow

In this world of substantial reduction of resources, environmental protection and energy conservation are with great urgency without delay. From industry, business to home, limited energy on the earth is consumed every day. In order to use the resources more effectively and reduce unnecessary waste, we offer a variety of flow measurement instruments to be used in different areas of equipment production process control and factory automation with high product precision, easy installation, and long maintenance cycle and low cost and equipped with a comprehensive flow measurement test laboratory to secure the final check for each flow meter.



EPD Electromagnetic flow meter

Commonly used in all types of conductive liquids, can also be used in measuring the mixed liquid no with granules, no special requirements for temperature, pressure density and viscosity, and will not cause pressure loss for the fluid in the pipeline. Product precision is up to 0.1% with choice lining materials, and caliber ranging from DN15 to DN300.

EPR Paddlewheel flow meter

The Paddlewheel Flow Meter is suitable for use with non-granule, non-sticky, neutral or corrosive liquids. Capable of displaying instantaneous flow and cumulative flow, measuring flow rate range of 0.3 ~ 10m/s, with good linearity.

Solid Level Measurement

FineTek offers a wide range of material level detection sensors, with a variety of product designs, and there is always an applicable product can be used from a single switch control to the need of continuous signal output to warehouse inventory management.

SB RF-Capacitance/ Admittance level switch

Suitable for the detection of materials with viscosity, in other words, the switch is not affected by the attached material as it can effectively detect the high and low level of the materials of high viscosity in some of the mining storage tank. The product design includes high/low level switch failsafe protection, adjustable time delay function, and sensitivity adjustment signal. And with many different models suitable for use in high temperature, stirring or narrow space application.

SA Capacitance level switch

Used for storage tank high, low level detection of the pharmaceutical equipment with complete series of models, except to the standard type, high temperature type, there are also ultra-high temperature type, with the temperature up to 800 ˚C, Plate-Probe type is suitable for lower position detection, type is suitable for large-size tank, explosion protection type is used in the place of explosion protection, this switch has no moving part, so it will not have mechanical wear and tear due to friction, and equipped with output operation delay function (0 ~ 6 seconds).

JTR Guided wave radar level transmitter

Wave Guided Radar Level Meter uses advanced echo wave processing technology with a wide range of product applications that is capable of measuring the solid of low dielectric constant; and capable of measuring the solid level, liquid level and medium surface. The models including coaxial, rod and cable type for the customer's choice, suitable for use in high temperature and high pressure medium liquid level measurement.

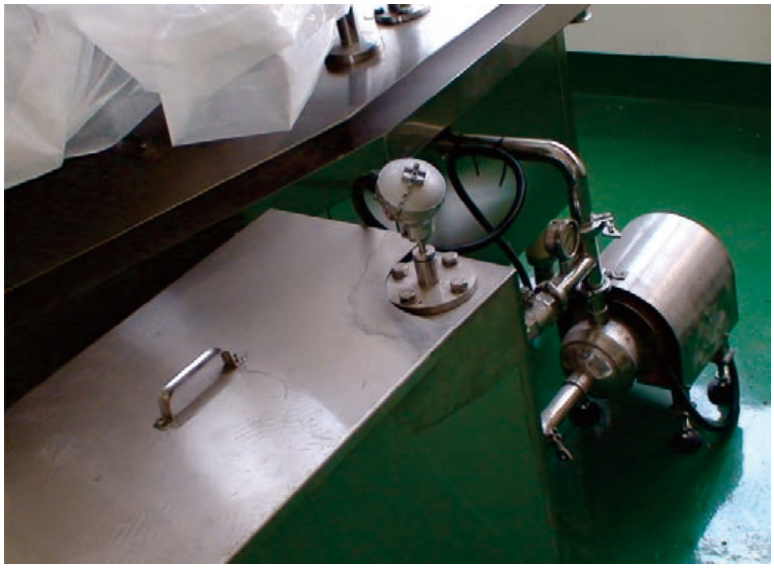
Temperature measurement

Temperature measurement is the most commonly monitored physical quantity in industrial control, both in pipeline and in storage tank. In addition to the need for production process, temperature measurement is also related to the factory safety, in recent years due to the development of digitization, temperature monitoring can easily obtain information of the site through certain signal transmitters, so that the control can be much more real-time.

FineTek offers a wide range of temperature sensing components and precision temperature transmitters, and supports compliance of the most commonly used HART protocol in the EU.

TR Series temperature transmitter

Use the electrical bridge to accurately detect the input signal, and then use the amplifier and the impedance converter to obtain a stable input signal.



GP Platinum resistance thermometer

Wide applicable temperature range, with direct temperature measurement, good linearity, variable types, can be customized.

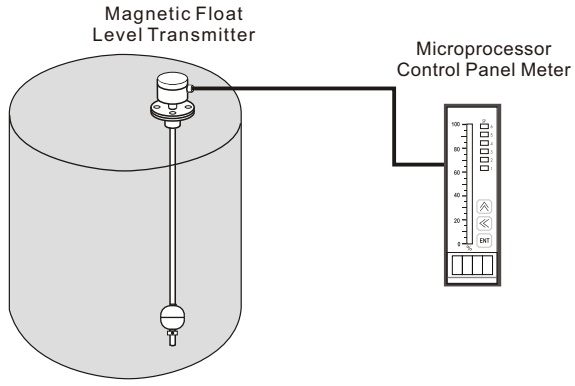
GP Thermocouple thermometer

Suitable for use in high temperature and harsh environment, easy installation and use.

FG Magnetic float level transmitter

OPERATING PRINCIPLE

The "Magnet Float Level Transmitter" is using the magnet in the float following the liquid level variation to change the bleeder circuit composed by the resistance and reed switch in the joint structure, the smaller gap between the reed switch, the higher the accuracy. The divider signal can be converted to 0/4 ~ 20mA or other different standard signal through the converter. The meter can be used for distant indication with other digital panel meters, is a liquid level meter with excellent reliability.



FEATURES

- Various optional wetted materials.
- A variety of float specifications, also suitable for a variety of liquid with different specific gravity.
- Special reed packaging process, with better environmental durability.
- Can be used for the liquid level of ultra-light density.
- Suitable for use in the environment with pressure in the tank.
- Can be used for high temperature liquid.
- Accuracy is not affected by temperature, pressure, and changes in the measured object.

SPECIFICATIONS

Wetted material	PVDF / PP / SUS304 / SUS316
Operating temp.	<120°C
Supply voltage	Loop Power 12~36 Vdc
Linearity	>0.45 (comparing with water)
Pressure	30Bar (Max.)
IP rating	IP65
Explosion-proof	ATEX 2G Ex d IIB T6~T3 Gb (Optional)

※The specification is subject to the brochure.

EGS Sanitary magnetostrictive level transmitter

High resolution, high accuracy, easy installation and does not need regular calibration and maintenance, stable and high reliability. Dirt and dust proof, high pressure resistance, seamless casing appearance constructed by corrosion-resistant stainless steel. Capable of connecting with PC to do the remote monitoring. Operating temperature is -40 ~ +200℃, capable of oil, water surface level, level detection output.

APPLICATIONS

- Suitable for high temperature sterilization (200℃) environment
- Suitable for high pressure cleaning environment
- CIP Cleaning System
- SIP Sterilization System
- Pasteurization System
- Pharmaceutical Facility Application
- Beverage, Drinking Water, Edibe Oil
- Food filling application and food liquid level control
- Temperature Measurement

SPECIFICATIONS

Wetted material	SUS316/SUS316L
Measurement range	25mm-500mm
Temp. sensing	PT100
Operation voltage	12Vdc~30Vdc
Output current	4~20mA/20~4mA
Operation pressure	10bar(Max.)
Linearity	±100um@500mm or ±0.02% FS
Repeatability	±0.02% F.S
Ambient temp.	-40~85℃
Operating temp.	-40~125℃
Communication output	RS485
Surface cleanliness	Ra<0.3um, Ra<0.5um, Ra<0.8um
Enclosure protection rating	IP67(Housing)/IP69K(Probe)
Connection specifications	Food Grade Connection 1-1/2"~2"

※The specification is subject to the brochure.

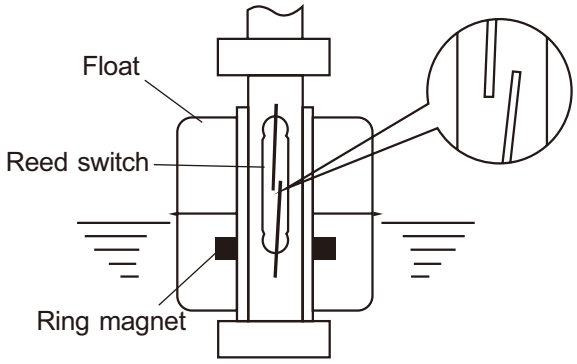
FC/FD Magnetic float level switch

OPERATING PRINCIPLE

Set up one or more reed switches in a closed metal or plastic tube, and then pipe it through one or more hollow floats with ring magnet installed inside, and use the fixed ring to control and float and reed switch at the interrelated positions, so that the float floats goes up and down in a fixed range.

FEATURES

- Control switch position can be customized.
- Contact lifetime is up to 2,000,000 times
- Enclosure protection rating above IP65.
- Wetted Material has PVDF、PP；SUS304 and SUS316, suitable for all types of liquid.
- Maximum Operating Temperature 200˚C
- Maximum Operating Pressure 50 Bars.



SPECIFICATIONS

Float material	PVDF / PP / SUS304 / SUS316
Operating temp.	<200°C
Contact form	SPST-NO / SPST-NC /SPDT
Contact capacity	20W / 40W / 50W
Linearity	>0.5 (comparing with water)
Pressure	50bar (max.)
IP rating	IP65
Explosion-proof	ATEX 2G Ex d IIB T6~T3 Gb (Optional)

※The specification is subject to the brochure.

JTR Guided wave radar level transmitter

OPERATING PRINCIPLE

Guided wave radar level transmitter outputs electromagnetic pulse along with the cable or rod to propagate with the speed of light, when detected the surface of medium to be measured, the pulse will be partly reflected to form an echo wave and returned to the pulse transmission device through the same path, and the height of liquid level can be calculated. Guided wave radar level transmitter uses advanced echo wave processing technology with a wide range of product applications that is capable of measuring the solid of low dielectric constant; and capable of measuring the solid level, liquid level and medium surface. The product models include coaxial, rod, cable type for the customer's choice, suitable for use in the high temperature and high pressure medium liquid level measurement.

FEATURES

- Meet the various measurement requirements of different temperature, pressure and medium.
- Contact measuring, capable of overcoming the steam, foam and stirring effects.
- 4~20 mA / 2-wire, simple wiring, low power consumption (2.4W max.).
- 128*64 LCM Display, easy on-site adjustment.
- Display distance, level, percentage, current 4~20 mA.
- Unique algorithms and echo wave processing technology can be used various types of complicated applications.
- Echo wave graphics display function, to display the signal waveform inside the tank, can be used for background noise processing.
- Capable of simulating output current signal of 4mA, 20mA.

SPECIFICATIONS

Power supply	16~36Vdc 2-Wire Loop Power, 16~36Vdc 4-Wire
Analog output	4~20mA
Measuring range	6m(Rod Type)、30m(Cable Type)
Digital communication	HART 7.0 for 2-Wire, Modbus for 4-Wire
Enclosure	IP67
Explosion protection	Aluminum Alloy Material
Ambient temperature	-40~80°C
Operating temperature	-40~150°C
Accuracy	±5mm
Repeatability	±3mm
Operating pressure	0~60bar(25°C)

※The specification is subject to the brochure.

TR Economical type temperature transmitter

OPERATING PRINCIPLE

Temperature Transmitter is using the electrical bridge to accurately detect the input signal, and then use the amplifier and the impedance converter to obtain a stable input signal.

After using high-speed low-power microprocessors to perform linear curve conversion, through the isolated D/A converter to provide high-precision analog output signal.

FEATURES

- Power Supply 24Vdc，2-wire 4~20mA Output
- Input Signal Type: mV，V，mA, Thermocouples, RTD or Ohm.
- Disconnect and excess measuring range alarm current output.

SPECIFICATIONS

Loop power	10~36 Vdc(Loop Power)
Input DC voltage	0~500mV, 0~1V, 0~5V, 0~10V, 0~20V
Input DC current	4~20 mA
Input thermocouples	K/ J/ T/ E/ R/ S/ B/ N
Input resistance / Thermocouples	PT100, 0~400Ω
Analog output	4~20 mA /20~4mA
Operating temperature	-40~85°C

※The specification is subject to the brochure.

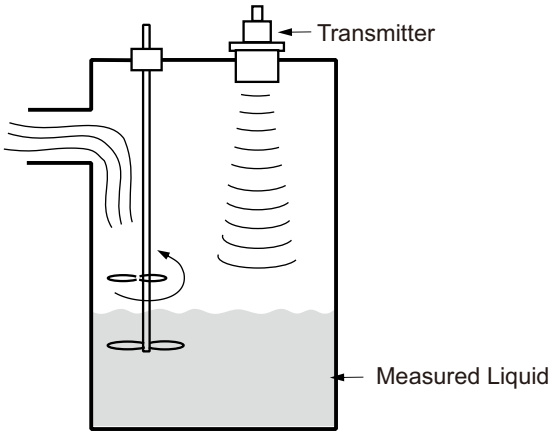
Input Type	Measuring Range	Accuracy*
Voltage	-10~100mV	£±0.1mV
B	250~1820°C	£±4°C
E	-200~1000°C	£±3°C
J	-210~1200°C	£±3°C
K	-200~1370°C	£±3°C
N	-200~1300°C	£±3°C
R	-50~1760°C	£±3°C
S	-50~1760°C	£±3°C
T	-200~400°C	£±2°C
Resistor	0~400Ω	£±0.4Ω
PT100	-200~850°C	£±0.5°C

EAX Ultrasonic level transmitter

OPERATING PRINCIPLE

The Ultrasonic Level Transmitter emits a strong sonic wave pulse to the measured to be measured. When the wave reflects off the material surface and back to the sensing probe, the reflected wave will be converted into electrical signal through the sensing probe and sent to the ultrasonic controller. The controller calculates the transmission time of sonic wave reflection and converts to level or distance.

Liquid level measurement of the tank with agitator



FEATURES

- Non-contact measurement, not affected by the pressure, viscosity and specific gravity of the material.
- Easy installation, cost saving and no need regular under normal condition
- Equipped with internal temperature compensation to enhance the product accuracy and long term stability.
- All isolated analog output.

SPECIFICATIONS

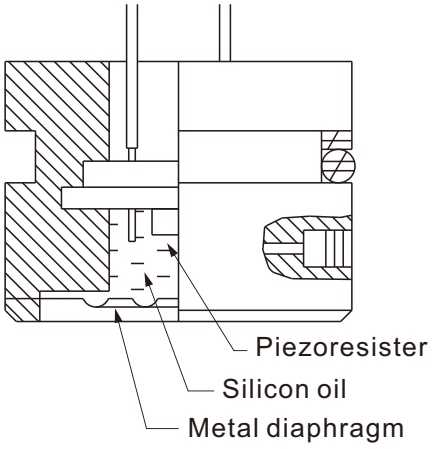
Power supply	7~28Vdc
Measuring range	0~12m
Output	4~20mA loop power
Resolution	1mm
Accuracy	±0.25%F.S
Blind distance	250mm
Operating temp.	-40~60°C
Communi-cation	HART
Display	4-bit LCD display
Process connection	2” NPT / 2” BSPT
Weight	1kg

※The specification is subject to the brochure.

EC Pressure level transmitter

OPERATING PRINCIPLE

The Ultrasonic Level Transmitter emits a strong sonic wave pulse to the medium to be measured. When the wave reflects off the material surface and back to the sensing probe, the reflected wave will be converted into electrical signal through the sensing probe and sent to the ultrasonic controller. The controller calculates the transmission time of sonic wave reflection and converts to level or distance.



FEATURES

- Can be used in the liquid and gas tank with viscous, weak acid and alkaline liquids, sewage water filth and impurities.
- Adopt stainless steel diaphragm, can be used for weak acid and alkaline liquids.
- The maximum operating temperature is up to 150 ˚C.
- No measurement blind distance.
- Small linear error (± 0.25% FS).
- Loop power, easy for wiring.
- Build-in temperature compensation, providing long-term signal stability.

SPECIFICATIONS

Wetted material	Sensor: SUS304 / SUS316 Cable: PVC / FEP
Wetted temp. resistance	-10˚C ~ 80˚C / High temp. model 150˚C
Power supply	Loop Power 13~36 Vdc
Linearity	±0.25% of F.S.
Pressure resistance	0.1 ~ 10 Bar
IP rating	IP65

※The specification is subject to the brochure.

SIS Food Grade Sanitary Intelligent Level Switch

OPERATING PRINCIPLE

Working principle of this sensor is based on the frequency sweep technology.

The sensor tip will send out electric field signal, and different resonance frequency is created according to different medium.

Thus a switching signal will be triggered if the sensor is covered with material.

SPECIFICATIONS

Ambient temp.	-40~85°C(-40~185°F)
Operating temp.	Max，100°C(Continuous) Ambient temp. -40~85°C(-40~185°F) Max，150°C(Short Time 1h) Ambient temp. -40~60°C(-40~140°F)
Rated voltage	18VDC~30VDC
Overvoltage protection	Class 2 Over Voltage Protection
Output mode	(DC)PNP/NPN(Optional)
Delay time function (Optional)	<1 Second (Maximum 60 Seconds)
Output load current	Max，100 mA
Electrical connections	M12 4PIN Connector
Casing material (Optional)	SUS304、SUS316、SUS316L
Operating pressure	-1~40 bar
Process connection (Optional)	G1/2、G3/4、G1
Probe material /Surface roughness (Optional)	PEEK/Ra<0.8 PEEK/Ra<0.6 PEEK/Ra<0.3
Casing protection rating	IP67/IP68/IP69K (IP68 Up to 1 Meter underwater, 30 days)
Standard compliance	IEC61000-4-2 IEC61000-4-4 IEC61000-4-11

※The specification is subject to the brochure.

FEATURES

- Use standard connector for easy installation and protection rating of IP67/IP68/IP69K.
- The compact miniaturized design to facilitate carrying and transporting, and can be quickly installed even in the narrow space or difficult operation.
- The surface roughness (Ra) level can be adjusted according to customer's needs, suitable for pharmaceutical and food processing industry applications.
- Equipped with magnetic test operation function, capable of confirming the installation of wiring and equipment normal operation immediately.
- Strong and sturdy stainless steel housing.
- Equipped with LED indicator to facilitate the control of field equipment status.
- Equipped with over-current protection, turn off the output immediately when the output circuit over-current is detected automatically.
- Can be applied in CIP and SIP cleaning environments.
- Not affected by the foam and viscous medium. Suitable for liquids and viscous medium, powder medium in containers and pipelines, used in single point liquid level inspection measurement and pump protection.
- Provides two sets of individually set up sensitivity outputs to facilitate inspection measurement of two different mediums (for example, media divided with separate layers).
- This product is certified by U.S. Food and drug administration (FDA)
- Also available with NEPSI explosion-proof certification, Ex tD A20 IP67 T85°C T_{200} 100°C
- Standard type: applicable for general materials. Extended type: suitable for materials which are with high viscosity and getting bridging easily. Compact type: designed for general materials and easy installation in narrow space.

APPLICABLE PROCESSES

Incoming raw materials warehouse, pre-mixed storage warehouse, finished product storage warehouse

FDA

SA Capacitance level switch

OPERATING PRINCIPLE

Use the sensing probe to detect the capacitance between the sensing probe and the tank wall (electrode to ground) with the material to be tested as medium, when the sensing probe is covered by the material, the capacitance is increased to reach the capacitance matching value set by the switch internal circuit, the circuit generates high-frequency resonance, detects the resonance signals, and convert to switch operation for the user operation.

APPLICABLE PROCESSES

Incoming raw materials warehouse, pre-mixed storage warehouse, finished product storage warehouse

FEATURES AND applicable environment

Since the Capacitance Level Switch has simple structure without moving mechanical driving structure inside the switch, so it will not have mechanical wear and tear due to friction. Suitable for use in solid, powder or liquid materials. The connection uses screw thread for easy installation in all types of places. This series of products can be divided into following types according to the requirements of its structure and the places of use:

- Standard Type (SA110 & SA111 A/B/C)
  Suitable for general use.
- Hi-Temp Type (SA120 & SA128 A/B/C)
  Suitable for use in high temperature environment.
- Remote Probe Type (SA140 A/B/C)
  Suitable for use in vibrating place.
- Steel Wire Cable Probe Type (SA150 A/B/C)
  Suitable for use in large-size tank.
- Plate-Probe Type (SA160 A/B/C)
  Suitable for use with bulk material or at the lower position of large-size tank.
- Explosion Protection Type (SA270 ~ SA279)
  Passed flameproof and dust explosion protection accreditation, (Ex dia II C T4~T6, DIP A21 TA, T3~T6), suitable for use in the hazardous area of dust explosion.

SPECIFICATIONS

Power supply	110/220Vac ±10% or 19~24Vdc
Contact rating	SPDT 5A/250Vac/30Vdc, NPN crystal output
Probe material	SUS304/316, PP, PVDF coating
Connection	1”PT JIS 1-1/2”x5 Kg/cm^2 (other specification can be customized)
Operating temperature	-20~80˚C(Max. 800˚C)
Insulating material	UPE, PEEK, ceramic
Housing	IP65 aluminum alloy baking varnish
Sensitivity	10pF (Std)
Delay time setting	0~6 sec
Certificatel-ntrinsically	Safe Explosion Proof (optional)

※The specification is subject to the brochure.

SB RF-Capacitance / Dmittance Level Switch

OPERATING PRINCIPLE

When the material touches the probe, the admittance between the probe and GND will increase, so that the variation of admittance can be used to determine the level of material. The guard section is placed between the probe and GND, its signal waveform is identical to the waveform of the probe, but these two are completely isolated, independent, so when it can inhibit the probe rod itself from the material attachment, since the admittance change of the probe and GND caused by the material attachment, the Level Switch only measures the admittance change between the probe and the tank wall, therefore, the false alarm from the material attachment can be eliminated.

FEATURES

- Not affected by the material attachment
- Easy Installation and adjustment
- Excellent stability; Not affected by temperature
- Adjustable delay output 0~30 Seconds
- Casing Protection Rating of IP65
- DPDT, 5 A/250Vac contact output
- Max operating temperature is up to 550°C (Explosion Protection Type 450°C)
- Switchable High / Low failsafe alarm function
- Suitable for use in liquid, syrup, solid, granule, and surface level detection
- Alarm testing simulation
- Explosion protection type Ex d IIB T1~T6 (SB17 Series)

APPLICABLE PROCESSES

Temporary storage tank and finished product tank of the sticky materials

SPECIFICATIONS

Housing	Aluminum alloy baking varnish (IP5)
Probe material	SUS304 or 316
Insulation material	PTFE or ceramic
Connection	3/4"/ 1"PT (other specification can be customized)
Sensitivity	0.3PF
Power supply	24Vdc±20% or 115/230Vac±10%, 50/60Hz
Power consumption	Max. 2 W
Output contact	5A/250Vac，DPDT
Operating temperature	-40~150℃/550℃
Delay Time Setting	0-30s
Fail Safe Alarm	Low or high (switchable)
Cable gland	1/2"NPTx2
Operating pressure	ATM~ 20kg/cm²

※The specification is subject to the brochure.

SPS Sanitary thermal dispersion flow Switch

OPERATING PRINCIPLE

Thermal Dispersion Flow Switch is an accurate and reliable flow sensing device designed using Heat Transfer Theory. The probe contains two temperature sensors, one needs to be heated so that there is temperature difference between two sensors, and this temperature difference has an inverse relationship with the flow velocity. The flow probe and its casing are made of stainless steel without any moving parts; therefore, there is no any mechanical wear and tear problem. Two precision adjustable resistors are used to set up the flow velocity alarm and sensitivity.

FEATURES

- The Thermal Dispersion Flow Switch has a higher sensitivity than the conventional blade flow switch and piston flow switch.
- Installation position is not limited, no moving mechanical structure wear and tear, so it is capable of measuring the liquid with impurities; can select different materials to be suitable for measuring in different food and food additives applications.
- The length of flow probe can be customized and manufactured based on the size of the piping diameter of the site, hence, the probe is suitable regardless the size of the piping either large or small.
- There are three different signal output, the user can select the most suitable way as required.

APPLICABLE PROCESSES

Food, pharmaceutical, high temperature sterilization, beverages, drinking water, cooking oil, food filling, and other industries. Flow detection and control for various delivery or cooling pipelines.

SPECIFICATIONS

Flow rate range	Water: 1~150 cm/s Oil: 3~300 cm/s
Ambient temp.	-20°C~80°C
Fluid temp.	-40°C~80°C
Output signal	NPN/PNP，400mA max (with current limiting circuit) Relay: 1A/30Vdc, 0.3A/125Vac (NO or NC)
Operation pressure	100bar max.
Casing material	SUS316L
Wetted material	SUS316L
IP rating	IP67
Warm up time	15 sec.
Operation voltage	19~30Vdc
Power consumption	50mA(max.)

※The specification is subject to the brochure.

EPR Paddlewheel flow meter

OPERATING PRINCIPLE

The working principle of the Paddle Wheel Flow Meter is to measure the flow velocity by using the fluidic to drive the blade rotation, and calculates the flow based on the flow velocity. ERP1 series flow meter consists of flow transmitter and pipes. The light and compact design allows the user to carry, install and operate it conveniently. The sensor is calibrated by the FineTek's professional flow test laboratory to calculate the K value with accuracy reaching ±3% and excellent linearity can be obtained at the blade flow rate of 0.3 ~10m/s. Display and non-display types are both available for the sensor digital panel meters. The display type has the design of built-in accumulated flow storage to facilitate the user accessing the data.

FEATURES

- LCM Graphic Display with 128x64 pixels, to facilitate the operation and understanding of the control status with NPN and PNP transistor output.
- Analog output: 4-20mA
- Wide output voltage range
- Built-in FRAM (Ferroelectric Random Access
- Memory) for Accumulated Flow Storage
- Communication Interface RS485 Modbus
- Remote type

SPECIFICATIONS

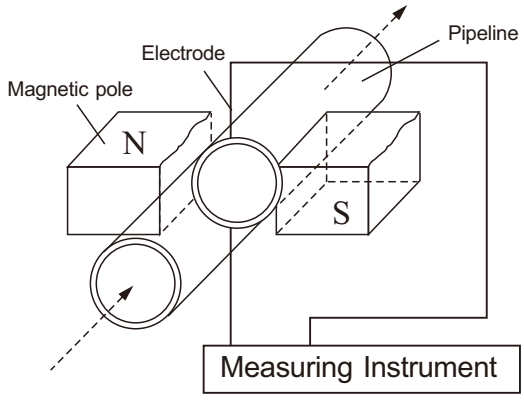
Type	Intelligent All-in-One Model / Non-Display Model / Pulse Output Model
Applicable pipe diameter	DN20、DN25、DN40、DN50
Flow rate range	0.3~10m/s
Accuracy	±3% under standard K value
Measuring principle	Magnetic induction
Operating temp.	Engineering plastics: -15°C~60°C(5°F~140°F) Stainless steel: -15°C~100°C(5°F~212°F)
Protection rating	IP66, the connector shall be connected and securely fastened
Analog output	4~20mA
Power supply voltage	12~36Vdc ±10%
Commun-ication Interface	RS485 Modbus

※The specification is subject to the brochure.

EPD Electromagnetic flow meter

OPERATING PRINCIPLE

The measuring principle of the Electromagnetic Flow Meter is based on the Faraday's law of electromagnetic induction, when the conductive liquid in the magnetic field flows perpendicular to the direction of the magnetic field, it will cut the magnetic field lines and produce induced voltage, this induced voltage and flow rate are in linear relationship, so that the fluid volume flow can be calculated.



FEATURES

- Not affected by the density, viscosity, pressure, conductivity and other variations when measuring the liquid.
- Capable of measuring the liquid with granules and can be measured with particles and suspended solid.
- Enclosure protection rating is up to IP67 NEMA 4X.
- There are a variety of options for the lining materials, suitable for all types of acid and alkaline environment.

All-in-One Model

SPECIFICATIONS

Accuracy	±0.5% 、±0.3% 、±0.2%
Medium temp.	20°C~120°C(PTFE Lining)
Ambient temp.	-40°C~70°C
IP rating	IP67/NEMA4X
Electrode material	Stainless steel, Hastelloy, titanium, tantalum
Lining material	PTFE, Synthetic rubber, neoprene
Flange material	Carbon steel
Analog output	4~20mA
Communication interface	RS485
Supply voltage	AC100~240Vac

※The specification is subject to the brochure.

Stand Alone Model

GPX/GKX Thermocouple

THERMOCOUPLE

Connects two metal conductors of different materials electrically to produce a closed circuit, heats the welding end to product temperature difference, there will be current flow in the loop reaction, this phenomenon is called "Seebeck-effect".

RESISTANCE TEMPERATURE DETECTORS

The resistance of general metal conductor changes with the temperature variation, use the property of this temperature coefficient can obtain the temperature through the change of resistance.

FEATURES

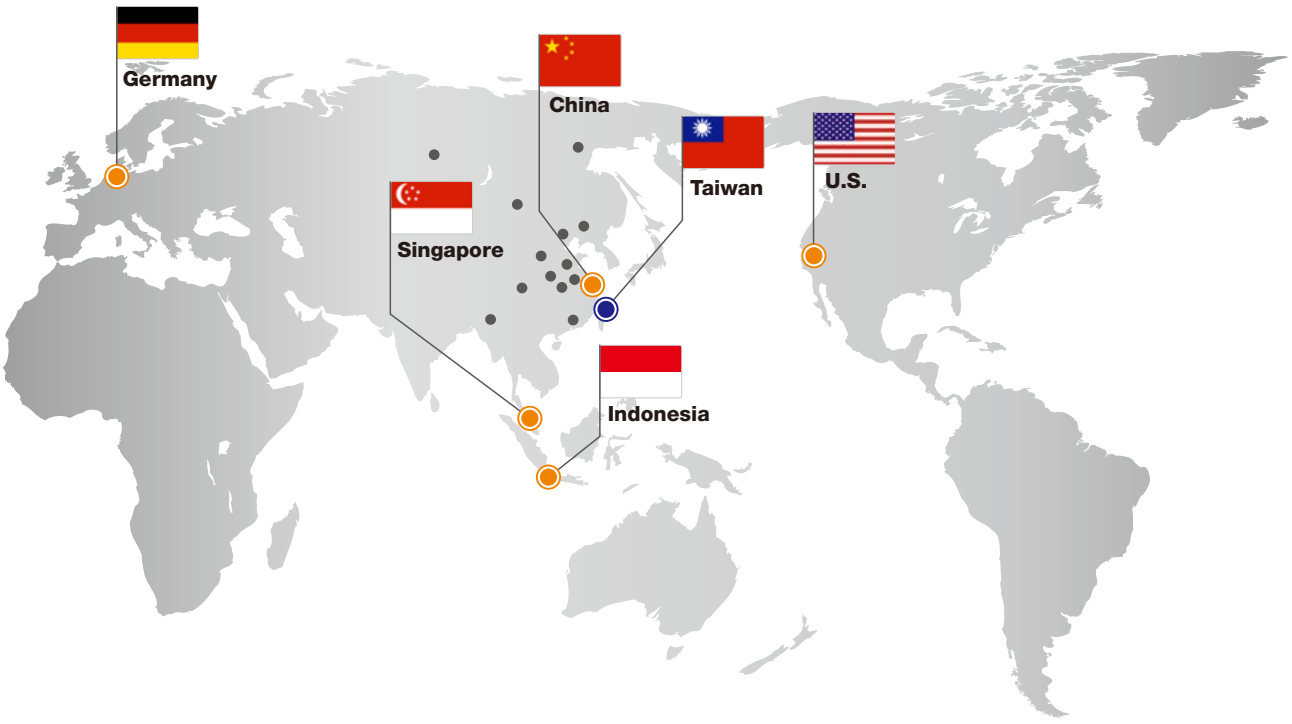
- Wide temperature measurement range up to 1200℃.
- Quick response, minimum by the time difference.
- Temperature is detected by thermo-electromotive force; temperature measurement, adjustment, conversion and other signal processing are easier.
- The price of thermocouple is favourabler than other temperature components.
- Reproducibility of platinum resistance thermometer (PT) is high.

SPECIFICATIONS

Measuring range	0-1200°C
Accuracy	0.3%(PT), 0.75%
IP rating	IP65
Isolation resistance	>1000 MΩ
Wetted material	SUS304,SUS316,Ti,PTFE

※The specification is subject to the brochure.

Global Network



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