



Creating a Better Future, FineTek Sensing the World

Food Beverage, Daily and Pharmaceutical





FineTek has accumulated 30 years of technology and has always focused on the field of industrial sensing measurement and research and development. Specialized R&D capabilities and stringent process management have resulted in us not only obtaining ISO9001 certification but also meeting a variety of the industry certification.

FineTek is committed to the development of the flow meter, and research. Approved by the National Industrial Technology Research Institute (ITRI) who provides annual checks. The products are widely applied to all kinds of fluids and liquid applications.

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

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

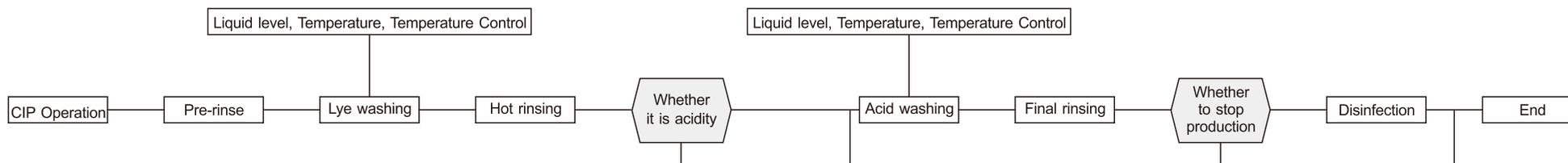
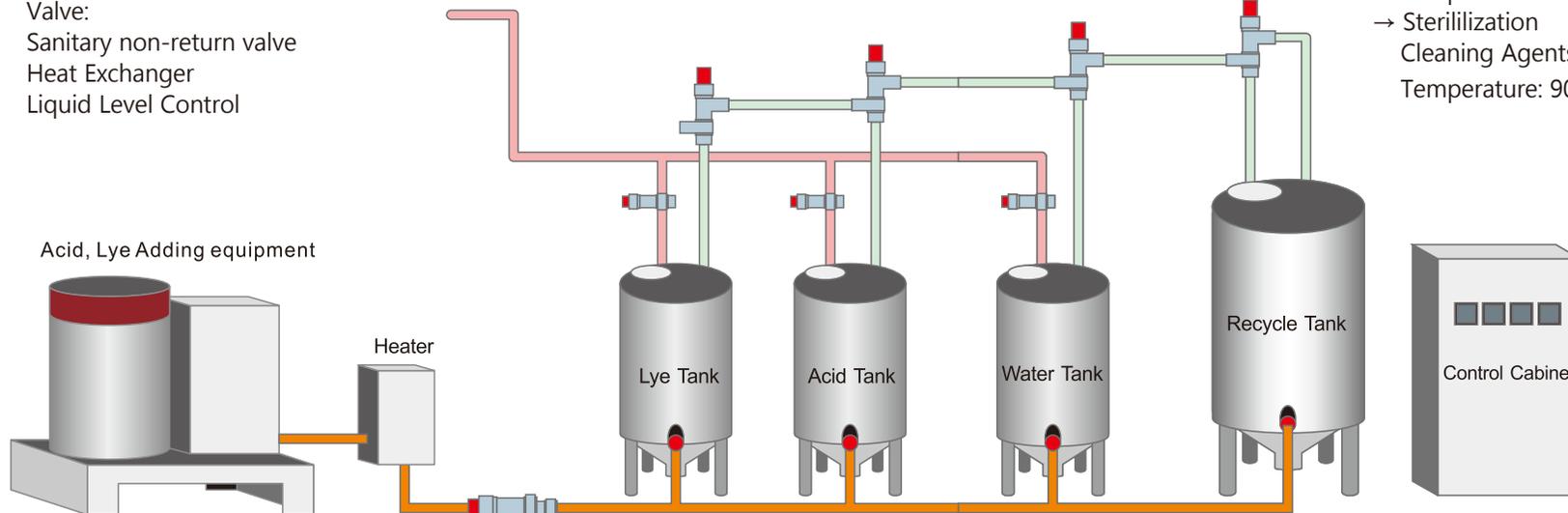
Heat Exchanger

Liquid Level Control

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

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





Used in containers, impurities liquid tank, for both clean and impure liquids. Visible level indication. Safer than glass type level gauges. Magnetic switches can be installed and adjusted to control low and high level alarms. With level transducer can convert the output into analog signal.

EFX By-pass level transmitter

OPERATING PRINCIPLE

Fine-Tek's By-pass indicator utilizes hydrostatic principle to show the liquid level in the tank. A float with a magnet inside rises and drops according to the liquid level change. Magnetic flags will flip as float passes through to indicate liquid level based on magnetic attraction method.

FEATURES

- Applicable in environment with high temp, high pressure, strong acid, strong alkaline and hazardous locations. The structure is simple but durable and reliable. It is also available with various options for upgrade.
- A level transducer or magnetic switch can be installed and adjusted during operation. It is not operated by electricity thus it will not be affected by power failure.
- Add different color of tag per 10cm that can be recognized easily.
- Multiple applications for textile dyeing, sewage water processing, power generating, boiler and petrochemical industries.

SPECIFICATIONS

- Wetted material: PVDF / PP / SUS304 / SUS316
- Resolution: 10mm
- Operation temp.: <350°C depend on wetted material
- Supply voltage: None
- Float S.G.: >0.55 of water
- Pressure: 110 kg/cm²(max.)
- Switch:
 - Contact form: SPST, SPDT
 - Contact capacity: 1A/30W /200VDC/240VAC
- Transmitter:
 - Resolution: 6.35mm /0.1mm
 - Output: 4-20mA / 3-wire resistance output





Usually used for small-and medium-sized manufacturing process tanks and in continuous level monitoring with a variety of wetted material. Product Resolution: 6.35mm, with low power consumption. Source signal technology. Length completely customizable for a maximum Up to 6 meters. Output available with loop power and 3 wire resistance.

FGX Magnetic float level transmitter



OPERATING PRINCIPLE

Float continuous level transmitter use float within the magnet with the level change to change the resistance within the rod with the magnetic reed switch, consisting of voltage dividing circuit, the gap of the magnetic reed switch is smaller, accuracy becomes higher. Pressure signal may pass through the converter into a 4-20mA or other with standard signal. The indicator can be used with other tables head for long-distance Indicates, is a simple principle, the level indicating excellent reliability devices.

FEATURES

- Variety of wetted materials can be selected.
- Variety float specifications, can also be applied to a variety of different specific gravity of the liquid. A special reed packaging process, has a better environmental tolerance. Applied to the ultra-small density level.
- Applicable to the environment of the tank, having a pressure. Can be used in high-temperature liquid.
- Accuracy independent of 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
- Float S.G.: >0.45 of water
- Pressure: 30bar (max.)
- Degree of protection: IP65
- Explosion-proof: ATEX 2G Ex d IIB T6~T3 Gb (Optional)



EGX Magnetostrictive level transmitter



OPERATING PRINCIPLE

Magnetostrictive level transmitter is the product based on magnetostrictive principle. Its output signal is an absolute position, so don't need to zero position if power shut down. Magnetostrictive level gauge provides output directly, without installing any output interface, which reduces the cost of the whole circuit. Accurate and reliable output can reduce the downtime maintenance. Long life don't need regular maintenance and calibration, saving lots of cost. And even available connecting to one or more sensors (by RS485) by PC for remote monitoring.

FEATURES

- High resolution and high accuracy.
- Easy installation with no need for periodic calibration or maintenance.
- Highly stable and reliable.
- Resistant to contamination and dust, and withstands high pressure.
- Seamless housing made of corrosion-resistant stainless steel.
- Can be connected to a PC for remote monitoring.
- Operating temperature: -40~195°C
- Capable of oil/water interface and dual-liquid-level detection output.

SPECIFICATIONS

- Wetted material: SUS316 / SUS316L
- Measuring range: 50~2500 mm
- Temperature sensor: PT100
- Operating voltage: 18~30 VDC
- Output signal: 4~20 mA, 20~4 mA, 0~5 V, 0~10 V
- Operating pressure: 30 bar (Max.)
- Non-linearity: 50~2000 mm: 1 mm;
500~2500 mm: 0.1% F.S.
- Repeatability: $\pm 0.002\%$ F.S.
- Ambient temp.: -40~85°C
- Operating temp.: -40~195°C
- Communication output: RS485
- Surface finish (roughness):
Ra < 0.3 μm / Ra < 0.5 μm / Ra < 0.8 μm
- Protection rating: IP67 (housing) / IP69K (probe rod)
- Connection specification: Food-grade connection 1-1/2"~2"



Usually applied to the dosing process of pharmaceuticals, tanks and almost any other liquid applications. Product material: (PVC, PP, PVDF, NBR, SUS304/316). Float lightest adaptive specific gravity: 0.45 .Length Fully customized according to customer needs (up to 6M). Custom-made multi-point control, housing available in anti-corrosive Max.

FDX Magnetic float level switch

OPERATING PRINCIPLE

In a sealed metal or plastic tube, set point or points, Magnetic reed switch, and then the tube through one or more of the hollow equipped with a ring magnet inside the float, and the use of a fixed ring control the float and the reed switch in the relevant position, so that the float in the fluctuate within a certain range.

FEATURES

- The position of the control switch is customized by the user. Contact life of up to one million times.
- Protection class IP65 junction box above.
- The wetted materials are PVDF, PP, SUS304 and SUS316, suitable for all kinds of liquid.
- The maximum operating temperature of 200°C
Maximum operating pressure of 50 Bar.

SPECIFICATIONS

- Wetted material: PVDF / PP / SUS304 / SUS316
- Installation connect: 1"~6" thread or flang
- Ambient temp.: -20~85°C
- Operation temp.: -20~200°C
- Wetted temp: <200°C
- Contact form: SPST-NO / SPST-NC / SPDT
- Contact capacity: 10W / 20W / 50W / 60W
- Float S.G.: >0.5 of water
- Operating pressure: 50bar (max.)
- Degree of protection: IP65
- Explosion proof:
ATEX 2G Ex d IIB T6~T3 Gb (Optional)





Used in level monitoring for various storage tanks, the guided wave radar level transmitter belongs to contacting measurement. It can overcome the effects from steam, foam and stirring. The unique algorithm and echo processing technology can be applied in many complicated scenarios.

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 Loop Power
16~36VDC 4-Wire
- Analog output: 4~20mA
- Measuring range: 6m(Rod Type) ·
30m(Cable Type)
- Digitalcommunication: HART 7.0 for 2-Wire
Modbus for 4-Wire
- Explosion protection: Aluminum Alloy Material
- Enclosure: IP68
- Ambient temp.: -40~80°C
- Operating temp.: -40~150°C
- Accuracy: ±5mm
- Repeatability: ±3mm
- Operating pressure: 0~60bar(25°C)



Temperature transmitter series use a bridge, accurately detect the input signals, and then use the output of the amplifier and impedance converter to obtain a stable input signal.

TRX 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, 0~400W
- Analog output: 4~20 mA /20~4mA
- Operating temp.: -40~85°C

Input Type	Measuring Range	Accuracy
Voltage	-10~100mV	$\leq \pm 0.1\text{mV}$
B	250~1820°C	$\leq \pm 4^\circ\text{C}$
E	-200~1000°C	$\leq \pm 3^\circ\text{C}$
J	-210~1200°C	$\leq \pm 3^\circ\text{C}$
K	-200~1370°C	$\leq \pm 3^\circ\text{C}$
N	-200~1300°C	$\leq \pm 3^\circ\text{C}$
R	-50~1760°C	$\leq \pm 3^\circ\text{C}$
S	-50~1760°C	$\leq \pm 3^\circ\text{C}$
T	-200~400°C	$\leq \pm 2^\circ\text{C}$
Resistor	0~400Ω	$\leq \pm 0.4\Omega$
PT100	-200~850°C	$\leq \pm 0.5^\circ\text{C}$



Used in the level monitoring of the tank, it belongs to non-contacting measurement, with long service life. The 2-wire output of the product is convenient to install, which can measure the level 18m away at maximum. The protection grade is IP67.

EAX4 Ultrasonic level transmitter



OPERATING PRINCIPLE

The ultrasonic level transmitter is a non-contact, low-cost and easy-to-install measuring device. It can be applied to most industrial applications for liquids. Most important aspect of it is that it is easy-to-install and low maintenance due to no moving parts.

FEATURES

- 4~20mA two-wire output.
- 24Vdc power supply.
- Casing protection IP67.
- With integrated structure.
- Probe material PVDF.
- False echo detection.
- 2" connection.
- Non-contact measurement. Easy installation.
- Fully isolated analog output.
- With temperature compensation feature, which can improve measurement accuracy.
- Beam angle: 5°
- Not affected by liquid temperature, S.G, viscosity
- Maximum measurement range 8m (26 ft).

SPECIFICATIONS

- Frequency: 50KHz
- Power consumption: 500mW @ 24VDC
- Communications: 4~20mA
- Blanking distance: 300mm
- Maxi. range: 8m
- Resolution: 1mm
- Accuracy: $\pm 0.25\%$ (full scale)
- Operating Temp.: -40~80°C
- Beam angle: 5°
- Max. Operating pressure: <0.1MPa
- Weight: 1.4kg



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.

ECX Pressure level transmitter

OPERATING PRINCIPLE

The pressure transmitter is constituted by a piezoelectric semiconductor wafer bridge. Diaphragm type pressure exerted on the diaphragm by the silicone oil and then spread to the semiconductor electric bridge (below) voltage is generated at both ends so that the bridge unbalance, this does not the equilibrium potential signal via the amplifier and then transferred into 4-20mA current signal, this signal 4-20mA indicator series to show the actual level.

FEATURES

- Can be used sticky weak acid, scale-containing impurities in liquid, and gas tongcao within.
- Stainless steel diaphragm, a weak acid can be used in liquid) Maximum use temperatures up to 150°C
- Blind from the sensorless.
- Linearity error ($\pm 0.3\%$ FS)
- The loop power signal circuits, wiring convenience Built-in temperature compensation, long signal stability.

SPECIFICATIONS

- Wetted material :
Probe SUS304 / SUS316
Wire PVC / FEP
- Operating temp : -10~80°C/ High temp. 150°C
- Supply voltage : Loop Power 13~36 VDC
- Linearity : $\pm 0.3\%$ of F.S.
- Pressure : 0.1 ~ 10 bar
- Degree of protection : IP65





SAX Capacitance level switch



OPERATING PRINCIPLE

Capacitance switch relay on electrical capacitance theory (the ability of a medium to store electrical energy). When an electrical has two separated conductive plates, the space between the plates acts as a capacitor and stores the electrical energy.

FEATURES

- As Capacitance Level Switch has no moving parts inside the device, it will not be affected by friction. It is suitable for powder or liquid application easy to install. The customer can choose the types for his requirements.
 - Standard Type (SA110 & SA111 A/B/C)
 - High-Temperature Type (SA120 & SA128 A/B/C)
 - Corrosion proof Type (SA130 & SA132 A/B/C)
 - Remote probe Type (SA140 A/B/C)
 - Cable Type (SA150 A/B/C)
 - Flat Plate Type (SA160 A/B/C)
 - Explosion-Proof Type (SA270 ~ SA279)
 - Intrinsically Safe Explosion-Proof Type (SA370 ~ SA378)
 - Anti-Static Type (SA180 & SA181 A/B/C)

SPECIFICATIONS

- Power: 110/220VAC $\pm 10\%$ or 19~24VDC
- Output rating: SPDT 5A/250VAC/30VDC, NPN transistor output
- Sensing probe material: SUS304/316, PP, PVDF coating
- Connection: 1"PT JIS 1-1/2" x5 kg/cm² (other types are optional)
- Operating temp.: -20~80°C (Max. 800°C)
- Insulated material: UPE, PEEK, Ceramic,
- Housing: IP65 aluminum
- Sensitivity range: 10pF (Std)
- Delay time setting: 0~6 sec
- Ex-proof cert.: Ex dia IIC (optional)



SBX RF-Capacitance / Admittance level switch



OPERATING PRINCIPLE

When medium contacts with measuring electrode, the admittance between measuring electrode and ground electrode will be increased, by the variation of admittance, medium level can be determined. Between the measuring and ground electrodes, the signal wave of shielding electrode is exactly the same with the wave of measuring electrode, but both signal waves are completely isolated. Thus, it can prevent the variation of admittance of probe and GND which was caused when medium attaches to the electrode. This can ensure the level switch only sense the admittance between measuring electrode and tank wall which can eliminate the false alarm caused by medium attached to the probe.

FEATURES

- It is not affected by material adhesion.
- It is easy to install and adjust.
- It has good stability and not affected by temperature.
- It is with delay time function, 0~30s.
- IP65 protection.
- DPDT, 5A/250Vac contact output.
- Maximum operating temperature of 550°C (450°C for explosion proof type)
- Switchable high/low level fail safe protection alarm function.
- Suitable for measuring liquid, viscous liquid, solid, granules and etc.
- Simulation alarm test function.
- Explosion Proof Ex d IIB T1~T6 (SB17 series)

SPECIFICATIONS

- Power supply: 24VDC±20%
115/230VAC±10%, 50/60Hz
- Operating temp.: -40~150°C/550°C
- Output contact: 5A/250VAC, DPDT
- Operating pressure: ATM~ 20kg/cm²
- Sensitivity: 0.3PF
- Power consumption: Max. 2W
- Delay time setting: 0-30s
- Fail safe alarm: Low or high (switchable)
- Cable gland: 1/2"NPTx2
- Connection: 3/4" / 1"PT
(other specification can be customized)
- Housing: Aluminum alloy baking varnish (IP65)
- Probe material: SUS304 or 316
- Insulation material: PTFE or ceramic



SCX Tuning fork level switch



OPERATING PRINCIPLE

The working principle is based on the changes of vibration frequency of the tuning fork when it comes into contact with a liquid or solid material.

When the fork comes in contact with material the vibration is dampened and results in frequency change which triggers the switch. It's ideal for applications where: the dielectric constant is low; when material moisture content changes easily; low viscosity liquids; there is a combination of differing materials in the container/tank.

FEATURES

- Strong vibration force, suitable for powder- and granular-type materials.
- Adjustable to accommodate materials with different densities.
- Provides DPDT relay / PNP & NPN outputs.
- High- and low-level power cut-off protection for enhanced safety and reliability.
- Maximum operating temperature up to 280°C.
- Advanced protection mechanism allowing the second output signal to be switched to an alarm signal.
- Self-diagnostic function capable of detecting tuning fork wear or material buildup.
- Equipped with switch delay function.
- Capable of detecting materials below the water surface.

SPECIFICATIONS

- Power Supply: 19–253 VAC/VDC, 50/60 Hz
- Process Connection: 1-1/2" PT (other connections available upon request)
- Power Consumption: Max. 1.5 W
- Dielectric Strength: 3.7 kV
- Ambient Temperature: -40~80°C
- Operating Temperature: -40~280°C
- Material Density: 0.01 g/cm³ or 0.05 g/cm³
- Overvoltage Protection: Overvoltage Category II
- Max. Load Current: (PNP & NPN) Max. 350 mA
- Working Pressure: 25 bar
- Output Signal: DPDT Relay / PNP & NPN
- Enclosure Rating: Aluminum alloy (IP67)
- Measuring Frequency: Approx. 140 Hz
- Explosion-proof Certification: NEPSI, IECEx



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.

EPR Paddle wheel flow meter

OPERATING PRINCIPLE

The Paddle wheel flowmeter measures the flow velocity by using the fluidic to drive the blade rotation, and calculates the flow rate based on the flow velocity. ERP1 series flow meter consists of flow transmitter and pipe fitting. The light and compact design allows the user to carry, install and operate it conveniently. The product is calibrated by professional flow test device, with the accuracy of K value reaching $\pm 3\%$. The measuring range is 0.3 ~ 10m/s, with high linearity. Display and non-display type are both available. The display type is built-in with accumulated flow storage device.



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

SPECIFICATIONS

- Type: Intelligent All-in-One Model / Non-Display Model / Pulse Output Model
- Applicable pipe: DN15, DN20, DN25, DN40, DN50
- Flow rate range: 0.3~10m/s
- Accuracy: $\pm 3\%$ under standard K value
- Measuring principle: Magnetic induction
- Operating temp.:
Engineering plastics -15°C-60°C
Stainless steel -15°C-100°C
- Protection rating: IP66, the connector shall be connected and securely fastened
- Analog output: 4~20mA
- Power supply: 12~36VDC $\pm 10\%$
- Communication Interface: RS485 Modbus



Common to all applications. Liquid, can also be measured if containing particles. A liquid mixture of granules for most temperatures, pressure, density and viscosity does not affect operation. Product accuracy of up to 0.3%, with optional lining material, optional diameter range from DN15~500.

EPD Electromagnetic flowmeter

OPERATING PRINCIPLE

The working principle of the electromagnetic flowmeter is based on the Faraday law of electromagnetic induction. When the conducting liquid flows in the orthogonal direction of the magnetic line direction, it will cut the magnetic lines and generate induced voltage, which shows linear relationship with the flowing speed. Thus, the fluidic volume flow can be calculated.



Standard Type



Remote Type



FEATURES

- The measurement results are not affected by the change in liquid density, viscosity, temperature, pressure and conductivity.
- It can be widely applied in the conducting liquids that may contain fiber, solid granules and suspended matters.
- Enclosure protection rating: IP67/NEMA 4X
- Suitable for all kind of acid/alkaline environment

SPECIFICATIONS

- Power supply: AC100~240VAC/24VDC
- Accuracy: 0.5% · 0.3% · 0.2%
- Medium temp.: 80°C(NBR) · 120°C(PTFE)
- Ambient temp.: -40~70°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, 2~8KHz
- Communication interface: RS485

EPU Clamp-On Ultrasonic Flowmeter



OPERATING PRINCIPLE

EPU Clamp-on ultrasonic flowmeters measure by using ultrasonic pulse waves to pass through the probe and strike the liquid material. While the pulse waves rapidly disperse through the liquid, the liquid flow will cause a small change in the rate at which the pulse waves are spread. This change in time at which the pulse waves are dispersed is proportional to the flow rate of the liquid. Hence, the flow rate of the liquid is derived.

FEATURES

- No intrusion in the pipeline during measurement of flow rate, hence no adverse effects will be caused on the pipeline or process liquid.
- LCM display of instantaneous flow rate and cumulative amount.
- Standard 4-20mA, pulse wave output, RS485 Modbus communication.
- High-quality, durable, and reliable.
- Applicable to all types of liquids that without air, sediment or sludge.
- Able to measure both volume and flow rate of liquid.
- Languages on operation interface: traditional Chinese, simplified Chinese, and English.
- IP67 protection level, with waterproof transducer.

SPECIFICATIONS

- Power Supply: 18~32 VDC / 100~240 VAC
- Measurement Technology: Transit-time measurement method
- Analog Output: 4~20 mA
- Pulse Mode:
NPN transistor output, 32 VDC / 200 mA
- Communication Interface: RS-485 (Modbus)
- Measurement Range:
Flow velocity 0~15 m/s
- Accuracy:
±0.2% F.S. at 0.6~3 m/s
±1% O.R. at 3~15 m/s
- Ambient Temp.: -20~60°C
- Protection Rating: IP67



GPX / GKX Thermocouple



OPERATING PRINCIPLE

Two metal conductors of different materials, generate a closed electrical connection to heat at the weld end to generate the temperature difference, then the current flow in the loop this phenomenon is called "Seebeck-there will be a current flow, effect "

FEATURES

- Measuring a wide temperature range, the maximum available to 1200°C.
- The response is fast, the error generated due to the time difference is very small.
- The temperature detected by thermal electromotive, the temperature measurement, regulating, transform signal processing is relatively easy.
- The thermocouple price is cheap compared to other temperature components.
- Platinum resistor (PT), high reproducibility.

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



Commonly used in liquid and oils. Simple to use, with more higher sensitivity. Easy to install with no moving parts and thus no wear of the mechanical structure. Applicable to acid-base solutions.

SPX Thermal dispersion flow switch



OPERATING PRINCIPLE

Digital Thermal Dispersion Flow Switch detection feature is mainly used where the medium is liquid. Due to different application requirements in the working environment, various models are used, for example, standard type, extended type etc. Two temperature sensing elements are placed in the pipeline.

One is heated and the other is not, resulting in a difference in temperature. When the liquid medium flows past the two elements, heat energy is taken away and the temperature of the heated element will fall. The flow rate of the liquid medium is thus calculated according to the difference in temperature of the two elements.

FEATURES

- Thermal dispersion flow switches have higher sensitivity when compared with traditional mechanical switches.
- Three signal output methods for customers to choose from.
- Unlimited installation locations.
- Will not wear off the structure; liquids containing impurities can still be measured.
- The length of the flow sensor rod can be adjusted according to the environment. The pipe diameter can also be adjusted and used in a wide range of applications.
- Replaced the knob with buttons for easier adjustment.
- Digital interface which can be quickly set by using the buttons.
- Multi-segment display with 10 LEDs to sense the liquid flow rate more accurately.

SPECIFICATIONS

- Flow rate range : water: 1~150cm / s
- Medium temp. : -20~85°C
- Ambient temp. : -20~80°C
- Operating pressure : 100 bar (max.)
- Warm-up time: Approx. 15 sec
- Connection thread : G1/2
- Protection : IP67
- Supply voltage : 19~36VDC
- Alarm output :
 - Open NPN/PNP (250mA)
 - Relay 0.3A@125VAC,
 - 1A@30 VDC (NO or NC)



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.

FEATURES

- This product features a standard connector for easy installation and offers protection ratings of IP67/IP68/IP69K. Its compact, miniaturized design makes it easy to carry and transport, and allows for quick installation even in narrow spaces.
- It is equipped with a magnetic test function to immediately verify proper wiring and equipment operation. An LED indicator enables convenient on-site status monitoring. Built-in overcurrent protection automatically shuts off the output when an overcurrent condition is detected, ensuring operational safety.
- Suitable for CIP and SIP cleaning environments, it is not affected by foam or high-viscosity media. It provides two independently adjustable sensitivity outputs, allowing detection of two different media.
- The product is certified by the U.S. Food and Drug Administration (FDA) and is also available with NEPSI explosion-proof certification (Ex tD A20 IP67 T85°C T200 100°C).

SPECIFICATIONS

- Rated Voltage: 18 VDC~30 VDC
- Ambient Temperature: -40~85°C
- Operating Temperature:
Max. 100°C (continuous) – Ambient temperature -40~85°C
Max. 150°C (short-term, 1 hour) – Ambient temperature -40 ~ 60°C
- Operating Pressure: -1~40 bar
- Overvoltage Protection: Class II overvoltage protection
- Output Mode (DC): PNP / NPN
- Switching Delay Function: < 1 second (adjustable up to max. 60 seconds)
- Output Load Current: Max. 100 mA
- Electrical Connection: M12 4-pin connector
- Housing Material: SUS316, SUS316L
- Process Connection: G1/2
- Probe Material: PEEK
- Probe Surface Roughness: Ra < 0.8
- Protection Rating: IP67, IP68, IP69K (IP68: 1 meter underwater for 30 days)



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FineTek Co., Ltd.

No.16, Tzuchiang St., Tucheng Industrial Park, New Taipei City 236, Taiwan R.O.C.
Tel: (886) 2 2269 6789 Email: info@fine-tek.com

Shanghai 86 21 6490 7260

USA 1 909 598 2488

Singapore 65 64526340

Germany 49 (0)4185 8083 12

Indonesia 62 (021) 2958 1688