Creating a Better Future, FineTek Sensing the World

Water Treatment Control Instrument

FineTek

Innovation · Quality · Sharing

FineTek has accumulated 30 years of technology and has always focused on the field of industrial sensing measurement and research and develop- ment.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.

Introduction water is two-thirds of the area, which covers the surface of the earth and isone of the necessary conditions for survival on Earth. 97% of the presence of water is in the ocean, only the remaining 3% of the freshwater 0.1% of the river and is closely related to human life,Lakes, soil and the atmosphere.

Can be used to purify any water treatment technology areas and water treatment the untim- ate goal is to make the water reach a cartain standard of cleanlinessLevel. Applications are for: Sedimentation, filtration, coagulation, floccul- ation, and corrosion, scale and other water conditioning processes. Social production and life water are closely related and so is water. Processing is involved in the field of a very wide range of applications, and thus constitutive and has become a huge industrial application.

APPLICATION PROCESS

- Water purification - water intake, sub-wells, coagulation tank dosing pool, rapid filter, pumping stations, storage tanks, etc.
- Sewage - desilting basin, aeration tank, mixing pools oxidation ponds, coagulationtank, storage tank

Used in containers,impurities liquid tank, for both clean and impute liquids. Visible level indication. Safer than glass type of level gauges. Smart volume allows easy installation.
Magnetic switches can be instal-led and adjusted to control low level and high level alarms.

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 hag per 10cm that can he 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/cm^2(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

Apply to the natural water, wastewater, unknown liquids and well reservoirs. Contact capacity up to 10A/250Vac. You can also do multi-level control Float material available with plastic and stainless steel Micro switch, Proximity Switch,Reed Switch and Mercury Switch available Simple installation and durable.

FAB Cable float level switch

OPERATING PRINCIPLE

Cable float switch is a simple structure, easy to use, and safety Wholly reliable liquid level detection tool, which uses micro-switches, magnetic reed switch or mercury switch do contact.

To hammer rise and fall with the water level as the center angle changes when the horizontal plane and the rise or hem angle exceeds the angle, steel beads or mercury will move up and down as the angle output ON or OFF contact signal to reach the level detection function.

The float housing demand different plastic and stainless steel for selection, applicable to a variety of high and low temperature wastewater environment.

FEATURES

- Suitable for long-distance, multi-level control, Shen pumps or containing particulate / liquid control of the bulk impurities.
- Has the best environmental tolerance, easy to replace, and cheap.

SPECIFICATIONS

- Wetted material: PVC / PP / SUS304
- Operating temp: 60°C / 70°C/ 125°C
- Contact form: SPST-NO / SPST-NC /SPDT
- Contact rating: 10A/250VAC or 15A/250VAC
- Actuation angle: 28°±2°
- Pressure: 2kg/cm^2
- Wire voltage: 600VAC
- Isolation resistance: >100MΩ

Usually applied to the dosing process of pharmaceuticals, tanks and almost any other liquid applic- ations. 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)

Usually used for small-and medium-sized manufacturing process tanks and in continuous level monitoring with avariety 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)

Applied to the waste water, clean water, high quality liquid and weak acid-base liquids designed for complete submersibility. Unique cable seal system ensures water tight integrity.

ECX Pressure level transmitter

OPERATING PRINCIPLE

The pressure transmitter is constituted by a piezoe- lectric 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 (±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：±0.3% of F.S.
- Pressure：0.1 ~ 10 bar
- Degree of protection：IP65

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 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: ±0.25%(full scale)
- Operating Temp.: -40~80°C
- Beam angle: 5°
- Max. Operating pressure: <0.1MPa
- Weight: 1.4kg

Using FMCW continuous FM wave technology, greatly imp-roving measurement accuracy non contact measurement with LCD display, user frien-dly calibration available for High pressure, high temp.
High viscosity fluid, measuring range 0.5m~35m.

JFR485 FMCW radar wave level gauge

OPERATING PRINCIPLE

The JFR4 radar wave level meter is a smart, non-contact liquid level-measuring instrument that uses 80GHz high-frequency. The antenna is further enhanced for optimal processing. The new, fast microprocessor can perform signal analysis and processing at a faster rate, ideal for liquid storage tanks. The product is dustproof and waterproof, suitable for outdoor or industrial environments, and can be used for industrial measurement of liquid levels in barrels and tanks, and other environmental applications.

FEATURES

- Non-contact measurement, no wear and tear, and no pollution.
- Small antenna size, easy to install.
- The measurement blind spot is small, therefore particularly effective on the measurement of small storage tanks.
- The beam angle is small, the energy is concentrated, and the echo ability is enhanced, making it conducive in avoiding interfering objects.
- Unaffected by corrosion, foam, and viscosity.
- Unaffected by changes in water vapor, temperature and pressure in the atmosphere.
- High signal-to-noise ratio, even in the case of fluctuations.
- The 80GHz frequency is the best choice for measuring low dielectric constant media, and it is suitable for measuring material working conditions with dielectric constant ≥ 1.8 of the medium under test.

SPECIFICATIONS

- Medium: Liquids
- Measurement range: 35m
- Frequency: 80GHz
- Power supply: 24VDC
- Power consumption: Max.0.54W
- Blind distance: 0.05m
- Resolution1.6 uA
- Accuracy: 2mm
- Analog output: 4-20mA
- Beam angle: 6˚
- Operating temp. range: -40~120℃
- Operating pressure: 0~3bar
- Connection: G1-1/2”
- Damping time: 0~100s adjustable
- Cover material: Aluminum /IP67
- Cable inlet: M20*1.5, Blind plug 20*1.5

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

Standard Type

Remote Type

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.

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 outpu：4~20mA, 2~8KHz
- Communication interface: RS485

EPR Paddle wheel flowmeter

OPERATING PRINCIPLE

The Paddle wheel flow meter 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±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: ±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 ±10%
- Communication Interface: RS485 Modbus

EPF Doppler ultrasonic flowmeter

OPERATING PRINCIPLE

The doppler ultrasonic flowmeter adopts contactless measurement. It is simple to install, convenient, and easy to maintain. It is suitable for measuring liquids in pipelines that contain tiny particles, impurities or air bubbles. Precise, stable & reliable, this flow meter is applicable in the sewage and wastewater to detect the flow rate of water in pipelines. The doppler ultrasonic flow meter (EPF) transmits pulse waves to the pipeline through a sensor. The pulse wave signal is reflected after encountering particles in the liquid or air and is then received by the sensor. Based on the changing values of the frequency, the movement speed of the particles can be calculated. The average flow rate is therefore calculated using a set flow field data.

FEATURES

- It’ s available to have a the flow measurement without cutting or disassembling the existing pipes, easy for on-site installation.
- LCM display shows instantaneous and cumulative flow rates.
- 4-20mA output, pulse wave output, RS485 Modbus communication.
- Suitable for various types of wastewater with high bubble content and liquids containing particulate impurities.
- Interface languages: Traditional Chinese, Simplified Chinese, English.

SPECIFICATIONS

- Screen dimensions: LCM 128*64 pixel backlight
- Comm. interface: RS-485(Modbus)
- Analog output：4~20mA
- Pulse width: Automatic (pulse wave width 50%)
- Pulse mode: NPN transistor output 32vdc/200mA
- Pipeline dimensions: DN15 ~ DN500
- Flow range: 0.03~12m/s
- Measurement accuracy: 0.12~1.5m/s, ±0.25% F.S.
  1.5~12m/s, ±2% O.R.
- Power input: 18~32 VDC/ 100~240VAC
- Operating temp.: 20°~70°C
- Conveyor protection level:
  Waterproof and dust-proof IP67
- Sensor operating temp.: -25°~55°C
- Sensor cable length: 6.8m
- Sensor protection level:
  Waterproof and dust-proof IP66

Commonly used in liquids and clean fluids mass flow detection,using simple operating principles.
Easy to install with low price. Appropriate and applicable diameter DN 25~80.

SFX Paddle flow switch

Ex NEPSI

OPERATING PRINCIPLE

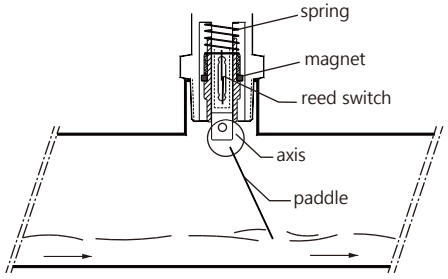
Paddle-type flow switch works when the flow of water forces the blade to close the switch. When the liquid in the pipe flows, the paddle and spring push the blade up actuating the switch. When the flow stops and the paddle hangs perpendicularly, the switch is opened.

FEATURES

- Simple structure, easy to install, without adjustment.
- Long life, cheap.
- Maximum pressure up to 25kg/cm^2.

SPECIFICATIONS

- Repetitive error: 5%
- Operating temp.: -30~100°C(Max:150°C)
- Degree of protection: IP65
- Contact capacity: 60W 220VAC /200VDC
- Contact form: SPDT



Switch on in case of liquid flowing in pipes

FLOW CONTROL RANGE TABLE

Pipe spec. / Flow Volume Gallon / Min. / Paddle Length	1"		1-1/2"		2"		2-1/2"		3"	
	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.
1"	4.7	3.9	10.9	8.3	19.9	16.1				
1-1/4"			7.7	6.1	16.5	12.3	31.3	22.8		
1-1/2"			5.7	4.5	13.4	9.5	25.2	18.5		
2"					8.4	6.3	15.1	12.8	29.7	21.9
2-1/2"							13.9	10	20.4	15.4
3"									17.1	12.8

※1 Gallon=3.7854 Litter

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)

PBX / PMX Bargraphic display scaling meter

OPERATING PRINCIPLE

A commonly used industrial A / D converter with high zero stability. To accurate detection of input signal, the second signal amplifier and resistance a stable anti-converter input signal through a high-speed microprocessors rely on precision signal operations, and output control the parameters of the system point links, and signals through the D / A converter, the values do re-transmission in order to achieve the control purpose.

FEATURES

- Two sets of signals can also accept input, range from so With custom.
- Measurement commonly used industrial the instrument AC, DC signal.Up to do a 8:00 level control.
- Communication with PLC, supports RS-485 interface.The product complies with IEC60092-504 / IEC60947-2.

SPECIFICATIONS

- Supply voltage: 85~265VAC, 18~36VDC
- Input signal: 0-20mA, 0-200mA, 0-5V
  0-10V, 0-20V, 0-200V
- Sampling: 4Hz
- Display range: -1999~9999
- Digit size: 0.36" red
- Panel degree of protection: IP54
- Operation temp.: 0~55°C
- Communication interface: RS485
- Protocol: Modbus

Application Demo

▲ Magnetic Float Level Switch

▲ Electromagnetic Flow Meter

▲ Magnetic Float Level Transmitter

▲ Electromagnetic Flow Meter

▲ Ultrasonic Level Transmitter

▲ By-Pass Level Transmitter

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