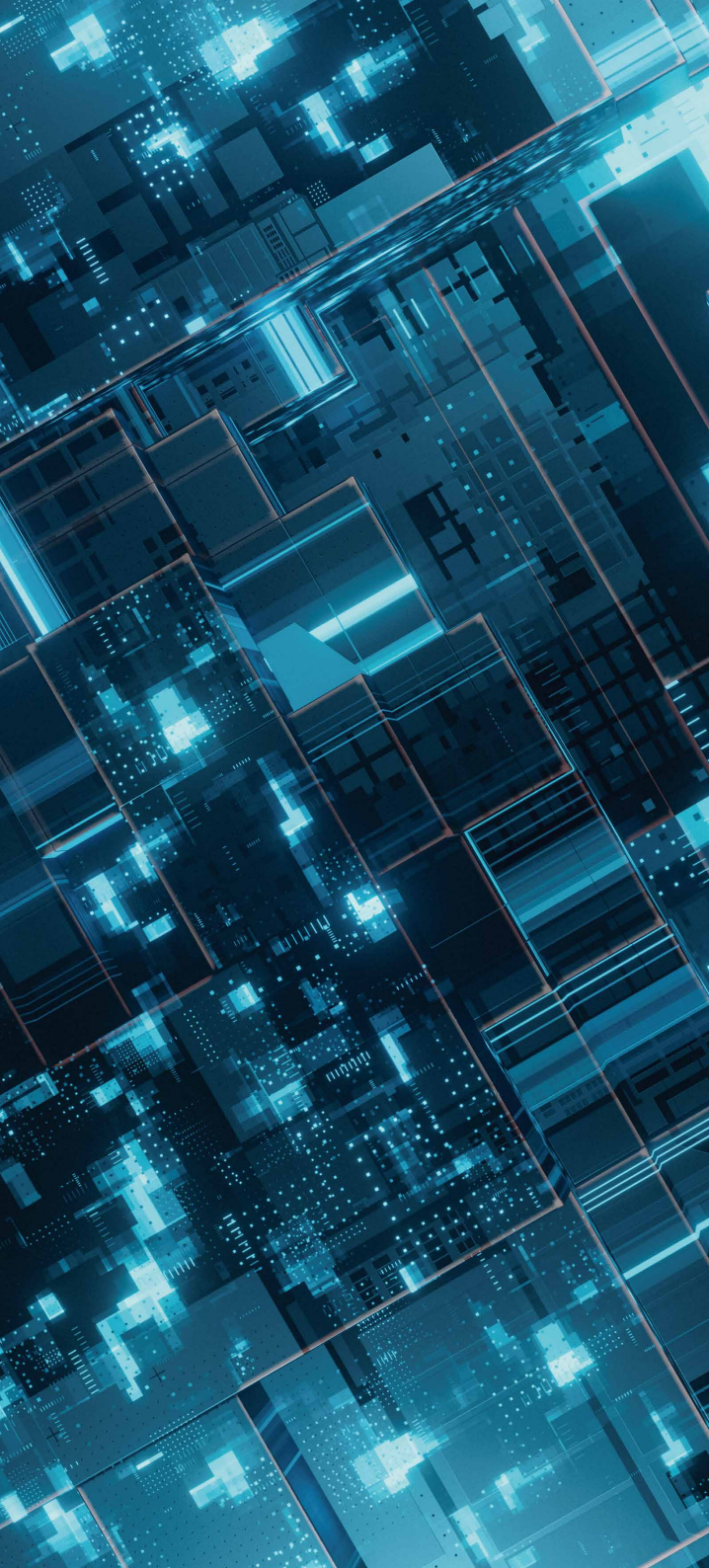




Creating a Better Future, FineTek Sensing the World

Monitoring and Controlling Solutions for
High-Tech (PCB / Semiconductor) Industries



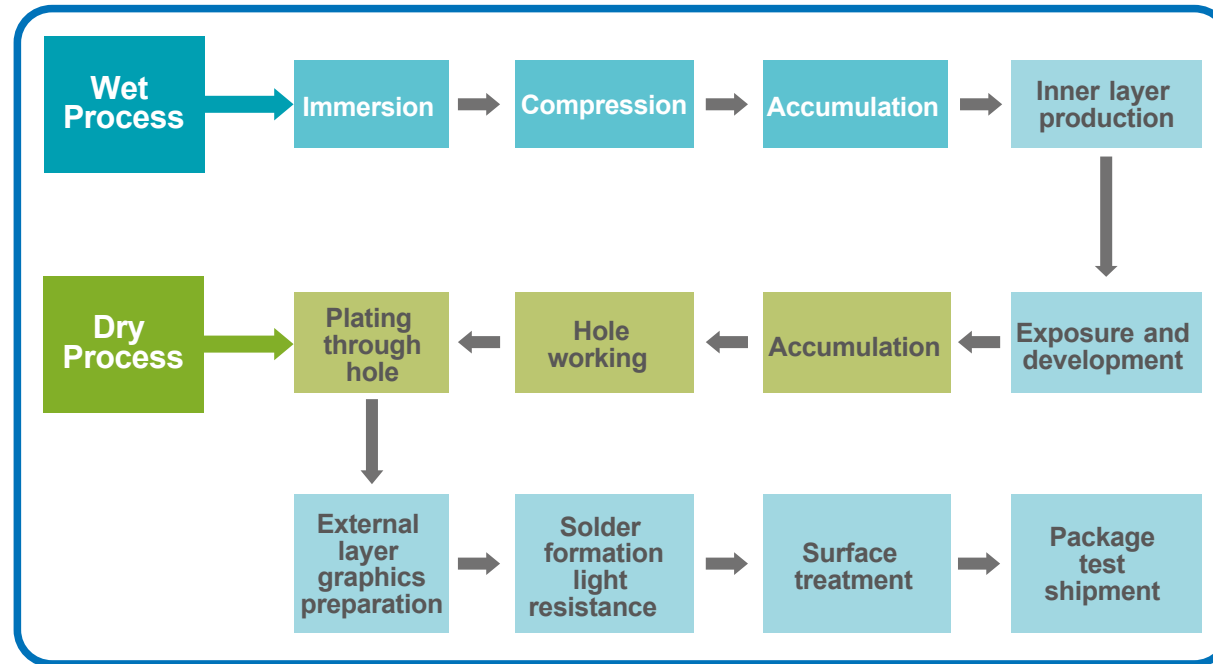


FineTek has accumulated 40 years of technology and has always focused on the field of industrial sensing measurement and research and development. Specialized R&D capabilities and stringent process management have resulted in us not only obtaining ISO9001 certification but also meeting a variety of the 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.

Businesses promote ESG with the hope to conserve energy, be environmentally friendly, recreate technology and create a wonderful industrial environment. The Sustainable Development Committee was formed in 2021 and that year marked the beginning of FineTek Group's aim for ESG sustainability. Welcoming the brand-new outlook of the post-pandemic era, ESG is included in our corporate governance belief. Technology, humanity, nature, and action are the four core values that underline environmental protection, social responsibilities, and corporate governance. The Company learns from nature, stands by people and shares interest. The solid organizational culture and practice based on such beliefs of FineTek are like persevering cornerstones that support constant devotion to the development of automated control instruments and meters and the close collaborative relationships with industrial process equipment suppliers and the upstream and downstream of the industrial chain. This is why we can constantly work hard to explore new product technology fields reflective of the actual needs of customers.

PCB Easy Process Flowchart ▶ ▶ ▶



Wet process equipment

By combining FineTek' s sensors such as the float switch and the ECP1 display pressure meter, changes in the nozzle pipeline pressure can be monitored according to the cleaning history while the PCB of equipment and a device is being cleaned in order to enhance the cleaning efficacy and boost process flow control and analysis while at the same time minimizing the waste of water and detergent.

Dry Process Dust Collection Equipment

The advanced dust density meter is used and linked to the diaphragm valve controller to create a clean and pollution-free environment and to fulfill the corporate goals of energy conservation, improved product performance and extended life span of equipment. The flow meter is applied to record the waste solution and the amount of water used, which has significantly contributed to the improved water recycling rate and water utilization efficiency of businesses and helped customers recycle chemicals from waste liquids, fulfilling the corporate belief in ESG sustainability.

High Tech PCB Wet Process Application

FCM Mini Float Level Switch



OPERATING PRINCIPLE

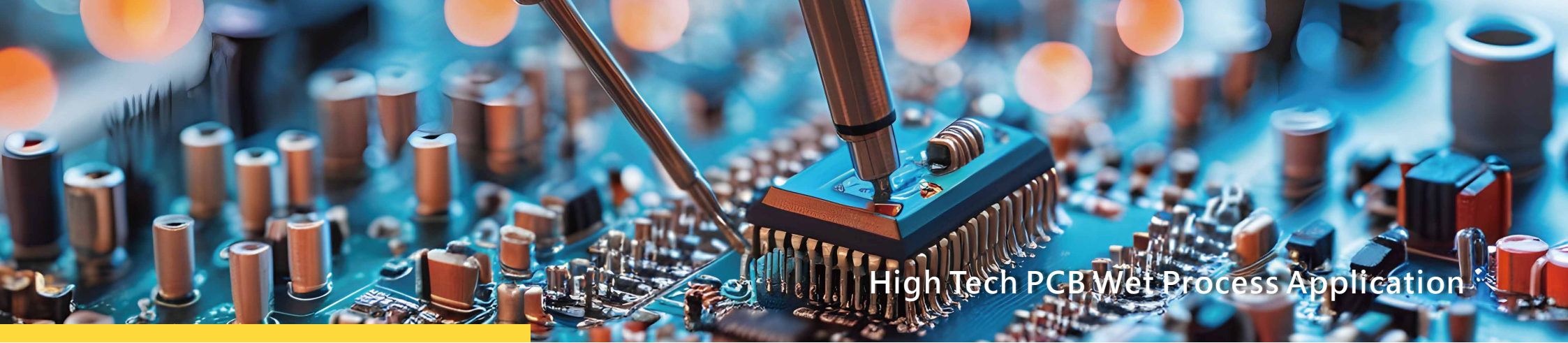
A float switch operates using a magnet embedded inside the float and a reed switch installed within the stem. When the liquid level rises, the float moves upward; when the level drops, the float descends. As the magnet inside the float approaches the reed switch, it actuates the switch to output an ON signal; when the magnet moves away, the switch returns to an OFF state. This ON/OFF output is then used to achieve the desired control function.

FEATURES

- The highest CP value and the least costly of all DES control instruments.
- The use of reed switches does not require a power supply, and the contact life can withstand up to 12 million times.
- The product is available in plastic: PVDF, PP, PVC, and metal: SUS304, SUS316.

SPECIFICATIONS

- Maximum voltage: 240VAC/ 200VDC
- Contact capacity: 20W/SPDT, 40W/SPDT, 50W/SPST
- Maximum current: 1A
- Plastic pressure tolerance: 1ATM~4kg/cm²
- Working temperature: -20~120°C
- Applicable specific weight: 0.65~0.8



High Tech PCB Wet Process Application

ECP Pressure Gauge

OPERATING PRINCIPLE

Using the principle of piezoresistive pressure, when the pressure changes, the output data is converted by an internal circuit. The product is installed in the PCB process equipment to display the pressure at each segment. Abnormal pressure, which can cause problems during the production process, is avoided.

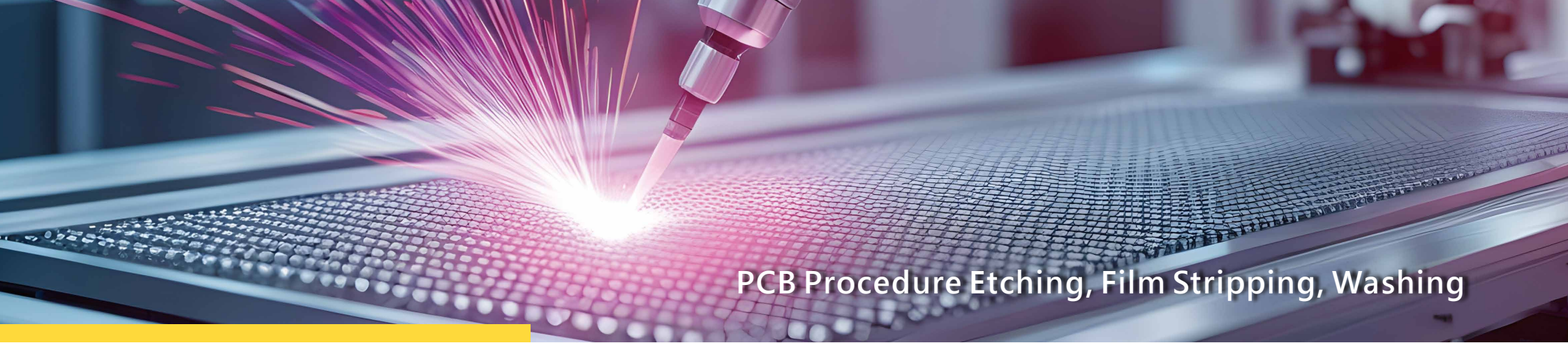
FEATURES

- Dual-color LED display with alarm indication
- 4–20 mA analog output
- Corrosion-resistant construction
- Quick-release design for easy maintenance
- Dual NPN/PNP outputs

SPECIFICATIONS

- Maximum voltage: 12~36VDC
- Working medium: liquid/light corrosive liquid/air
- Accuracy: $\pm 1\%$ F.S.
- Output: 4 ~ 20mA, NPN/PNP
- Working temperature: -10~60°C
- Display unit: MPa, kPa, kgf/cm², bar, psi, °C
- Display method: Dual-color LED





PCB Procedure Etching, Film Stripping, Washing

SDX Optical Level Switch



OPERATING PRINCIPLE

The optical liquid level switch uses the principle of total reflection in a prism. Reflection or penetration, is the basis of the level alarm output. When the sensor is surrounded by air, the angle of incidence is greater than the critical angle and thus total reflection occurs.

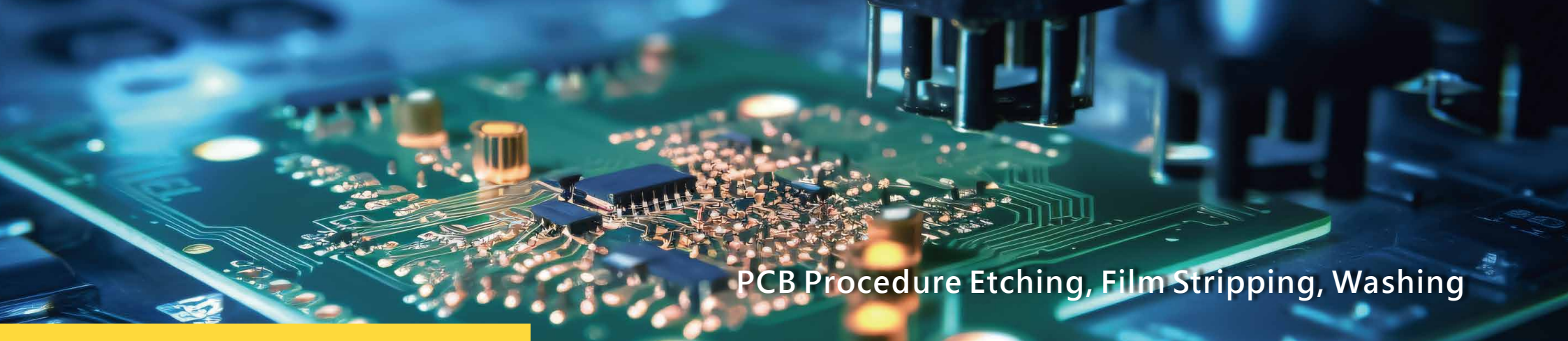
Totally reflected light will be transmitted to the receiver. Conversely, when the sensor is surrounded by liquid, due to the refractive index of the liquid and the sensor tip material, almost all light will penetrate the front of the sensor. Using this principle, the optical liquid level switch design is based on light. The receiver can detect and determine a light reflected or penetrated state, and determines the circuit output.

FEATURES

- Simple, compact, and robust
- No moving parts
- Built-in, solid-state electronics
- Easily removed, cleaned, and reinstalled
- LED switch indication

SPECIFICATIONS

- Probe Material: PES/Glass
- Operating Voltage: 10 ~ 28VDC
- Output Mode: NPN / PNP
- Output Function: NO / NC
- Operating Temperature: -20~100°C
- Protection Rating: IP67
- Indicator Light: Red LED
- Cable Specification: PVC or XLPE 24AWG, L=2m, 4C



PCB Procedure Etching, Film Stripping, Washing

SDL Liquid Leakage Sensor

OPERATING PRINCIPLE

The leakage sensor uses the principle of light reflection to detect leakages, and comprises of infrared luminous parts, infrared light receiving parts, and prisms. It can detect leakages on stainless steel plates, plastic plates, and wooden boards. It is small, reacts fast, highly sensitive, and retracts immediately after contacting the liquid.

FEATURES

- The optical type can measure a variety of liquids and is unaffected by external ambient light.
- Easy installation with a base and lock mechanism.
- Easier to maintain compared to resistive detection tape or paper-absorbing type. Simply dry the detection surface and re-install it back.
- PFA material can be used, suitable for acid, alkali, liquid medicine, pure water, and other liquids.
- The product has an indicator light, which can immediately signal the action status.
- Complete output type selection, NPN or PNP type.
- Comply with IP67.
- Comply with lead-free standards and CE certified.
- Comply with UL certification.

SPECIFICATIONS

- Power Supply: 12~24 VDC
- Output Type: 3-wire NPN/PNP
- Action type: NO when normal, NC when leakage is detected.
NC when normal, NO when leakage is detected.
- Circuit Protection: Power supply reverse connection protection, short circuit protection
- Indicator Light: Green under normal conditions, red under leak detection
- Operating Temperature: -20~80°C
- Material: PP/PFA
- Protection Rating: IP67
- Connection Method: Outlet type, 3-core cable, length 2.2m or more





PCB Procedure Lamination/Coating Machine

SBX RF-Capacitance / Admittance level switch



OPERATING PRINCIPLE

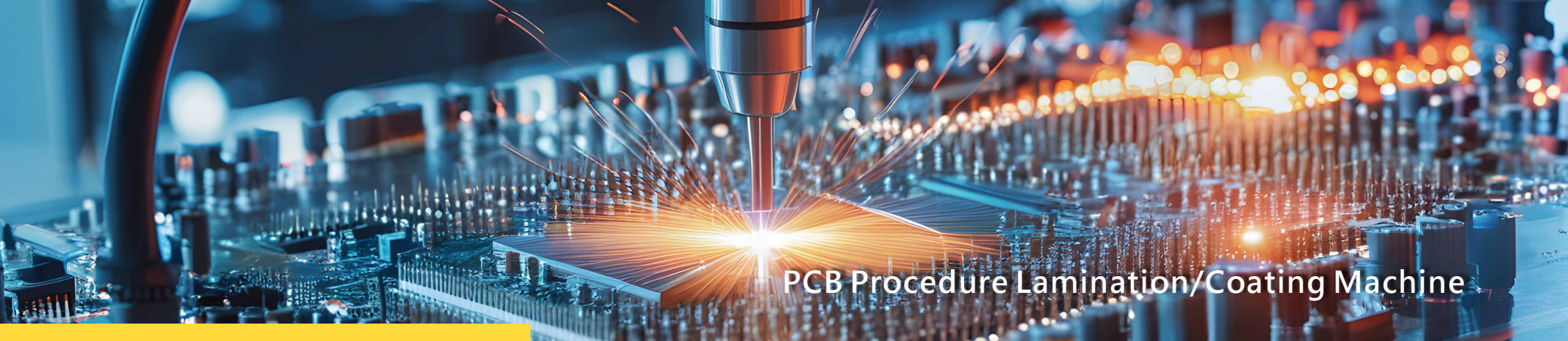
When medium contacts with measuring electrode, the admittance between measuring electrode and ground electrode will be increased, by the variation of admittance, medium level can be determined. Between the measuring and ground electrodes, the signal wave of shielding electrode is exactly the same with 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 $\pm$ 20%
115/230VAC $\pm$ 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



PCB Procedure Lamination/Coating Machine

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)

PCB Procedure Electroplating (Waste Water Treatment)

EPD Electromagnetic Flow Meter



Standard Type



Remote Type

OPERATING PRINCIPLE

The working principle of the electromagnetic flow meter 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 output : 4~20mA, 2~8KHz
- Communication interface: RS485

PCB Procedure Electroplating (Waste Water Treatment)

EPD Electromagnetic Flow Meter



OPERATING PRINCIPLE

A Diaphragm valve consists of three main components: the valve body, diaphragm, and actuator. The diaphragm separates the lower valve body cavity from the upper valve cover cavity, ensuring that the actuator component above the diaphragm does not come into contact with the medium, thus preventing any leakage of the medium. The Diaphragm valve operates by using a pneumatic source to drive the actuator, which moves the diaphragm to open or close the flow path, cutting off the fluid. This valve, which separates the internal cavities of the valve body, can be controlled simply by using an electromagnetic valve to control the air source.

FEATURES

- Low fluid resistance.
- To measure mediums containing suspended solids. The medium comes into contact with only the valve body and diaphragm, preventing corrosion to the valve stem.
- Suitable for use with corrosive, viscous, and slurry-type mediums.
- Compared to stem valves, it is easier and less labor-intensive to operate, and allows for the simultaneous control of multiple valves.
- EPDM + PTFE material options for the diaphragm, suitable for corrosive acidic or alkaline liquids.
- It also features a position indicator with a yellow marker to indicate the valve's operation, allowing for easy confirmation of the diaphragm's open or closed status.

SPECIFICATIONS

- Pipe Diameter: DN15, DN20, DN25
- Measured medium: Gas: Neutral gas, acidic/alkaline gas, oil-free gas
Liquid: Acidic/alkaline liquid, contaminated waste liquid, high-purity liquid sterile liquid
- Fluid Temperature: -10~60°C
- Air source pressure: 4~7 bar
- Output Type: N.C , N.O
- Automatic exhaust angle : 1~5°
- Control Air Interface: G-1/4"

PCB Procedure Acid Pickling Apparatus

EPU2 Integrated Clamp-on Ultrasonic Flow Meter



OPERATING PRINCIPLE

The ultrasonic flow meter adopts a non-invasive design, making it an ideal choice for server cooling systems. The installation process does not require cutting pipes or interrupting server operation, effectively avoiding losses caused by system downtime. Its advanced ultrasonic technology can accurately measure the flow rate changes of cooling water under different temperatures and pressures, ensuring that the server maintains an optimal operating temperature range, improving efficiency and extending lifespan. With these advantages, the integrated clamp-on ultrasonic flow meter has become the preferred solution for AI server cooling water flow control, providing stable and reliable cooling protection for the system.

FEATURES

- Simple to operate, easy to use, and supports both horizontal and vertical display,
- adapting to multi-angle installation requirements.
- Excellent signal processing capability, enabling stable measurement even with gas bubbles in the fluid.
- Flow data storage for up to 10 years, facilitating trend analysis and system performance optimization.
- Isolated output ensures signal transmission stability and resistance to interference.
- Autonomously adjusts ultrasonic transceiver parameters based on fluid characteristics and the environment.
- Easy installation, requiring only a screwdriver and hex wrench for quick setup.
- No need to cut pipes, no need to stop water, no fear of contamination, and quick installation.
- No coupling agent required for installation, reducing maintenance effort and installation time.

SPECIFICATIONS

- Measuring range: 0.1...5m/s
- Operating voltage: 20~30VDC
- Analog output: 4 ~ 20 mA, maximum load 500Ω
- Digital output: NPN output, 30 VDC/50mA
- Medium temperature: 0~60°C
- Enclosure material: Aluminum alloy
- Protection rating: IP65
- Pipe size: DN15, DN20, DN25, DN32, DN40



PCB Procedure Acid Pickling Apparatus

EGX5 Magnetostrictive Level Transmitter (Corrosion-resistant)



OPERATING PRINCIPLE

The sensor mainly consists of magnetostrictive wires sealed in a stem/rod and a permanent magnet sealed into a float that can move up and down the stem. Electrical current travels along the wires in the stem creating an axial magnetic field. When the float's and stem's magnetic field intersect, a torsional force is created with different height levels (see right).

The sensor measures the liquid level (D) by calculating the elapsed time between torsional forces. Using velocity and time, distance can be calculated. This action is timely and continuous. A change in float position will be detected promptly via signal output.

FEATURES

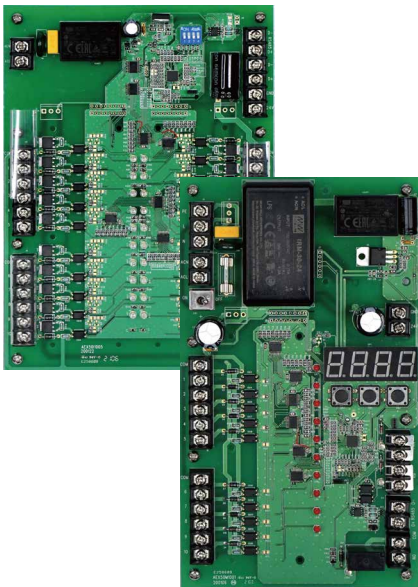
- Absolute positioning output and no calibration required after power failure.
- Stability and reliability.
- Easy installation without calibration & maintenance.
- Prompt response time, high resolution & high accuracy.
- Durable structure, dust-proof, withstands high pressure.
- Oil/water dual level indication.
- The Max. operation temp. is 195°C.
- EG-6, 37, 60 adopted loop power structure for wire saving.
- Explosion-proof model available for hazardous environments.
- IP67 (Enclosure)/IP69K (Probe).
- Support HART / RS485 and 4~20mA / voltage output.

SPECIFICATIONS

- Operating Voltage: 20~30VDC
- Analog Output: 4 ~ 20 mA, Maximum Load 500Ω
- Linearity: For measuring range above 500mm, error $\pm 0.1\%$ F.S.
For measuring range below 500mm, error $\pm 500\mu\text{m}$
- Digital Output: RS485
- Process Temperature: -40~125°C
- Float Specific Gravity: 0.9 (PFA)

PCB Procedure Cutting / Forming (Dust Collection Equipment)

AEX6 Programmable sequential controller



OPERATING PRINCIPLE

Programmable Sequence Controller AEX6 is specifically designed for use with pneumatic dust collector systems. It comprises of a microprocessor and a logic analysis & control circuit, with an output of 10, 20 points (up to 620 points with an expansion board) to control the solenoid of the diaphragm valve which in turn controls the pulse jet sequence of the valves, thus achieving the dust collector's main objective of cleaning the bag filter. The LED display panel indicates the current pulse jet position. Pulse Jet time and interval time can be adjusted. The number of control points can also be adjusted and increased. Wide application range, with user-friendly operation.

It has an external current input terminal, which can be connected to a differential pressure transmitter or used for dust concentration detection. When the current reaches the set value, the fabric bag is attached to a greater degree, and the pulse jet interval is automatically shortened to improve the efficiency of bag cleaning. Continuous low current indicates that the fabric bag has broken and pressure has reduced. A built-in relay contact can be used as an alarm output.

FEATURES

- Digital display for easy operation and real time control of operation status.
- Microprocessor control accurate and precise operation.
- Remote control function convenient to start and stop operations.
- Able to automatically execute pulse jet cycle even after system shuts down, therefore preventing clogging caused by damp and dust residue in the fabric bag.
- Number of output points can be increased up to 620 points. It can be connected to 4~20mA input (differential pressure or dust detection) when the set value is reached.
- Interval time is automatically shortened to improve performance, with a Relay output to warn when the fabric bag is broken.

SPECIFICATIONS

- Voltage: 100/240VAC, $\pm 10\%$ 50Hz/60Hz
- Power consumption: 3VA (excluding the output load)
- Ambient temp.: $-20\sim 70^{\circ}\text{C}$
- Pulse Jet time: 10~9900ms
- Pulse Jet interval: 1~999 seconds
- Shutdown cycle function: Yes
- Remote control function: Yes
- 4~20mA input: Yes
- Alarm output contact: SPST 3A 250VAC/24VDC
- Number of output points: Mother board -10, 20 and maximum expandable 620
- External box: 210x290x100 box ABS/cover PC.

PCB Procedure Cutting / Forming (Dust Collection Equipment)

BRC Diaphragm valve



OPERATING PRINCIPLE

The diaphragm valves are used specifically in the dust collector system. The valve consists of 2 air chambers divided by a piece of diaphragm. The 2 chambers are connected through an air passage (air passage's diameter is smaller than the orifice of the pilot valve). When the orifice opens, the air in the upper chamber is exhausted much faster than the speed of air that enters through the air passage. The air pressure of the upper chamber drops significantly, the higher pressure of the lower chamber pushes the diaphragm up and opens a bigger passage for air to enter into the bottom chamber. This sudden burst of air is used to inflate the fabric filter so as to shake off all the dust clinging on the bag filter. When the orifice closes, the pressure in both chambers equalizes and the diaphragm returns to its original position via the force of the coiled spring.

FEATURES

- Fast Response, large flow volume, effective cleaning action on fabric filter
- Low Air consumption
- Compatible with programmable sequential controller
- Ease of adjustment in jet pulse timing and duration

SPECIFICATIONS

- Power: 24Vdc $\pm$ 10%, 110/220Vac, $\pm$ 20% 50/60Hz
DIN Optional for DIN connector or lead wire
- Suitable fluid: Air
- Body material: Aluminum
- Diaphragm material: Engineering plastic or NBR
- Operating temp.: -20~85°C
- Ambient temp.: -20~60°C



PCB Procedure Cutting/Forming (Dust Collection Equipment)

BVK /BVR /BVT Pneumatic vibrator

BVK Series Pneumatic Ball Vibrator
 Best choice for bridge-break in thin wall and small tank. This model can be used in vibrating separator, vibrating conveyor, automatic component arrangement, electroplating built-up, protection material packing process, process molding.



Model No.	Frequency (V.P.M.)			Force (N)		
	2Bar 29PSI	4Bar 58PSI	6Bar 87PSI	2Bar 29PSI	4Bar 58PSI	6Bar 87PSI
BVK-10	22,500	28,000	34,000	250	470	710
BVK-13	15,000	18,500	22,500	320	550	870
BVK-16	13,000	17,000	19,500	450	800	1,100
BVK-20	10,500	14,500	16,500	720	1,220	1,720
BVK-25	9,200	12,200	14,000	930	1,570	2,050
BVK-32	7,800	9,700	12,500	1,510	2,470	3,210

BVR Series Pneumatic Roller Vibrator
 The high vibration frequency can prevent material jam in pipe delivery. It can also be applied in bridge-break, concrete injection operation process.



Model No.	Frequency (V.P.M.)			Force (N)		
	2Bar 29PSI	4Bar 58PSI	6Bar 87PSI	2Bar 29PSI	4Bar 58PSI	6Bar 87PSI
BVR-50	25,000	35,000	36,000	1,070	2,920	4,220
BVR-65	19,000	21,000	26,000	2,730	4,830	6,120
BVR-80	15,500	18,500	19,000	3,000	6,090	7,450
BVR-100	11,000	14,000	16,000	3,750	6,750	8,900

BVT Series Pneumatic Turbine Vibrator
 Best choice in low noise environment. It is usually installed on vibrating separator, conveyor, automatic arrangement machine, packing machine, filling machine etc.



Model No.	Frequency (V.P.M.)			Force (N)		
	2Bar 29PSI	4Bar 58PSI	6Bar 87PSI	2Bar 29PSI	4Bar 58PSI	6Bar 87PSI
BVT-10	27,500	35,000	37,500	840	1,390	2,400
BVT-13	26,000	30,000	33,000	1,400	2,440	3,730
BVT-16	17,000	21,500	24,000	1,220	2,090	3,160
BVT-20	17,000	20,000	23,000	2,170	4,040	5,520
BVT-25	12,000	15,500	17,000	2,120	3,510	5,070
BVT-32	8,000	10,000	13,000	3,290	5,360	7,149

PCB Procedure Cutting/Forming (Dust Collection Equipment)

EPD Electromagnetic Flow Meter



OPERATING PRINCIPLE

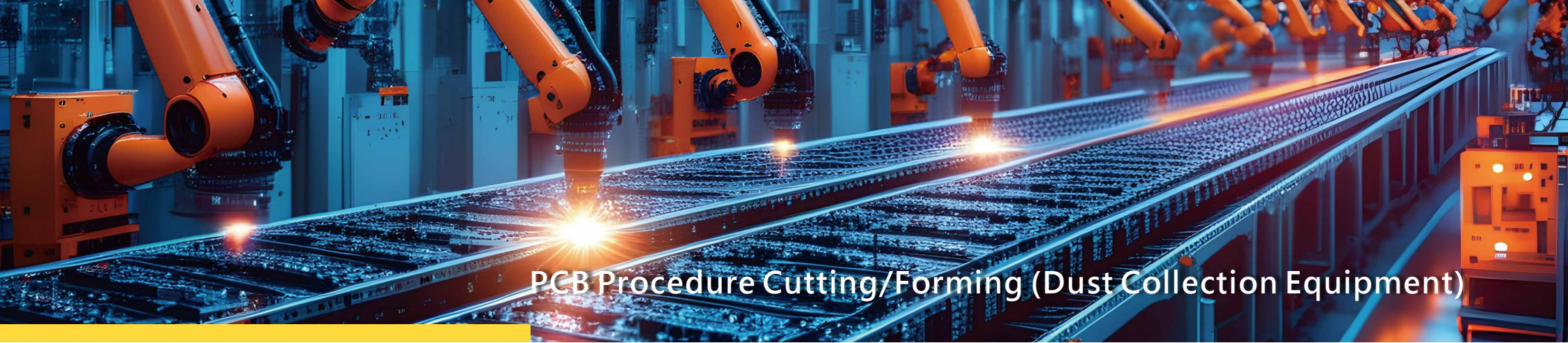
A Diaphragm valve consists of three main components: the valve body, diaphragm, and actuator. The diaphragm separates the lower valve body cavity from the upper valve cover cavity, ensuring that the actuator component above the diaphragm does not come into contact with the medium, thus preventing any leakage of the medium. The Diaphragm valve operates by using a pneumatic source to drive the actuator, which moves the diaphragm to open or close the flow path, cutting off the fluid. This valve, which separates the internal cavities of the valve body, can be controlled simply by using an electromagnetic valve to control the air source.

FEATURES

- Low fluid resistance.
- To measure mediums containing suspended solids. The medium comes into contact with only the valve body and diaphragm, preventing corrosion to the valve stem.
- Suitable for use with corrosive, viscous, and slurry-type mediums.
- Compared to stem valves, it is easier and less labor-intensive to operate, and allows for the simultaneous control of multiple valves.
- EPDM + PTFE material options for the diaphragm, suitable for corrosive acidic or alkaline liquids.
- It also features a position indicator with a yellow marker to indicate the valve's operation, allowing for easy confirmation of the diaphragm's open or closed status.

SPECIFICATIONS

- Pipe Diameter: DN15, DN20, DN25
- Measured medium: Gas: Neutral gas, acidic/alkaline gas, oil-free gas
Liquid: Acidic/alkaline liquid, contaminated waste liquid, high-purity liquid sterile liquid
- Fluid Temperature: -10~60°C
- Air source pressure: 4~7 bar
- Output Type: N.C , N.O
- Automatic exhaust angle : 1~5°
- Control Air Interface: G-1/4"



PCB Procedure Cutting/Forming (Dust Collection Equipment)

SEX Rotary Paddle level switch

OPERATING PRINCIPLE

The paddle rotation is impeded by material, surrounding the paddle, motor will stall and cause the Micro-Switch to change state. (including an alarm or control)

FEATURES

- Airtight sealing device, outdoor application is available
- High safety dust protection
- The torque force is adjustable
- The performance of torsion is stable and reliable
- If the rotary paddle bears an extra overload the motor will be appeared slide to prevent the inside mechanism damaged
- Easy maintenance
- SE380 design with adjustable torque to fit wide density range

SPECIFICATIONS

- Power: (A)110VAC, (B)220VAC, (C) 240VAC, (D) 24VAC, (E) 24VDC
- Operating temp.: 20~70°C (Max. 200°C)
- Power consumption: 3W, 11W (DC 24V)
- Contact capacity: SPDT 5A/250VAC (Std) or 3A/250VAC
- Connection: 1"PF, JIS 2-1/2" x5 kg/cm² (other types are optional)
- Housing: IP65 aluminum
- Conduit: 1/2" PF
- Ex-proof cert.: PTB ATEX, NEPSI (optional)



PCB Procedure Cutting/Forming (Dust Collection Equipment)

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)

PRODUCT APPLICATION



- | | | |
|---|---|------------------------------------|
| 1 |  | Programmable sequential controller |
| 2 |  | Diaphragm valve |
| 3 |  | Capacitance level switch |
| 4 |  | Rotary paddle switch |
| 5 |  | Air hammer |
| 6 |  | Pneumatic vibrator |
| 7 |  | Dust monitoring |

For the dust collection equipment, refer to the figure below for overall planning. The sequence controller is used to control backflow to the dust collection bag pipe through the diaphragm valve, therefore extending its service life. The dust density meter can detect the concentration of dust in the chimney. Its signal can also be connected to the sequence controller. When the output signal is higher than the set value, it means that the dust bag is overfilled. The jet interval will then be shortened automatically for enhanced bag-cleaning efficiency. In addition, installing an air knocker or vibrator at the inclined trough of the dust collection system prevents materials from piling up. Installing a rotating paddle switch or a capacitance level switch will serve as a control sensor to alert high/low materials levels in the dust collection barrel.

Peripheral Systems of Semiconductor Processes

The semiconductor industry emits a lot of carbon dioxide and consumes a lot of water resources during the production process. With the rapid development of the semiconductor industry, the carbon footprint is becoming increasingly obvious. Hazardous waste is also constantly being produced. Therefore, more attention is now given to the declaration and implementation of ESG-related aspects in factories. FineTek adopts the spirit of enterprise to develop and combine automated sensors and industrial equipment to improve efficiency. More importantly, greenhouse carbon emissions are reduced, and water resources are utilized efficiently including the maximized use of recycled water.

Ultra-purified Water Equipment

Pipe flow and barrel/tank level monitoring



Paddle Wheel Flow Meter



Guided Wave Radar Level Transmitter



Chemical Equipment

High/low level monitoring



Magnetic Float Level Transmitter



Magnetostrictive Level Transmitter



By-Pass Level Transmitter



Air Pollution System

Air discharge monitoring

Diaphragm Valve



Water Treatment System

Waste water discharge monitoring



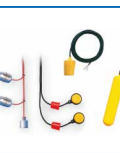
Ultrasonic Level Transmitter



Flowmeter



Cable Float Level Switch



Air-conditioning Cooling System

Pipe flow monitoring

Thermal Dispersion Flow Switch



High Tech Upstream/Downstream of Semiconductor Sector

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)

PCB Procedure Cutting/Forming (Dust Collection Equipment)

EPR Paddle wheel flow meter



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 $\pm 3\%$. 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

High Tech Upstream/Downstream of Semiconductor Sector

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High Tech Upstream/Downstream of Semiconductor Sector

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)

High Tech Upstream/Downstream of Semiconductor Sector

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"

High Tech Upstream/Downstream of Semiconductor Sector

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
- Resolution 1.6 uA
- Accuracy: 2mm
- Analog output: 4-20mA
- Beam angle: 6°
- Operating temp. range: -40~120°C
- 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



High Tech Upstream/Downstream of Semiconductor Sector

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)

High Tech Upstream/Downstream of Semiconductor Sector

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

High Tech Upstream/Downstream of Semiconductor Sector

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: $28^{\circ} \pm 2^{\circ}$
- Pressure: 2kg/cm²
- Wire voltage: 600VAC
- Isolation resistance: >100MΩ

PRODUCT FACTS



Dust collector air knocker vibrates and feeds out



Wet process equipment



Cooling water reserve detection of electronic plants



Pipeline flow detection



Wastewater level detection



Wastewater flow detection



Dust collection machine uses the diaphragm valve to remove the cloth bag



Ultrasound level measurement



Dust collection machine dust density detection



Creating a Better Future, FineTek Sensing the World

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