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Hebei Huachuang M&C Technology Co.,LTd

Product Overview

- Ultrasonic Level Transmitter
- RF Admittance Level Transmitter
- RF Admittance Level Switch
- Tuning Fork Level Switch
- Rotary Paddle Level Switch
- Magnetic Level Indicator



Splendid moment

Approaching HCCK

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Certification



Company profile

Hebei Huachuang M&C Technology Co.,Ltd is located in Economic development zone of Fengnan district in Tangshan City , as a High-Tech Enterprise, we are specialized in the developing and producing of material (liquid) level measurement and control instruments .

Founded in 2014, we own indepenent conditions of R&D, experiment, producing, assembling and testing, replying on the cooperation platform with domestic universities for produce/study/research, we devoted ourselves into the research and producing of material(liquid) level measuring instruments with the spirit of profession, focus, innovation. We keep strictly inspection and control on the quality of components, produce each instrument with the artisan spirit.

With the concept of "providing steady and reliable measuring devices for customers, ensuring the high efficiency operation of enterprises", and take " creating max value for customers continuously " as our mission. We established good cooperation with customers as partners, growing towards more professional, large-scale and internationalization.

Huachuang is willing to grow up with you together to embrace the glorious future!



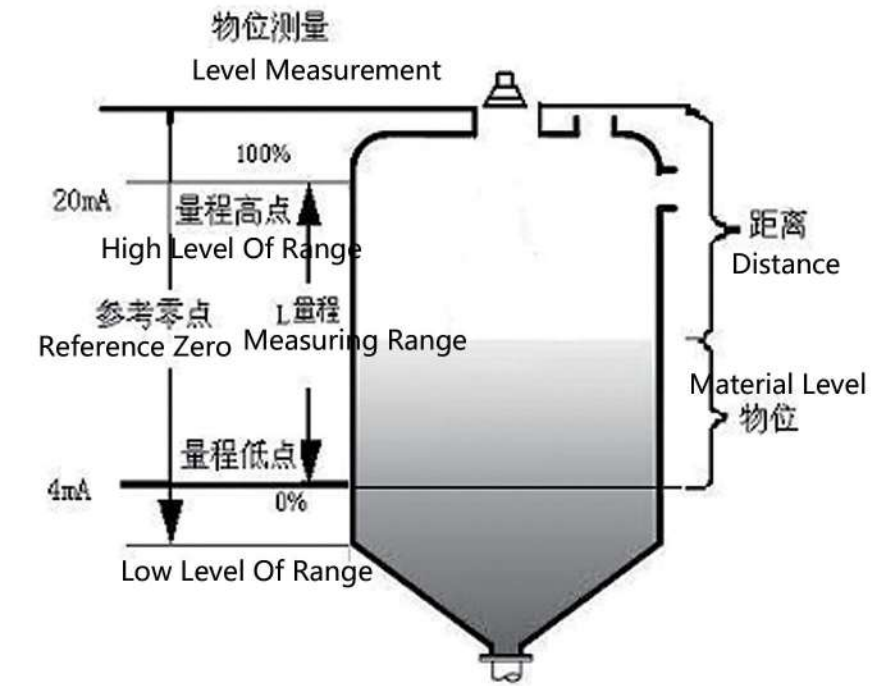
Ultrasonic Level Transmitter

Overview

Ultrasonic level transmitter is a non-contact, high reliability, cost-effective, easy to install and maintain level measurement instrument. It is a low-cost measuring device for measuring liquids, slurries and solids at industrial sites. It is widely used in water treatment, municipal, chemical, metallurgical and mechanical manufacturing industries.

Principle

The ultrasonic material/level transmitter is installed on the upper part of the container under the control of the electronic unit, and the probe emits a pulse of ultrasonic waves to the object to be measured. The sound waves are reflected by the surface of the object, and the partially reflected echoes are received by the probe and converted into electrical signals. From the time the ultrasonic wave is transmitted to the time it is received again, its time is proportional to the distance from the probe to the object being measured. The electronic unit detects the time and calculates the measured distance based on the known speed of sound so that the level value can be calculated. Since temperature has an effect on the speed of sound, the meter should measure the temperature to correct the speed of sound.



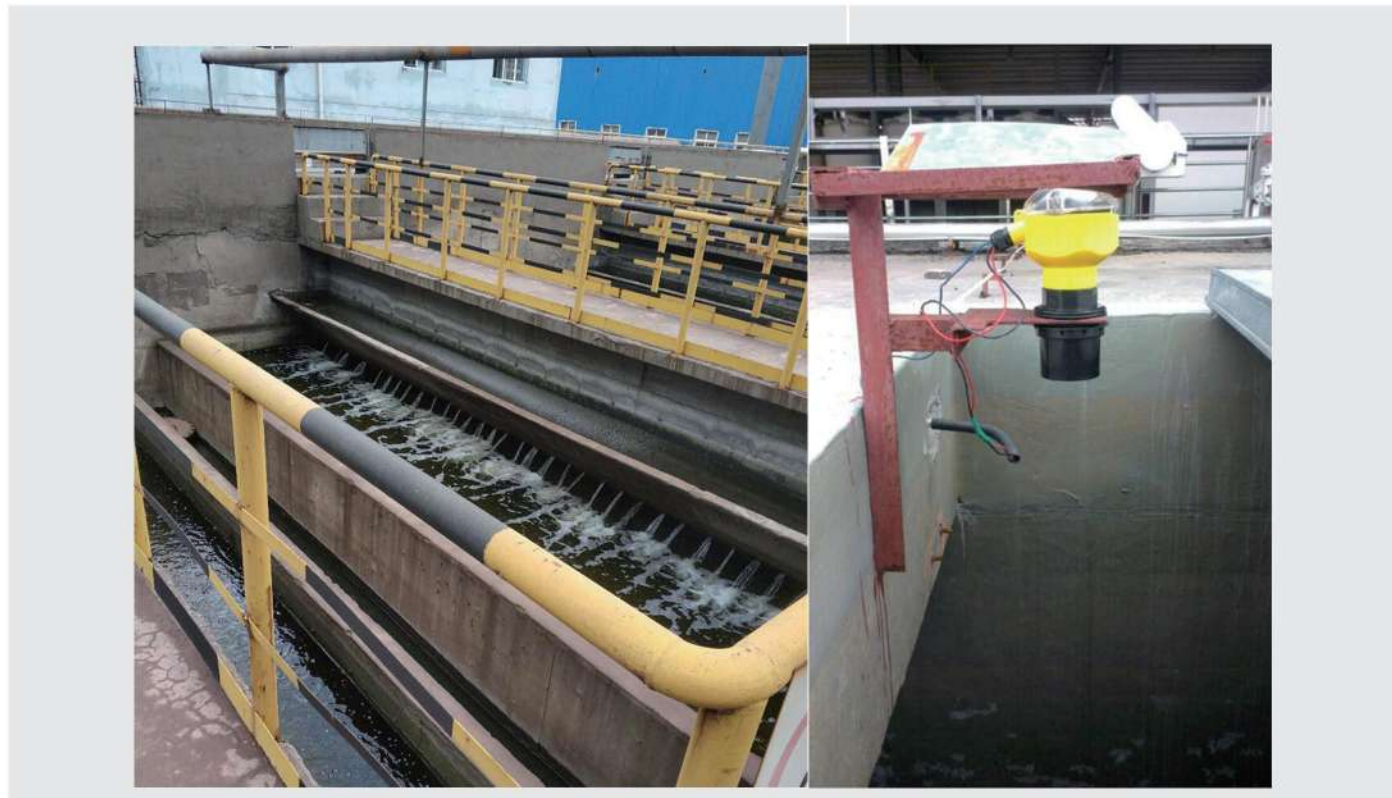
HCUS-400 Ultrasonic Level Transmitter-Standard



Application:	Solids,Liquids
Measuring Range:	0 ~ 30m
Connection Process:	Thread
Process Pressure:	≤0.3MPa
Accuracy:	0.5%-1.0%
Protection Grade:	Display Meter IP66/Probe IP68
Signal Output:	(4-20)mA/RS485Modbus

Type	Code	Parameters		
Sensor Type	P	Standard	T	Anti-Corrosion Type
	L	Die-Casting Aluminium With Epoxy Coating/IP67		
Housing/ Protection Grade	G	Die-Casting Aluminium With Epoxy Coating、Dual Chamber/IP67		
	S	Plastic Shell/IP66		
Probe Mounting Size	G	Thread G1½,Rated Range 5m		
	H	Thread G2,Rated Range 10m		
	J	Thread M78*2,Rated Range 15m		
	K	Thread M78*2,Rated Range 20m		
	L	Thread G3,Rated Range 30m		
	Y	Special Custom		
Power Supply	1	220V AC	2	24V DC
			3	12V
Electronic Unit	I	Two-Wire System (Without Relay Output)		
	K	Four-Wire		
	M	Communication (MODBUS-RTU)		
Relay Output	R	No Relay Output		
	R1	One Relay		
	R2	Two Relay		
Electrical Interface	M	Cable Waterproof Joint(Die-Casting Aluminium Shell)		
	N	Cable Waterproof Joint(Plastic Shell)		
Range	XXX	User Specified Unit : m		
Special Custom	X	Special Custom		

Note: Die-Cast Aluminum Enclosure Limited (4-20) mA Or 485 Communication Only.



HCUS-500 Ultrasonic Level Transmitter-Flameproof



Application:	Solids,Liquids
Measuring Range:	0 ~ 20m
Connection Process	Thread
Process Pressure:	≤0.3MPa
Accuracy:	0.5%-1.0%
Protection Grade:	Display Meter IP66/Probe IP68
Signal Output:	(4-20)mA Two Wire
Explosion-Proof Grade:	Ex d IIC T6 Gb

Type	Code	Parameters
Sensor Type	P	Standard
	T	Anti-Corrosion Type
Housing/ Protection Grade	L	Die-casting aluminium with epoxy coating/IP67
	G	Thread G1½, Rated Range 5m
Probe Mounting Size	H	Thread G2, Rated Range 10m
	J	Thread G78*2, Rated Range 15m
	K	Thread G3, Rated Range 30m
	Y	Special Custom
	D	DC Supply 24V DC
Power Supply	A	AC Supply (85~265) VAC
	Y	Special Custom
	I	(4-20)mA Two Wire
Electronic Unit	K	(4-20)mA Four Wire
	M	485 communication (MODBUS-RTU protocol)
	O	(4-20)mA+485 communication (MODBUS-RTU protocol)
	R	Without Relay Output
Relay Output	R1	One Relay
	R2	Two Relay
	N	Waterproof Cable Gland
Range	0-XXX	User Specified Unit : m
Special Custom	X	Special Custom



HCUS-600 Ultrasonic Level Transmitter-Separated Type



Application:	Solids,Liquids
Measuring Range:	0~30m
Connection Process:	Thread
Process Pressure:	≤0.3MPa
Accuracy:	0.5%-1.0%
Protection Grade:	Display Meter IP65/Probe IP68
Signal Output:	(4-20)mA Four-Wire/RS485 Modbus

Type	Code	Parameters		
Type	P	Standard	T	Anti-Corrosion Type
Housing	S	Plastic Housing		
Probe Mounting Size	G	Thread G1½,Rated Range 5m		
	H	Thread G2,Rated Range 10m		
	J	Thread G78*2,Rated Range 15m		
	K	Thread G78*2,Rated Range 20m		
	L	Thread G3,Rated Range 30m		
	Y	Special Custom		
Power Supply	1	220V AC	2	24V DC
Electronic Unit	K	(4-20)mA Four Wire		
	M	(4-20)mA、RS485Modbus		
	Y	Special Custom		
Relay Output	R	No Relay Output		
	R1	One Relay		
	R2	Two Relay		
	R3	Three Relay		
	R4	Four Relay		
Electrical Interface	N	M18*1.5		
Range	XXX	User Specified Unit : m		
Probe Cable	(XXX)	User Specified Unit : m		
Special Custom	X	Special Custom		



HCUS-700 Ultrasonic Level Transmitter-Underwater Type



Application:	Measurement Of Mud Level Underwater And Water Level
Measuring Range:	0-20m
Connection Process:	Thread
Process Pressure:	≤0.3MPa
Environment Temperature:	Display Meter (-20~+60)°C/Probe (-20~80)°C
Accuracy:	1%-3%
Resolution Ratio:	5mm or 0.5% (take the maximum)
Protection Grade:	Display Meter IP65/Probe IP68
Signal Output:	(4-20)mA Four-Wire/RS485Modbus Relay(AC 250V/8AorDC 30V 5A)

Type	Code	Parameters
Type	P	Standard
	T	Anti-Corrosion Type
探头安装尺寸 Probe Mounting Size	G	Thread G¾
	Y	Special Custom
电 源 Power Supply	1	220VAC
	2	24VDC
电子单元 Electronic Unit	K	(4-20)mA Four Wire
	M	(4-20)mA、RS485Modbus
继电器输出 Relay Output	R	No Relay Output
	R1	One Relay
	R2	Two Relay
	R3	Three Relay
	R4	Four Relay
电气接口 Electrical Interface	N	M18*1.5
量 程 Range	XXX	User Specified Unit : m
探头电缆 Probe Cable	(XXX)	User Specified Unit : m
特殊约定 Special Custom	X	Special Custom



Overview

The RF admittance level Transmitter is a continuous level measurement product based on the principle of RF admittance. The product has the advantages of good stability, high sensitivity and wide application range. It is developed on the basis of the traditional capacitive level meter and can be widely used in the continuous measurement of various liquid and solid level in petroleum, chemical, metallurgy, medicine, electric power, food, paper and other industrial fields. Especially in the environment of high temperature, strong corrosion, strong adhesion, and dust.

Principle

The RF admittance measurement technology is a unique measurement technique. When the level gauge probe is installed in a container, it forms a capacitor. The probe (measuring electrode) acts as a plate of the capacitor and the container acts as the other plate of the capacitor. (If the container is an insulating material, a reference electrode should be added). When the level rises, the dielectric change between the two plates causes a change in capacitance. This change will cause radio waves acting on the RF admittance switch probe. The change, the RF admittance level meter detects the change of the radio wave through the RF circuit and converts it into a linear current output.



HCDN-501 RF Admittance Level Transmitter



Application:	Liquid, Solid
Measuring Range:	10PF ~ 5000PF
Allow Work Pressure:	0.1~2MPa
Allowable Ambient Temperature:	-35°C~65°C
Accuracy:	< 0.5% Actual Measured Value
Protection Grade:	IP65
Signal Output:	4-20mA(24VDC)
Housing:	Die Casting Aluminum
Protection Grade:	Ex d[ia Ga] IIC T6 Gb
Cable Entry:	M20*1.5

Type	Code	Parameters		
Instrument Type	P	Standard		
	Z	Explosion-Proof Type		
Instrument Appearance	Y	Integrated Type		
	F	Split Type		
Measurement Electrode	1	Rod type φ10		
	2	Rod Type φ12+PFA Bushing		
	3	Rod Type Reinforcement φ19		
	4	Rod Type Reinforcement φ19+PFA Bushing		
	Y	Special Custom		
Process Connection/ Material	G	External Thread G $\frac{3}{4}$	H	Thread G1
	K	DN40	A	DN50
	J	DN65	B	DN80
	C	DN100	Y	Special Custom
Signal Output	M	(4-20)mA		
	Y	Special Custom		
Medium Temperature	A	(-40~100)°C		
	B	(-40~250)°C Heat Sinks		
Measuring Range	XXX	User Specified Unit : m		
Length Cable	L	User Specified Unit : m		
Special Custom	Y	Special Custom		



HCDN-502 RF Admittance Level Transmitter



Application:	Liquid, Solid
Measuring Range:	10PF ~ 5000PF
Allow Work Pressure:	0.1~2MPa
Allowable Ambient Temperature:	-35°C~65°C
Accuracy:	< 0.5% Actual Measured Value
Protection Grade:	IP65
Signal Output:	4-20mA(24VDC)
Housing:	Die-Casting Aluminium
Protection Grade:	Ex d[ia Ga] IIC T6 Gb
Cable Entry:	M20*1.5

Type	Code	Parameters			
Instrument Type	P	Standard			
	Z	Explosion-Proof Type			
Instrument Appearance	Y	Integrated Type			
	F	Split Type			
Measurement Electrode	1	Cable type φ8			
	2	Cable Type φ11+PFA Bushing			
	Y	Special Custom			
Process Connection/ Material	G	External Thread G¾	H	Thread G1	
	K	DN40	A	DN50	
	J	DN65	B	DN80	
	C	DN100	Y	Special Custom	
Signal Output	M	(4-20)mA			
	Y	Special Custom			
Medium Temperature	A	(-40~100)°C			
	B	(-40~250)°C Heat Sinks			
Measuring Range	XXXX	User Specified Unit : m			
Length Cable	L	User Specified Unit : m			
Special Custom	Y	Special Custom			



HCDN-503 RF Admittance Level Transmitter



Application:	Liquid, Solid
Measuring Range:	10PF ~ 5000PF
Allow Work Pressure:	0.1~2MPa
Allowable Ambient Temperature:	-35°C~65°C
Accuracy:	< 0.5% Actual Measured Value
Protection Grade:	IP65
Signal Output:	(4-20)mA Alarm Output
Housing:	Die-Casting Aluminium
Protection Grade:	Ex d[ia Ga] IIC T6 Gb
Cable Entry:	M20*1.5

Type	Code	Parameters		
Instrument Type	P	Standard		
Instrument Appearance	Y	Integrated Type		
	F	Split Type		
Measurement Electrode	1	Rod type φ10		
	2	Rod Type φ12+PFA Bushing		
	3	Rod Type Reinforcement φ19		
	4	Rod Type Reinforcement φ19+PFA Bushing		
	Y	Special Custom		
Process Connection	G	External Thread G¾	H	Thread G1
	K	DN40	A	DN50
	J	DN65	B	DN80
	C	DN100	Y	Special Custom
Signal Output	M	(4-20)mA With Two Alarm Output		
	Y	Special Custom		
Medium Temperature	A	(-40~100)°C		
	B	(-40~250)°C Heat Sinks		
Measuring Range	XXX	User Specified Unit : m		
Length Cable	L	User Specified Unit : m		
Special Custom	Y	Special Custom		



HCDN-504 RF Admittance Level Transmitter



Application	Liquid, Solid
Measuring Range	10PF ~ 5000PF
Allow Work Pressure:	0.1~2MPa
Allowable Ambient Temperature:	-35°C~65°C
Accuracy:	< 0.5% Actual Measured Value
Protection Grade:	IP65
Signal Output:	(4-20)mA Alarm Output
Housing:	Die-Casting Aluminium
Protection Grade:	Ex d[ia Ga] IIC T6 Gb
Cable Entry:	M20*1.5

Type	Code	Parameters		
Instrument Type	P	Standard		
Instrument Appearance	Y	Integrated Type		
	F	Split Type		
Measurement Electrode	1	Cable type φ8		
	2	Cable Type φ11+PFA Bushing		
	Y	Special Custom		
Process Connection	G	External Thread G ³ / ₄	H	Thread G1
	K	DN40	A	DN50
	J	DN65	B	DN80
	C	DN100	Y	Special Custom
Signal Output	M	(4-20)mA With Two Alarm Output		
	Y	Special Custom		
Medium Temperature	A	(-40~100)°C		
	B	(-40~250)°C Heat Sinks		
Measuring Range	XXX	User Specified Unit : m		
Cable Length	L	User Specified Unit : m		
Special Custom	Y	Special Custom		



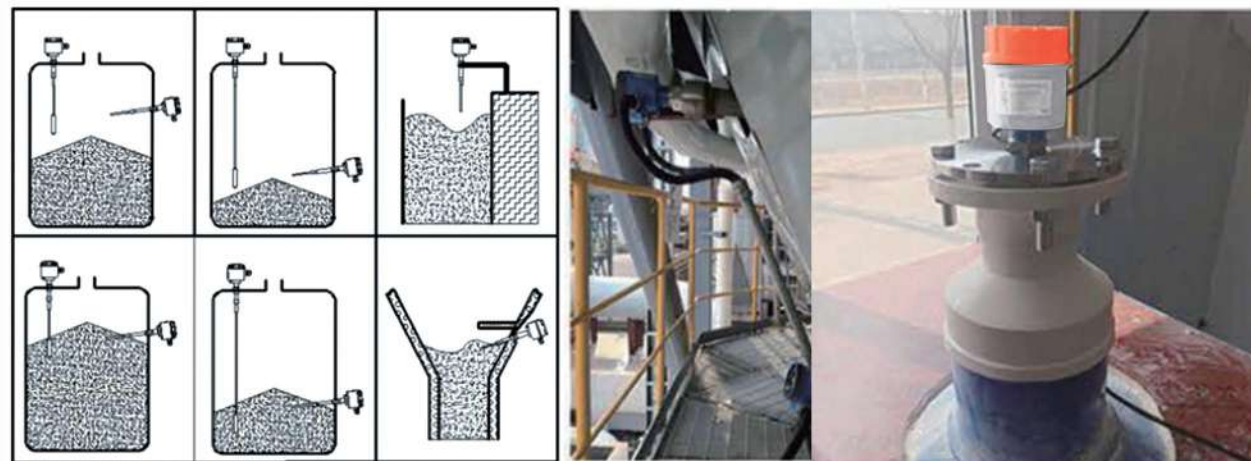
HCSP-30 RF Admittance Level Switch

Overview

RF admittance level switch is a level limit switch based on the principle of RF admittance, which is modular in design and economical and practical. It can measure a variety of solids and liquids and can be used in a variety of applications. Potentiometers can be used to adjust sensitivity and output delay.

Principle

RF admittance level switch transmits a certain high frequency radio wave acting on the probe. To analyze and confirm the level change in the container. The frequency of radio waves varies with the materials measured by the level switch. The probe of RF admittance level switch and the wall of container will form a capacitor with fixed spacing as two electrodes. The insulating material of the probe and the surrounding air will provide the insulating medium; when air is replaced by other medium, the capacitance will change. This change will cause a change in the radio waves acting on the RF admittance level switch probe. Once this change is detected by the internal circuit of the RF admittance level switch, and compared with the setting value, the change will be confirmed. When the setting value is same with detected , it will output a switching signal.



Application:	Solid Particles, Powder Liquid Conductive Non-Conductive Materials
Power Source:	220V AC or 24V DC
Relay Capacity:	DPDT rated 5A
Time-Delay Relay:	0~30 Second adjustable
Rate Work:	3W
Medium Temperature:	-40°C ~ 200°C
Environment Temperature:	-40°C ~ 80°C
Cable Inlet:	M20*1.5 or 1/2 NPT

Type	Code	Parameters		
Instrument Type	P	Standard		
	Y	Special Custom		
Instrument Appearance	Y	Integrated Type		
	F	Split Type		
Process Connection	H	External Thread G1	K	DN40
	A	DN50	J	DN65
	B	DN80	C	DN100
	Y	Special Custom		
Medium Temperature	P	-40°C ~ 120°C		
	S	-40°C ~ 200°C		
	Y	Special Custom		
Power	1	220V AC		
	2	24V DC		
Cable Inlet	M	M20*1.5		
	N	1/2 NPT		
Length Of Electrode	XXX	Actual Range Customer Selected, Unit mm		
Cable Length	L	User Specified Unit : m		
Special Custom	Y	Special Custom		

HCYC Tuning Fork Level Switch

Overview

Tuning fork level switch can measure a variety of material levels, it has wide applicability and extremely high reliability. The products are used in petrochemical, metallurgy, light industry, building materials, environmental protection and other industries, to achieve the monitoring of salt mine storage bins, the reliable measurement of stock bins of foam molding machines and plastic uptake machines (low density foam particles), and precise measurement of cement packaging hoppers, rubber production raw material silos, sintered ash silos in smelters. The tuning fork level switch is easy to install and maintenance free. Its working has nothing to do with the conductivity, dielectric constant, viscosity, pressure and temperature of the liquid.

Principle

The working principle of tuning fork level switch is that the probe is based on the tuning fork design, adopts piezoelectric devices to realized the vibration driving and detection of the fork body. When not in contact with materials, the tuning fork will vibrate at the resonant frequency; once it is contacted by the materials, the vibration amplitude of the tuning fork decreases obviously, and the output signal amplitude of the piezoelectric detection device decreases accordingly. The signal change will be detected and analyzed by the intelligent circuit and a switching signal will be output.



Application:	Solid Particles , Powder, Liquid
Medium Temperature:	-20 ~ 200°C
Power:	3W
Time Delay:	1-30s
Vibrating frequency:	300±50HZ
Contacter Capacity:	SPDT 8A/250V AC
Electrical Interface:	M20*1.5
Working Pressure:	≤2Mpa
Working Voltage:	24V DC/220V AC
Protection Grade:	IP65

Type	Code	Parameters
InstrumentType	P	Standard
Process Connection	G	Thread G1A
	Y	Special Terms
Power Supply	1	24V DC
	2	220V AC
	Y	Special Custom
Measuring Temperature	P	-20 ~ 80°C
	Z	-20 ~ 130°C
	G	-20 ~ 200°C
Inserted length	XXX	Unit: cm

HCZX Rotary Paddle Level Switch

Overview

Rotary paddle level switch is on-site control equipment which is used to detect the level of solid materials(powder, particles), its unique sealing design, super overload protection ability and simple installation method make it widely used in feed, food, pharmaceutical, chemical, plastics, construction, fertilizer and other industries.

Principle

The blade of rotary paddle level switch is connected with the clutch by driving shaft, the motor will keep working before the blade touching the materials, once the blade contacts with the materials, the motor power will be shut off and stops moving, at the same time, the device will output a signal to indicate that the material level has reached the height configured.



Application:	Solid Particles , Powder
Medium Temperature:	-20~80℃/high temperature type -20~400℃
Power:	4W
Rotating Speed:	1RPM
Measuring Torque:	1.0 N·m
Contact Capacity:	SPDT 5A/250VAC
Electrical Interface:	M20*1.5
Working Voltage:	24V DC 220V AC

Type	Code	Parameters		
Type	P	Standard		
	R	Flexible Shaft		
Process Connection	G	Thread G1A		
	A	DN50 PN0.6MPa	B	DN65 PN0.6MPa
	Y	Special Terms		
Power Supply	1	24V DC		
	2	220V AC		
	Y	Special Custom		
Measuring Temperature	P	-20~80℃	Z	-20~200℃
			G	-20~400℃
Protective Tube	W	With		
	Y	Without		
Blade	H	30*100mm Standard type A		
	I	65*80mm Standard type B		
	G	30*100mm Small sickle		
	K	100*130mm Large sickle		
	Y	Special Custom		
Inserted Length	XXX	Unit: cm		

HCUHZ Magnetic Level Indicator

Overview

Magnetic level indicator could be used to observe the liquid level directly of the medium in various containers. And remote transmission and switching alarm function could be added, it is connected to remote display through 4-20mA output. It is suitable for liquid level indication of the petroleum, chemical and other industries. The liquid level indicator has simple design structure, intuitive and clear observation, no blocking nor leakage, easy installation and simple maintenance.

Measuring Principle

There is a cavity to accommodate the floater of magnetic level switch, we call it as main body or housing. It is connected by flange or other method with container to form a communicating vessels. Because we added a magnetic steel in the floater at the junction interface which it sinks into the liquid and emersion part. When it floats with the floater and push the rotating columns to turns 180°. Because the magnetic rotating column is a cylinder composed of two semi-cylinders with red and white, so it will change the color when rotate 180°, the junction surface of two colors is just the height of liquid level inside.



Application:	Liquid
Material :	Stainless Steel, Engineering Plastics, PTFE
Measuring Range:	300mm ~ 6000mm
Display Method:	Field Display
Remote Transmission:	4 ~ 20mA
Accuracy:	±10mm
Electrical Interface:	M20*1.5
Nominal Pressure:	0 ~ 2.45Mpa、 2.45Mpa ~ 9.6Mpa

Type	Code	Parameters		
Type	P	Standard		
Process Connection	G	Thread G1A		
	H	Flange		
	Y	Special Custom		
Materials	B	Stainless Steel	C	Engineering plastic
	E	PTFE	Y	Special Custom
Remote Transmission	0	Without		
	1	4 ~ 20mA		
Alarm Output	R0	Without		
	R1	1 Alarm		
	R2	2 Alarms		
	Y	Special Custom		
Medium Temperature	P	-20 ~ 80°C		
	T	80 ~ 400°C		
Nominal Pressure	Q	0 ~ 2.45Mpa		
	W	2.45Mpa ~ 9.6Mpa		
Measuring Range	XXX	Unit: mm		