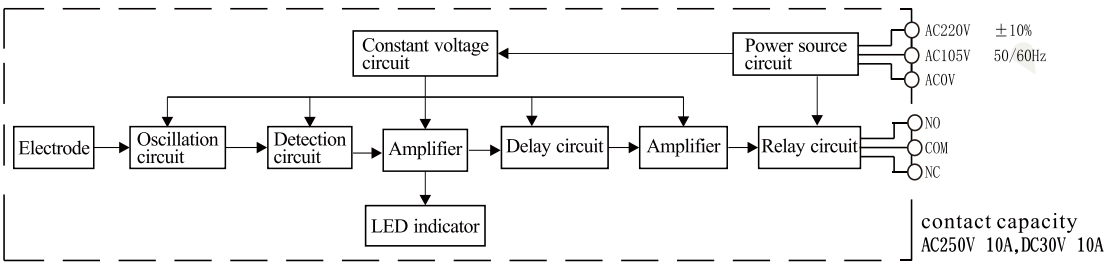
01静电容物/液位开关

工作原理

SE系列静电容物位开关是利用物位开关的探头（感应极）与桶壁（接地电极）作为电容器的两个极板,当电容器的两个极板间的介质发生变化时，其电容值也会发生变化，物位开关独特的分析处理单元检测这一变化的大小，当这一变化达到开关的设定值时，即转换成开关信号输出，供控制使用，从而反映出被测介质或液体界面的高低。

WORKING PRINCIPLE

The probe (induction pole) of the level switch and the container wall (earth ground) are used as the two polar plates of the capacitor. As the medium between the two plates changes, the capacitance changes accordingly. The special analyzing and processing unit of the level switch detects the range of changes. When the change is up to the set value of the switch, it is converted into switch signal output for control. In this way, it further reflects the height of the measured medium or the liquid level.



技术参数

- **电源电压：** 220VAC /105VAC、24VAC/24VDC
- **触点容量：** 250VAC /10A、DC30V /10A, SPDT
- **功　　率：** 4.5VA
- **延　　时：** 0-10S可调
- **环境温度：** -25℃~70℃
- **防护等级：** IP65
- **介质温度：** 标准型-25℃~80℃
  高温型可达200℃
  超高温型最高可达1000℃

特点

- ▲ 粘附性介质测量时动作稳定
- ▲ 导电、不导电介质均可使用
- ▲ 强腐蚀性液体检测方便
- ▲ 无可动部件、机械强度好
- ▲ 安装方便，调试简单

specification

- Power Supply: 220VAC/105VAC, 24VAC/24VDC
- Contact Capacity: 250VAC/10A, DC30V/10A, SPDT
- Power: 4.5W
- Time Delay: Adjustable 0~10s
- Working Temperature: -25℃~70℃
- Protection Grade: IP65
- Medium Temperature: Standard Type: -25℃-80℃
  High-temperature Type: max 200℃
  Ultrahigh Temperature Type: max 1000℃

Features

- ▲Stable measurement of adhesive mediums
- ▲Applicable to both conductive and non-conductive mediums
- ▲Convenient detection of strong corrosive liquids
- ▲Strong mechanical property without movable parts
- ▲Easy installation with simple adjustment

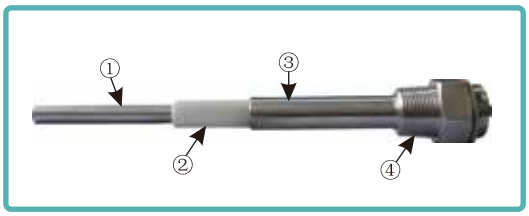
用　途

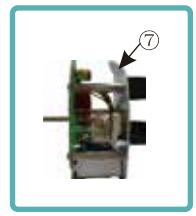
液　体：各种溶剂、燃料、水、纯水等等
界　面：油水界面、水及水中沉淀物、汽泡及洗衣水等
粒　状：饲料、药品、塑料粒子等
混合液：工厂废水、废液、生活污水、雨水等
粉　体：灰尘、土砂、面粉、糖、米粉、石灰粉、水泥等
块　状：煤、石子 、矿石等

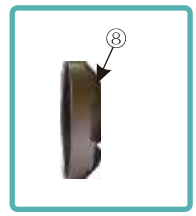
APPlications

Liquid: Various kinds of solvents, fuels, water, pure water and etc.
Interface: Water-oil interface, water and sediments in water, foam, washing water and etc.
Particles: Feed, medicine, plastic particles and etc.
Mixed Liquid: Plant effluent, sewage, domestic sewage, water and etc.
Powder: Dust, mud with sand, wheat flour, sugar, rice flour, lime powder, cement and etc.
Lump: Coal, stone, ore and etc.

结构 示意图







①感应极：材质SUS304或SUS316L
②绝缘体:材质UPE或PTFE
③接地极：材质SUS304或SUS316L
④接续螺纹：材质SUS304或SUS316L（标准：1″PT）
⑤接线盒：铝合金烤漆
⑥出线接口：G3/4″
⑦电路板：
⑧接线盒盖：铝合金烤漆

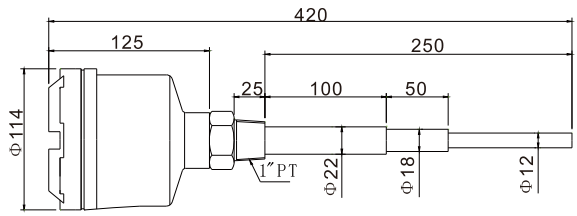
structure Diagram

① Induction Pole: SUS304 or SUS316L
② Insulator: UPE or PTFE
③ Earth Ground: SUS304 or SUS316L
④ Screw Connection: SUS304 or SUS316L
(Standard: 1" PT)
⑤ Connection Box: Aluminum alloy coated with paint
⑥ Outlet Interface: G3/4"
⑦ Circuit Board:
⑧ Connection Box Cover: Aluminum alloy coated with paint

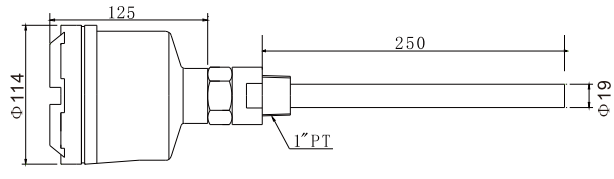
型　号

Model

SE—10



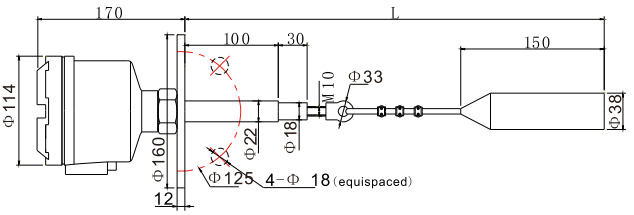
SE—11



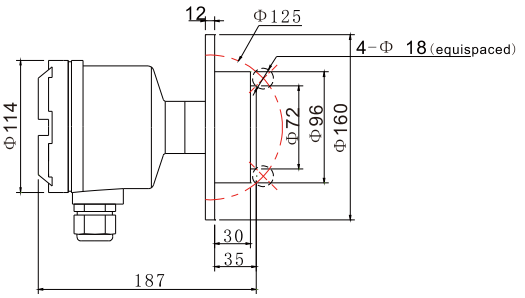
型 号

Model

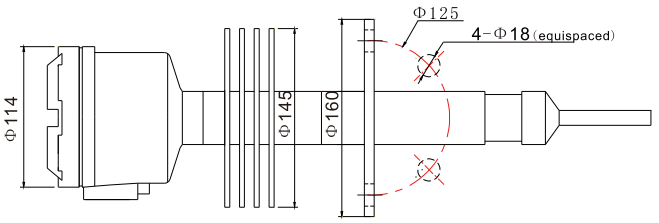
SE—20



SE—30



SE—40



选型指南 Selection Guide

SE—□□□—□

总长：

单位mm

电源：

A：220VAC / 105VAC ±10% B：24VAC /24VDC

安装连接方式 **Connection Method:**

F：法兰 flange S：螺纹 screw

X：其它（详细备注）others (Rmarks for detals)

探头形式 **Probe Model**

10.棒式（标准为250mm长） Rod type (standard is 250mm) 11.棒式被覆 Coated rod type

12.棒式高温型（max200℃） High temperature rod type (Max 200℃） 20.缆式 Wire type

21.缆式被覆 Coated wire type 22.缆式高温型（max200℃） High temperature wire type (Max 200℃)

30. 平板式（仅法兰连接） Flat type (only for flange connection)

40.超高温型 Ultra high temperature type 50.特殊定制探头 Specially customized probe

02射频导纳物位开关 L-2000D

02RF Admittance Level Switch L-2000D

工作原理

射频导纳物位控制器是基于射频(RF)技术引进研发而成的、防粘附、更可靠、适用性更广的物位控制器：将一高频无线电波施加在探头上，当物料位置发生变化时，这一变化被电路检测后通过仪表内的分析处理单元进行连续的分析，确定周围环境(物位)的变化，并转换成相关的信号输出供远程控制或报警使用。仪表独特的电路设计(利用等位原理)，可以使测量电路能彻底消除探头上物料的堆积对测量的影响，从而正确反映出实际的物位而不是粘附在探头上堆积的物料。

WORKING PRINCIPLE

RF Admittance Level Controller is developed based on the introduced RF technology, which is anti-adhesion and more reliable with wide application. With high frequency radio waves applied to the probe, the conductance value formed together by the probe, the container wall and the measured materials changes accordingly when the position of the material changes. Once the electric circuit detects this change, the analyzing and processing unit of the instrument makes constant analysis to recognize the change of the surrounding environment (material level), and then converts this change into related output signals for long-distance control or alarm. The unique electric circuit design based on the equipotential principle enables the measured circuit to eliminate any impact on detection by the material adhering on the probe, thus correctly reflecting the actual material level rather than the accumulated materials that adhere on the probe.

特点

通用性强：广泛应用于各种场合、飞灰。颗粒、粉体、液体、粘稠、导电、不导电的物料。

抗粘附性：独特的电路设计可以使测量电路对探头上堆积的物料忽略不计并自动校正。

分离式探头：探头与控制器部分可分离，无电缆连接，安装拆除方便，且不影响现场工作。

功能强大：输出触电容量大，并有指示灯显示工作状态，0~30秒延时可消除物料波动的影响。

断电保护：常开或常闭(现场切换)。

Features

Wide Application: Application for the detection on flying ash, particles, powders, liquids, and adhesive, conductive or non-conductive materials.

Anti-adhesion: Unique electric circuit design to enable the measuring circuit to neglect the accumulated materials on the probe and conduct automatic readjustment.

Separate Probe: Separable probe and controller without cable connection to facilitate disassembly, and installation without influence on the work site.

Powerful Function: Huge output contact capacity with a indicator to show the work status and 0 to 30 seconds time delay to eliminate the influences of the medium's fluctuation.

Power-off Protection: Normally open or normally close (which can be switched on site)

技术参数

电 源 电 压：220VAC/110VAC/24VAC/24VDC
功　　率：3W
继电器输出：5A/240VAC,两组常开、常闭触点
灵　敏　度：0.3pf-750pf
探 头 材 质：SUS304/SUS316、Teflon
环 境 温 度：-40℃-80℃
延 时 时 间：0-30秒可调
工 作 温 度：-180℃-250℃(超高温可达1000℃)
连 接 螺 纹：1″PT(特殊规格可定制)

Technical Specification

Power Supply: 220VAC/110VAC/24VAC/24VDC

Power: 3W

Relay Output: 5A/240VAC, DPDT

Sensitivity: 0.3pf ~750pf

Probe Material: SUS304/SUS316、Teflon

Environmental Temperature: -40℃~80℃

Time Delay : 0 ~ 30 sec adjustable

Environmental Temperature: -180℃~250℃

(Ultra-high temperature up to 1000℃)

Connection Screw: 1"PT (customizable)

选型指南 Selection Guide

L-2000D —□□□—□—□□□

隔爆 Explosion-proof

Ex不选则无防爆 No explosion proof unless Ex is selected

温度 Temperature

N:150℃ T:250℃ H:特殊高温 Special High Temperature

探头总长 Probe Length

用户自选,标准为450mm,杆式探头最长2.5米,缆式探头最长20米
Customer required, 450mm for standard, max 2.5 m for rod type probe length, max 20 m for cable type probe length

探头抗粘附极长度 Anti-adhesive Pole Length of the Probe

用户自选,标准为110mm,以至少伸出容器内壁积料50mm
Customer required, 110mm for standard, it should jut out at least 50mm from the adhesive materials in the tank inside wall

探头类型 Probe Model

A1.标准棒式 Standard Rod Type
A2.超短棒式 Ultra-shot Rod Type
A3.高温棒式 High Temperature Rod Type
A4.棒式被覆 Covered Rod Type
B1.钢缆 Steel Cable
B2.钢缆被覆 Coated Cable Type
C1.特殊高温 Specially High Temperature
C2.超高温 Ultra-high Temperature
D1.平板式 Flat Type
X.特殊定制 Specially Customized

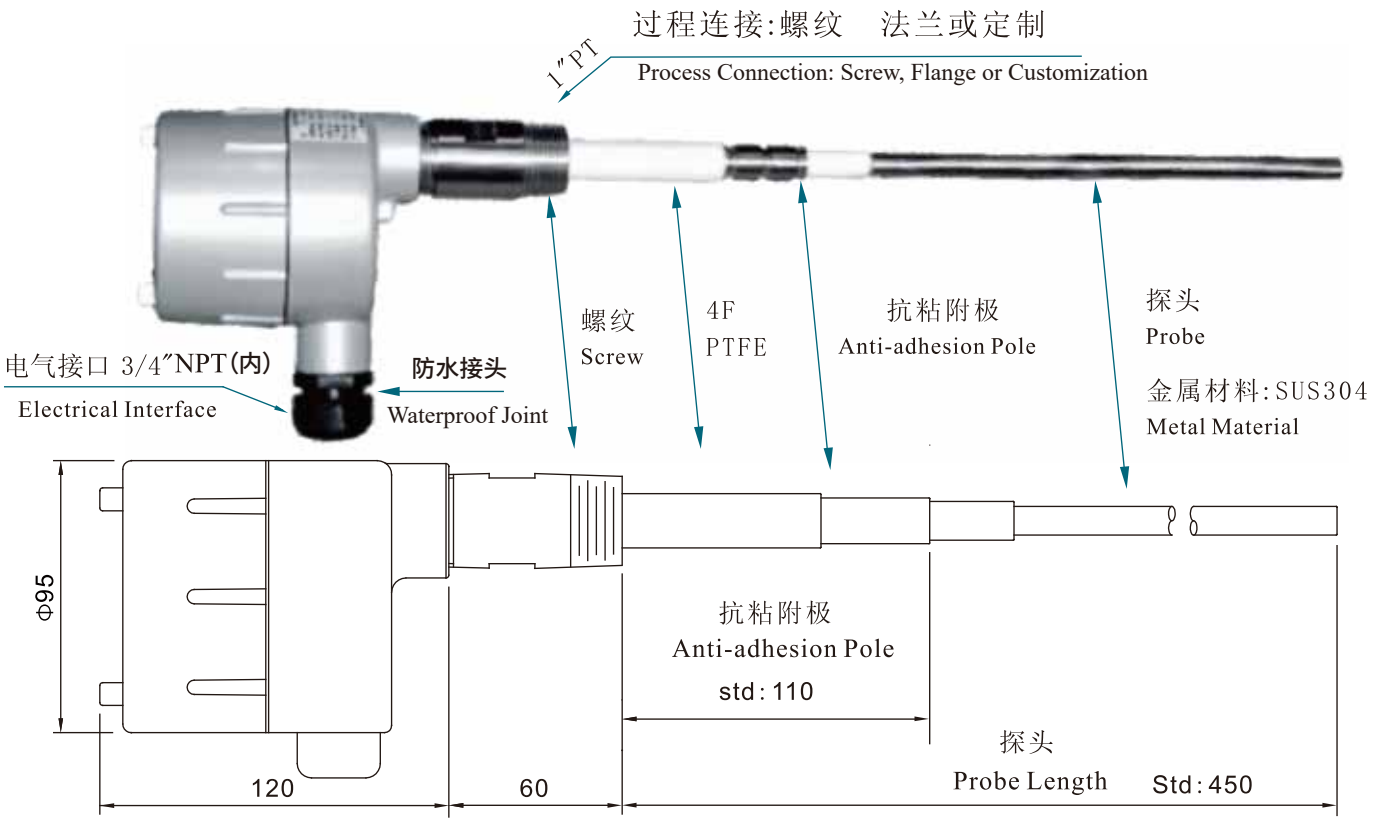
电源 Power Supply

A.220VAC B.110VAC C.24VAC D.24VDC E.特殊 Special

连接方式 Connection Form

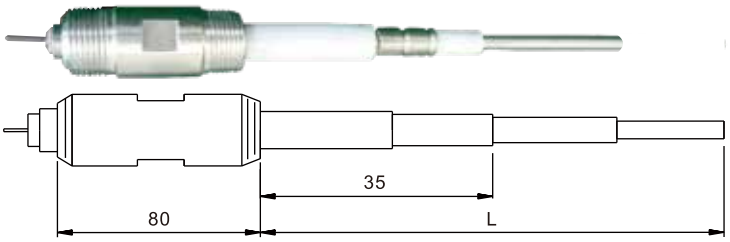
F:法兰 Flange S:螺纹 Screw

棒式标准探头 Standard Rod Type probe A1



探头型号 Probe Model

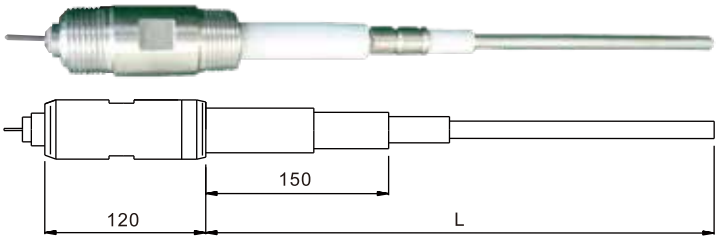
超短探头 Ultra-short Probe A2



这种探头伸入仓内的部分很短，适用于小的料斗、容器及其他空间有限的地方，可顶装、侧装。
最高工作温度：150℃
探头材质：SUS304/316、PTFE

The part of the probe into the tank is very short, suitable for small hoppers, tanks and other places with limited space by top mounting or side mounting.
Maximum Working Temperature: 150 ℃
Probe Material: SUS304/316, PTFE

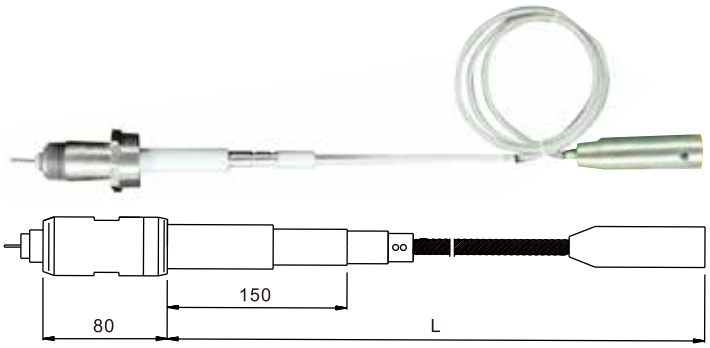
棒式高温探头 High Temperature Rod Probe A3



这种探头适用于较深或较厚的贮罐、料仓或保温层，检测较低的料位，可顶装、可侧装。
最高工作温度：250℃
探头材质：SUS304/316、PTFE

This kind of probe applies in deep or thick containers, hoppers or heat insulating layers to detect the low material level.
Maximum Working Temperature: 250 ℃
Probe Material: SUS304/316, PTFE

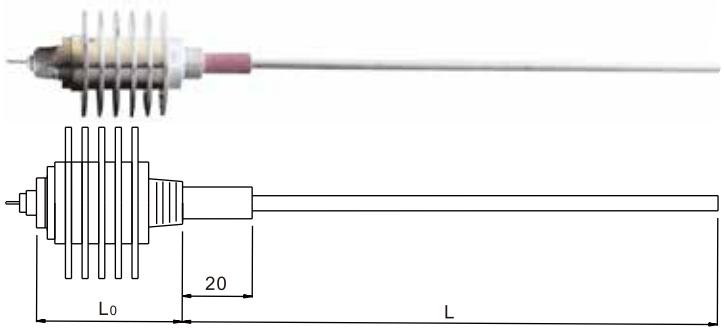
钢缆探头 Standard Cable Probe B1



这种探头伸入仓内的部分很长，适用于较高的料仓及容器，可顶装。
最高工作温度：250℃
探头材质：SUS304/316、PTFE

The part of the probe into the tank is very long, suitable for tall hoppers and containers by top mounting or side mounting.
Maximum Working Temperature: 250 ℃
Probe Material: SUS304/316, PTFE

特殊高温探头 Special High Temperature Probe C2

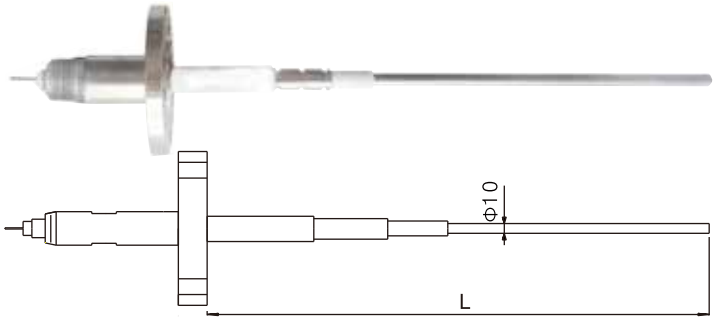


这种探头适用于各类高温料仓，可顶装、可侧装。
定制可达到1000℃
探头材质：SUS304/316、陶瓷

This kind of probe applies in various high temperature hoppers by top mounting or side mounting.
Maximum Temperature for Customization: up to 1000 ℃
Probe Material: SUS304/316, ceramics

探头型号 Probe Model

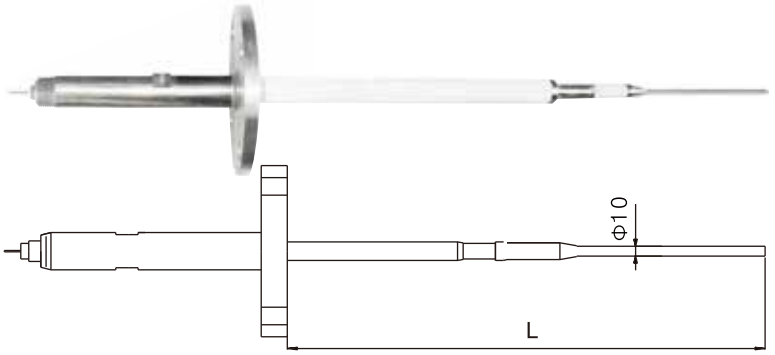
标准探头（法兰安装）Standard Probe (Flange Mounting) A3



这种探头采用法兰连接，可顶装、可侧装。
标准法兰：DN20、PN1.0、可定制
最高工作温度：250℃
探头材质：SUS304/316、PTFE

This kind of probe is connected with Flange by top mounting or side mounting.
Standard Flange: DN20, PN1.0 or customization
Maximum Working Temperature: 250 ℃
Probe Material: SUS304/316, PTFE

杆式超高温探头 Ultra-high Temperature Rod Probe C2



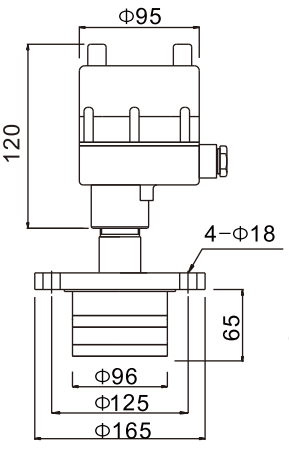
这种探头适用于高温环境
特殊定制可达到1000℃
探头材质：SUS314/316、陶瓷

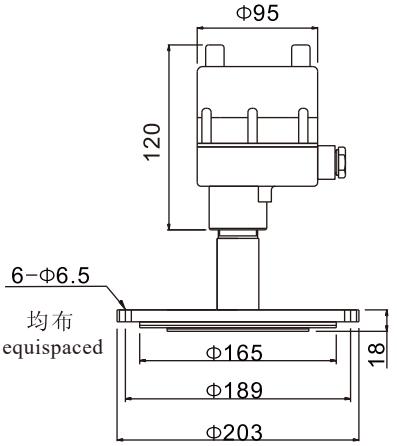
This kind of probe applies in high temperature environment.
Maximum Temperature for Customization: up to 1000 ℃
Probe Material: SUS304/316, ceramics

平板探头 Flat Probe F

这种探头安装在料仓上可保持探头与仓壁基本平齐，它使探头伸入料仓、溜槽、输送机械内部的部分减至最短。
最高工作温度：250℃
探头材质：SUS304/316
典型应用：检测砾石、粒料、煤块及其他溜　　槽中的物料，在物料流动场合其他探头容易折断或打弯的地方，用这种探头尤其理想，常用于溜槽堵塞检测，如电厂三通煤管的堵煤检测。

This kind of probe can be installed on the container to keep the probe in line with the container wall, which minimizes the internal part of the probe extending into the container, chute and conveying machinery.
Max Working Temperature: 250℃
Probe Material: SUS304/316
It is used to detect gravels, granular materials, coal briquette and other materials in the chute, and is especially desirable in case of material flow or places where probes are easy to break off or bend. It is commonly applied to detect chute block, such as the coal blockage detection of the coal dropping pie of power plants.





03射频导纳物位开关 SRF—88
03 RF Admittance Level Switch SRF-88

工作原理

射频导纳物位控制器是利用相移技术来检测仓内有无物料。电子单元中的石英晶体震动器产生一个高频正弦波，一路直接送往检测极棒，另一路经过一个电压跟随器送往防粘附保护电极，当极棒碰到物料时，信号的电抗（包括容抗和阻抗）会发生变化，引起极棒上高频信号的相位发生变化，经处理后，驱动输出电路，发出报警信号。当有物料粘附在探头上时，由于保护套与仓壁之间构成一个电容，所以加在保护套上的高频信号就会使该电容趋向饱和，之后保护套周围物料的电位就等于保护套上的电位，也就等于探测电极上的电位，因此探测极上的高频信号就无法通过粘附层流入仓壁。

WORKING PRINCIPLE

The radio frequency admittance level controller is used to detect whether there are materials in the container or not by phase shift technology. The quartz crystal vibrator in the electronic unit generates a high-frequency sine wave, one of which is sent directly to the detection pole, and the other is sent to the anti-adhesion protection pole through a voltage follower. When the pole hits the material, there is change in the resistance (including capacitance and impedance) of the signal, causing a change in the phase of the high-frequency signal on the pole. After processing, the output circuit is driven to issue an alarm signal. When the material is adhered to the probe, a capacitor is formed between the protective sleeve and the container wall, so that the high-frequency signal applied to the protective sleeve causes the capacitor to become saturated, and the potential of the material around the protective sleeve is equal to the electric potential on the protective sleeve and is equal to the electric potential on the detection pole. As a result, the high frequency signal on the detection pole cannot pass through the adhesive layer into the container wall.

型号A Model A　　型号B Model B

特点

双安装接头3/4″或1-1/4″NPT
两步手动校准
灵敏度模拟可调
波峰焊焊接电子线路
采用抬高型，最高工作温度可达120℃
高温震动场合可选用分离型形式，工作温度超过230℃
绳式最大长度为14米

Features

Double installation interface 3/4" or 1/4"NPT
Manual calibration in two steps
Adjustable sensitivity analog
Wave soldering electronic circuit
Max working temperature up to 120℃
Separate type for high temperature and great vibration conditions with working temperature up to 230℃
Max cable length up to 14m.

技术参数

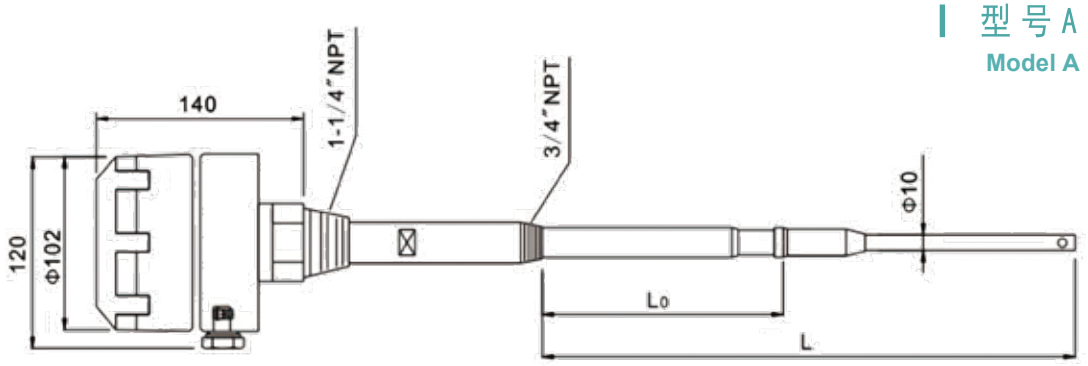
电源电压：220VAC±15% 50Hz、24VDC±5%
功　　率：4W
输　　出：双刀双掷(DPDT)，5A(阻性)，220VAC
环境温度：-40℃-70℃(中，低灵敏度设置)
　　-20℃-50℃(高灵敏度设置)
灵 敏 度：0.5-500pF
延迟时间：1，7，14秒可选或选择无延时

Technical Specification

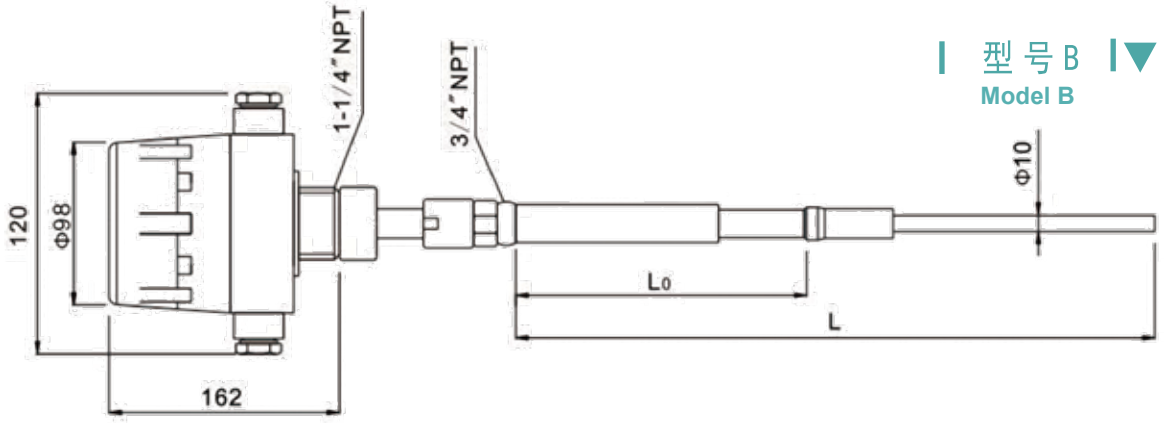
Power Supply: 220VAC±15% 50Hz、 24VDC±5%
Power: 4W
Output: DPDT, 5A (resistive), 220VAC
Environmental Temperature:
-40℃-70℃ (middle and low sensitivity settings)
-20℃-50℃(high sensitivity settings)
Sensitivity: 0.5-500pF
Time Delay: 1, 7, or 14 seconds for selection or select no time delay

选型指南 Selection Guide

型号A Model A



型号B Model B



SRF-88—□□□□□□

绳式电极组件 Rope Type Electrode Assembly

0=不要绳式电极组件
0 = ropeless type electrode assembly
1=指定绳式电极的长度,单位为mm
1 = the length of the designated rope type electrode, unit is mm

安装形式 Installation Form

A=3/4不锈纲和1-1/4 铝合金NPT接头
A = 3 / 4 stainless steel and 1-1/4 aluminum alloy NPT joint
N=1-1/4 NPT铝合金接头(标准探头)
N = 1-1/4 NPT joint of aluminum alloy (standard probe)

电源电压 Supply Voltage

1=220VAC 2=24VDC

外壳等级 Shell Class

G=普通型 G = General Type
X=隔爆型 X = Explosion-proof Type

探头形式 Probe Form

0=标准 0 = Standard
2=食品级 2 = Food Class
4=特短 4 = Special Short
5=重型 5 = Heavy
8=平板 8 = Flat

电子线路 Electronic Circuit

0=标准(2pF) 0 = Standard (2pF)
A=高灵敏度(1pF) A = High-sensitivity (1pF)
L=绳式电子部件 L = Rope Type Electronic Components

备注:绳式只用于0、 4、 5型探头
Note: Rope type is used only for 0, 4 or 5 probes

04射频导纳物/液位计 L-2631H

04 RF Admittance Level Meter L-2631H

工作原理

基于导纳原理，由容器内的探头和容器壁构成一个电容的二块极板，由探头与容器壁之间的空气以及探头本身的绝缘层构成该电容的介电材料，当容器内物料上升， 该电容介电材料中的部分空气被物料所取代，因为各种物料（介电常数＞1）均有不同于空气（介电常数＝1）的介电常数，所以该电容的电容量以及总阻抗也随之变化，这一变化被电路测量后，再通过放大器，转换成线性的4~20mA电流信号输出，并连续跟踪、测量、转换、输出电信号。

Based on the principle of admittance, the probe inside the container and the container wall form the two-pole plates of the capacitor, while the air between the probe and the container wall, and the insulating layer of the probe constitute the dielectric material. When the material in the container rises, part of the air in the dielectric material of the capacitor is replaced by the material because various kinds of materials (dielectric constant >1) have dielectric constant different from that of air (dielectric constant =1). Therefore, the capacity and the total resistance of the capacitor also change, which is measured by the circuit and then converted into a linear 4~20mA current signal output through the amplifier to continuously track, measure, convert and output the current signal.

特点

通用性强：广泛应用于各种导电和非导电的测量。
抗粘附性：采用专业的抗粘附电路，可以消除物料粘附而产生的虚假信号。
探头可拆：探头与控制器之间没有电缆连接，随时可以将控制器拆除更换维修，不影响进出物料。
探头耐高低温：探头适合-30℃至260℃的工作环境。
贴片电路：采用贴片电子线路，提高了抗震性，使电路参数更稳当可靠。
智能诊断：通电后，仪表电路自动检测工作状态是否正常。

Wide Application: Application for the measurement of various conductive and non-conductive materials.
Anti-adhesion: Professional anti-adhesion circuit to eliminate false signal produced by medium adhesion.
Detachable Probe: No cable connection between the probe and the controller for disassembling, replacing and repairing the controller without influence on charging and discharging of the material.
High and Low Temperature Resistant Probe: Applicable for -30℃- 260℃ working environment.
SMT Circuit: SMT Circuit for improved anti-vibration feature and stable and reliable parameters.
Intelligent Diagnosis: Automatic detection to identify whether the working status is normal or not after power on.

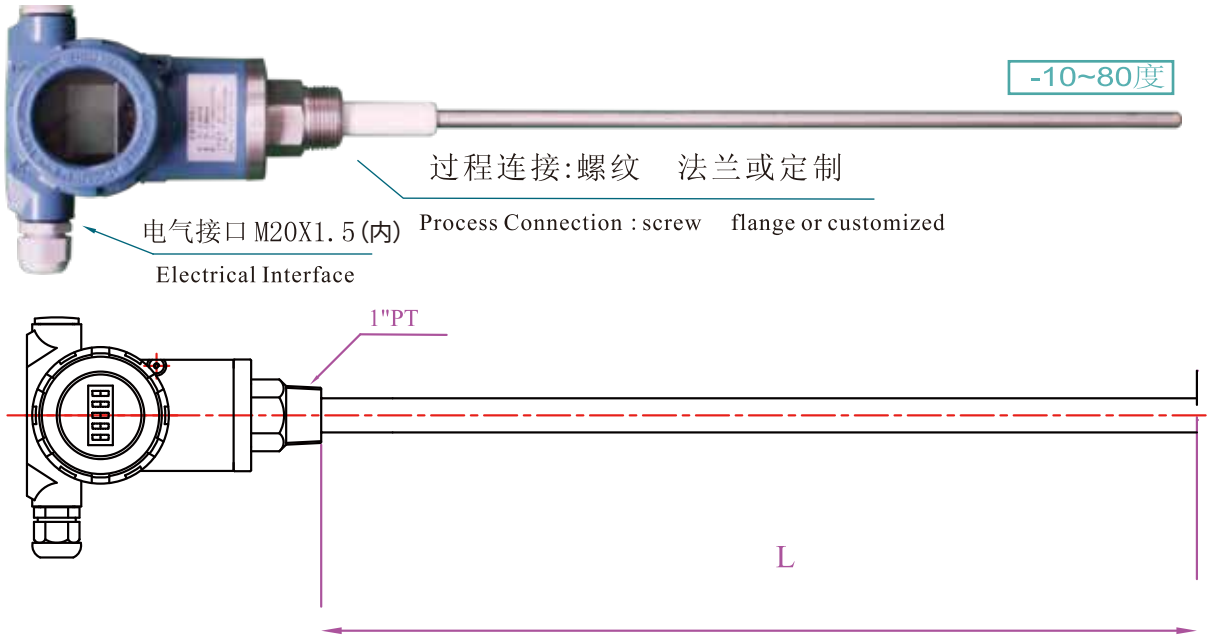
技术参数

电源电压：24VDC
量程范围：0.3m-30m
输出信号：4-20mA，两线制
功率：3W
线性精度：±0.5%
温度线性：±0.0015%/1℃
环境温度：-30℃-60℃
外壳标准：重型铸铝，IP65
电气接口：3/4’’ NPT

Power Supply: 24VDC
Measuring Range: 0.3m-30m
Output Signal: 4-20mA, two-wire system
Power: 3W
Linear Precision: ±0.5%
Temperature Linearity: ±0.0015%/1℃
Working Temperature: -30℃-60℃
Shell Standard: Cast aluminum, IP 65
Electrical Interface: 3/4”NPT

探头型号 Probe Model

L-2631H杆式（螺纹连接） L-2631 Rod Type (screw connection)

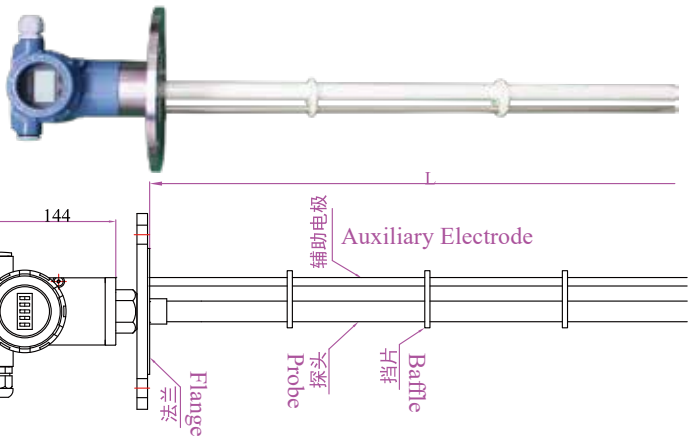


探头型号 Probe Model

双棒探头 Double Rod Probe A2

适合用于各种容器，可检测对SUS316不锈钢无腐蚀性液体。

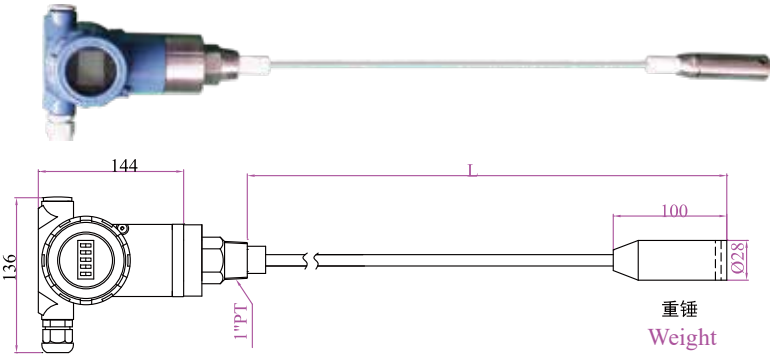
Applicable for various containers to measure liquids not corrosive to SUS316 stainless steel.



单缆标准探头 Standard Single Cable Probe B1

用于金属容器，可检测料位、液位，探头为Teflon涂层，抗腐蚀。建议使用于长度超过3米的应用中，如有搅拌，建议底部固定。

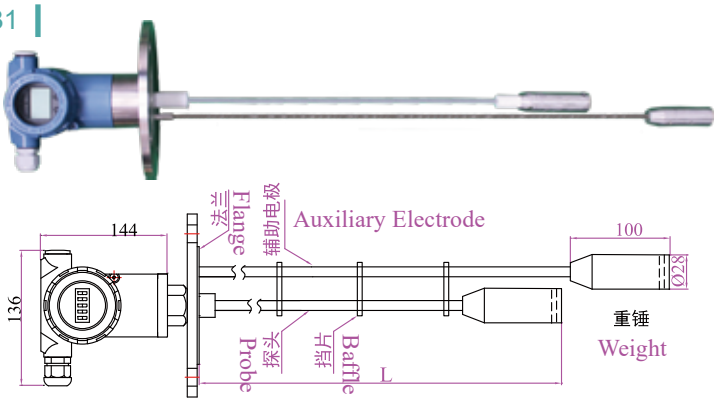
Applicable to measure the level of various liquids and solid materials in metal containers. The probe is Teflon coated and anti-corrosive. It is suggested for applications with a length of more than 3 meters. If there is stirring, it is suggested to fix the probe at the bottom.



双缆标准探头 Standard Double Cable Probe B1

用于各种容器，可检测大多数液体，探头为Teflon涂层，抗腐蚀。建议使用于长度超过3米的应用中，如有搅拌，建议底部固定。

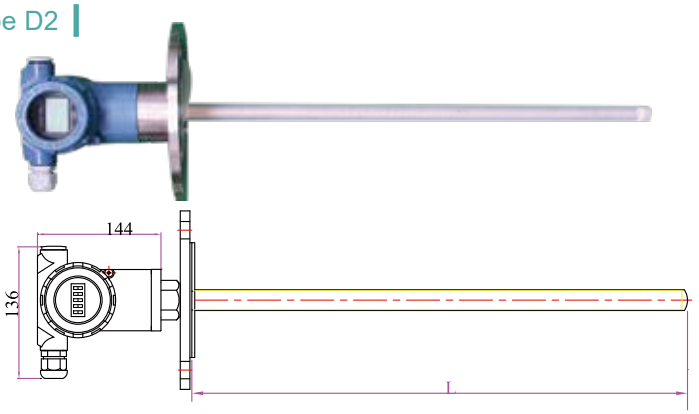
Applicable to measure most kinds of liquids in all kinds of containers. The probe is Teflon coated and anti-corrosive. It is suggested for applications with a length of more than 3 meters. If there is stirring, it is suggested to fix the probe at the bottom.



单杆防腐探头 Anti-corrosive Single Rod Probe D2

用于各种容器，探头为Teflon被覆，抗腐蚀。建议检测导电液体。

Applicable for various containers. The probe is Teflon coated and anti-corrosive. It is suggested to measure conductive liquids.



选型指南 Selection Guide

L-2631H — □ □ — □ □ □

防爆 Explosion-proof

Ex不选则无防爆 No explosion proof unless Ex is selected

温度 Temperature

N：125℃ T：250℃ H：特殊高温 Special High Temperature

探头总长 Probe Length

用户自选，杆式探头最长2.5米，缆式探头最长30米

Self-selected by customer, max 2.5m for rod probe length, max 30m for cable probe length

探头型号 Probe Model

A1. 单棒 Single Rod　　A2. 双棒 Double Rod

B1. 单缆 Single Cable　　B2. 双缆 Double Cable

C1. 超高温 Ultra-high Temperature

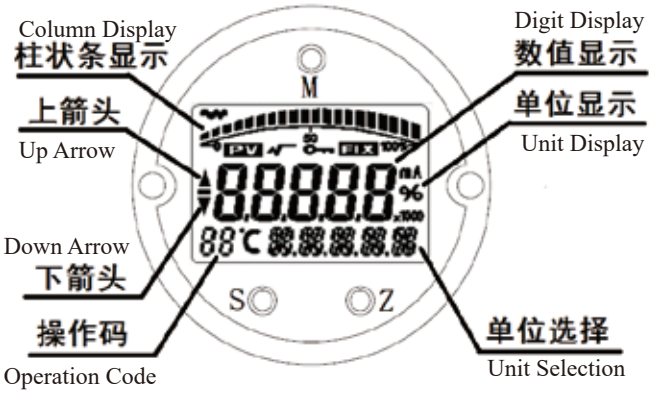
D1. PP被覆 Coated with PP　　D2. PTFE被覆 Coated with PTFE

X. 特殊定制 Special Customization

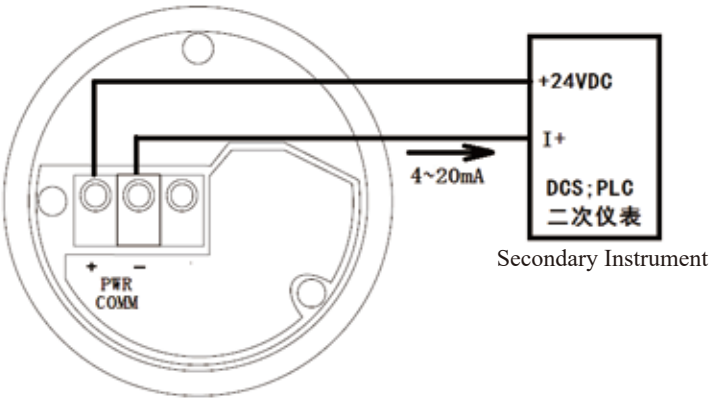
连接方式 Connection Method

F：法兰 Flange　　S：螺纹 Screw

典型接线示意图 Selection Guide



显示画面 Selection Guide



产品正常安装在设备上及信号回路按照图示接好后，必须根据实际物料的零点（低位）和满位（高位）高度，对仪表进行零点（低位）和满位（高位）标定，才能正常测量（标定和测量的物料必须是同一种物料）。

1. 探头刚刚接触到物料时，为零位，可进行零点（4mA）标定：在正常显示时，同时按下“M”+“S”键，并保持3秒以上；进入“标定零点”画面，左下角显示操作码“9”，“数值显示”为零位的数值0，按下S键，向上箭头为闪烁状态，再按下“M”键，即完成零点标定；同时左下角的操作码自动进入“10”（即满位标定画面），此时左上角没有闪烁，待实际物料满位时，即可进行如下第2步满位标定。

2. 满位（20mA）标定：当实际物料为，满位时，左下角显示操作码“10”，“数值显示”为满位的数值，按下S键，向上箭头闪烁，再按下“M”键，即完成满位（20mA）的标定；同时左下角的操作码自动进入“0”（显示画面），过10秒左右，左下角操作码自动消失，表头进入正常测量显示画面，显示值即为当前测量的数值。

在实时正常显示状态（主变量显示状态），按S键能更改显示设置：常按S键，显示会在“主变量”——“百分比”——“输出电流”之间循环显示，右下角会显示操作码“30”：

当显示“主变量”时，马上松开S键，同时再快速按一下S键，则只有“主变量”显示。

当显示“输出电流”时，松开S键，则“主变量”和“输出电流”循环显示。

当显示“百分比”时，松开S键，则“主变量”和“百分比”循环显示。

When the instrument is installed correctly on the equipment and the signal circuit is connected as shown in the diagram, the zero (low) position and full (high) position of the instrument must be calibrated according to the zero (low) position and full (high) position of the actual condition of material, so as to conduct normal measurement (the material calibrated and measured must be the same material)

When the probe is in contact with the material, it is in zero position and zero (4mA) calibration can be performed. When it is in normal display, press button M and S and keep it for more than 3 seconds; enter “calibrating zero position” screen, the lower left corner shows the operation code “9”, while “number display” is 0 in zero position; press button S, the up arrow is flashing, then press button M to finish zero position calibration; meanwhile, the operation code in the lower left corner automatically enters “10” (that’s the full position calibration screen). At this time, there is no flash in the upper left corner. When the actual material is in full position, the second step of full position calibration can be performed as follow.

Full position (20mA) calibration: when the actual material is in full position, the lower left corner shows the operation code “10”, while “number display” is the value in full position; press button S, the up arrow is flashing, the press button M to finish full position calibration; meanwhile, the operation code in the lower left corner automatically enters “0” (display screen). About 10 seconds later, the operation code in the lower left corner automatically disappears, the meter enters the normal measurement display screen, and the display number is the current measured number.

In the real-time normal display status (master variable display status), press button S to change the display settings; press button S, the display switches between “master variable” — “percentage” — “output current”, and the lower right corner shows the operation code “30”.

When “master variable” is displayed, release button S immediately and press button S quickly at the same time, then only “master variable” displays.

When “percentage” is displayed, release button S, then the display switches between “master variable” and “percentage”.

When “output current” is displayed, release button S, then the display switches between “master variable” and “output current”

射频导纳物/液位计 L-2631H
RF Admittance Level Meter L-2631H

安装指南 Installation Guide

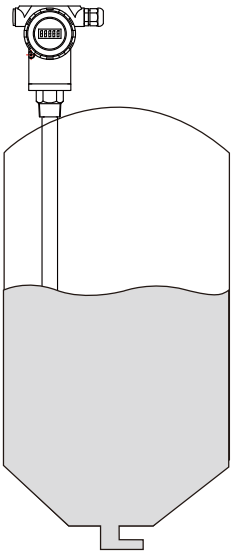
为了使仪表可靠工作，控制器必须正确安装，下列图片将有助于识别安装是否正确。

In order to make the instrument work more reliably, the controllor must be installed correctly. The following diagrams help to identify whether the installation is correct.

食品或制药行业容器
Containers for Food and Pharmaceutical Industries

对于全绝缘测量电极可选棒式或缆式，测量不受介质密度，温度，过压，泡沫，介电常数和粘附等因素的影响。

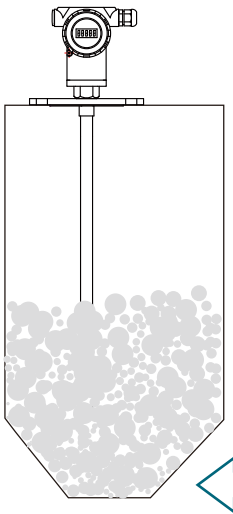
Rod type and cable type are available for fully insulated measuring electrode, and the measurements are not affected by the medium density, temperature, over-pressure, foam, dielectric constant and adhesion.

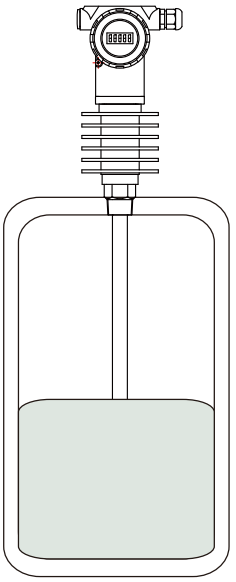


存储容器
Containers for Storage

可以用于测量储罐内的物位. 传感器可以不带料进行调试，然后投入工作，如果被测介质的粘度小，而且介电常数也小，则可以选用同轴管式，通过同轴管式测量也可以满足高精度测量的要求. 测量不受介质密度，温度，过压，泡沫，介电常数和粘附等因素的影响。

The instrument can be used to measure material level in containers. The sensor can be adjusted without material and then put into work. If both the adhesion and dielectric constant of the measured medium are small, the coaxial valve type can be selected, which can also meet the requirement of high accuracy. Measurements are not affected by the medium density, temperature, over-pressure, foam, dielectric constant and adhesion.

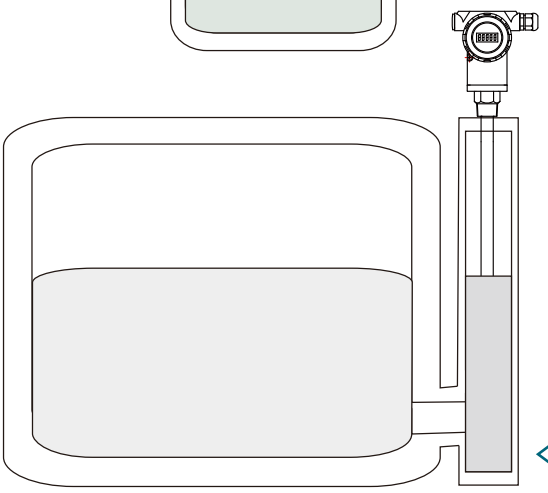




塑料和颗料
Plastics and Particles

在化工行业中测量粉末、颗料状的产品，由于介质不同或介质经常更换，故物位测量要求测量结果不受介质的特性变化，粉尘，介质堆角的影响。

It is applied to measure the powder or particles in chemical industry. As mediums are different or often replaced, the level measurement requires that the result is not affected by the change of the medium's characteristics, powder and medium accumulated at the corners.



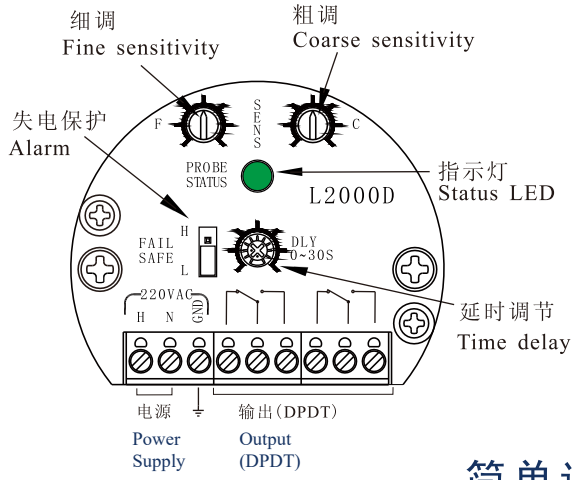
测量管或旁通管
Measuring Pipe or By-pass

用于测量管或旁通管、管子侧面的连接件，以及用于混合介质的开孔或管子内的腐蚀都不影响测量. 可以充分利用容器空间，提高测量精度。

The measurement is not affected by the connection used in measuring pipe, by-pass pipe and the side of the pipe, the opening for the mixed medium or the corrosion in the pipe, so that the space of the container can be fully utilized to improve the measurement accuracy.

射频导纳物位开关L-2000D
RF Admitance Level Switch L-2000D

使用说明 Operation Instruction



简单调节
Simple Adjustment

接通电源，在没有物料时请按以下步骤调节注意安全(亮红灯时表示无料,亮绿灯时表示有料)

After power on, adjust the buttons according to the following steps when there are no materials (when the red light is on, there are materials; when the green light is on, there are still materials left).

备注:

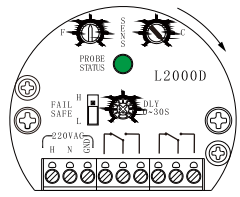
1. 出厂时已经过调整，请不要随意调整C粗调旋钮。
2. 如有不符,可单独调整F细调:逆时针向左为灵敏度降低,顺时针向右为灵敏度增高,空仓时亮红灯。
3. 如C粗调被调乱,请按以下步骤重新调整。

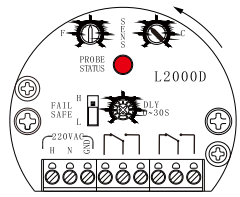
Note:

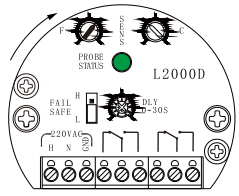
1. The instrument has been adjusted in the factory. Do not make random adjustment to the coarse sensitivity button C.

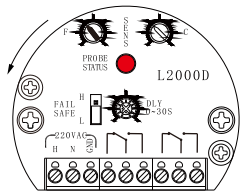
2. If there is any discrepancy with the site requirement, the fine sensitivity button F can be separately adjusted: counterclockwise to the left for decreased sensitivity while clockwise to the right for increased sensitivity, and empty for red light.

3. If the coarse sensitivity button C is disordered, follow the steps below to re-adjust.









1、F正中不动，C顺时针调到底，此时灯“变绿”
Keep F in center ,adjust C clockwise to the end, then the light turns green.

2、F仍正中不动，C逆时针调到灯刚好“由绿变红”
Still keep F in center ,adjust C counter-clockwise until the light turns red from green.

3、C不动，F顺时针调到灯刚好“由红变绿”
Do not adjust C, adjust F clockwise until the light turns green from red.

4、C不动，F逆时针调到灯刚好“由绿变红″,再逆时针调节0.2格到2格(根据物料特性)
Do not adjust C, adjust F counter-clockwise until the light turns red from green, then adjust F counter-clockwise 0.2 grid to 2 grids (according to material characteristics).

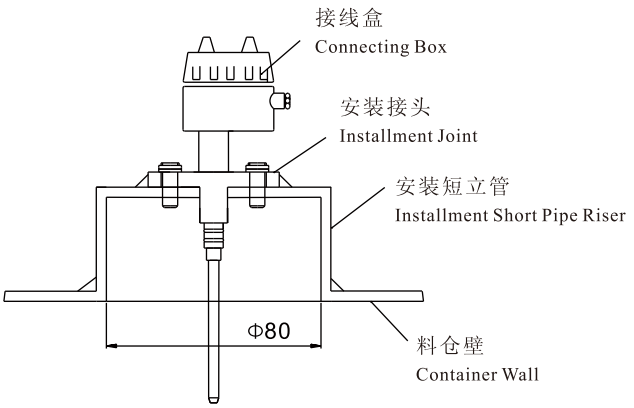
射频导纳物位控制器L-2000D、SRF-88

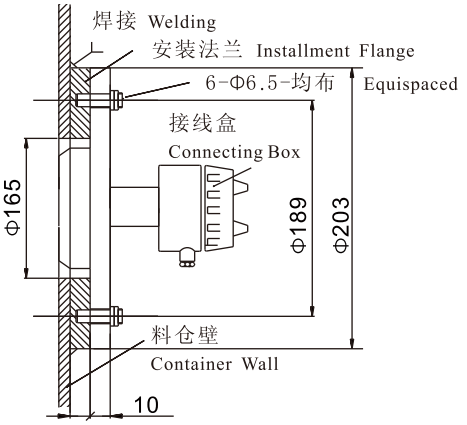
RF Admittance Level Switch L-2000D, SRF-88

安装指南 Installation Guide

为了使仪表可靠工作，控制器必须正确安装，下列图片将有助于识别安装是否正确。

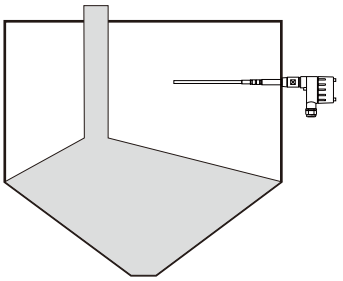
In order to make the instrument work more reliably, the controllor must be installed correctly. The following diagrams help to identify whether the installation is correct.



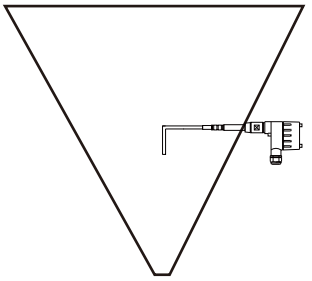


探头安装的标准方法是1″ NPT螺纹安装，也可采用法兰安装，可采用水平或垂直安装。

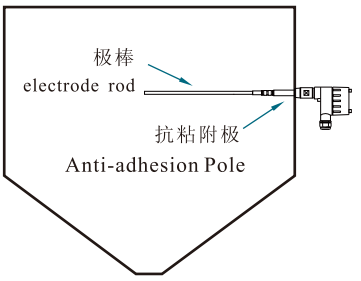
The probe can be horizontally or verticallyinstalled by a 1″ NPT screw or flange .



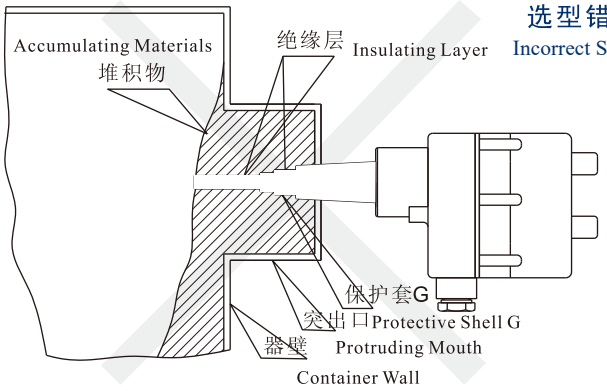
请注意不要安装在料流之下
Please note that you cannot install it in the material flow.

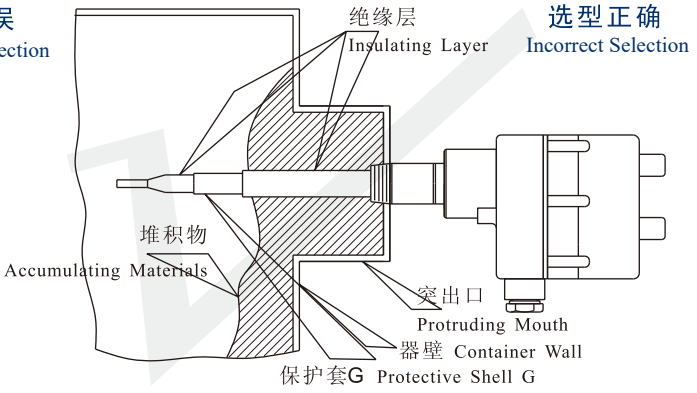


请注意在此处搭接，否则可能引起误报警
Please note that you should overlap it here, or it may cause wrong alarm.



请注意不要让保护极缩在立管里面
Please do not let the protective electrode shrink in the pipe riser.





在测非导电液体或导电液体和泥浆时，以及在测粉末、颗粒状时，最佳为水平安装，如需要垂直安装时，探头长至少保持12″，水平安装仪表时，探头保护长套G必须伸到容器壁内2″。

When the instrument is used to detect conductive or non-conductive liquids, pulp, powder and particles, it is best to be installed horizontally. When vertical installation is required, the length of the probe should be kept at least 12”. When the instrument is installed horizontally, the protective shell G of the probe must be plugged into the container wall at 2”.