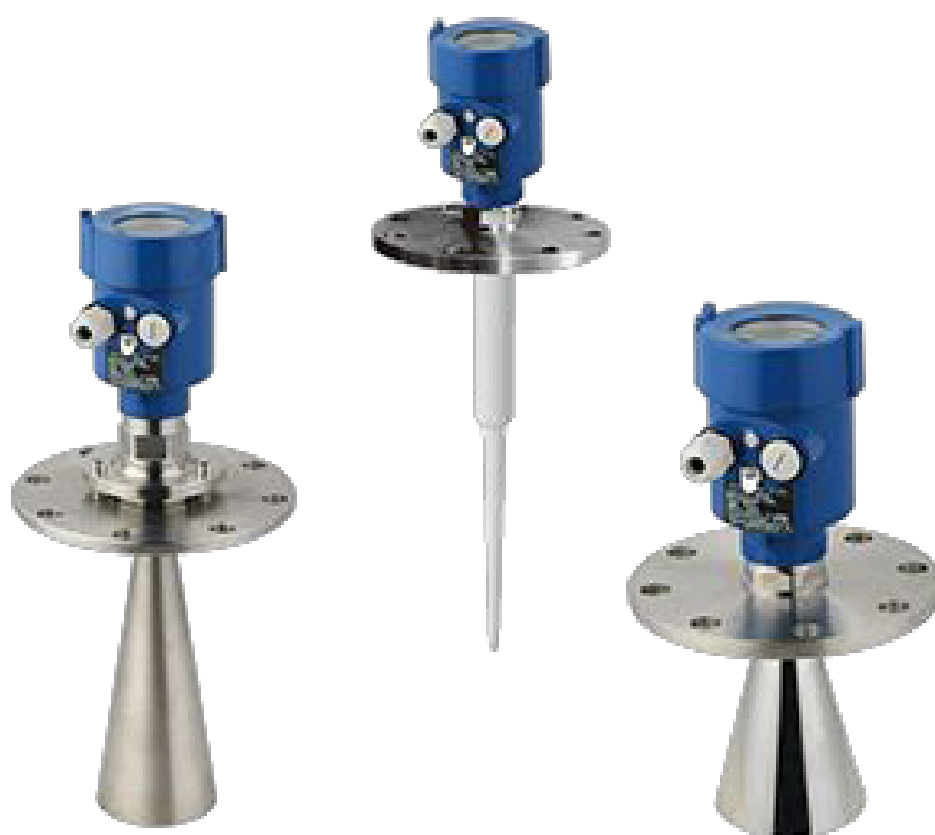


6GHz Intelligent Radar Level Meter

Product Manual

Model : KRD500 SERIES



Directory

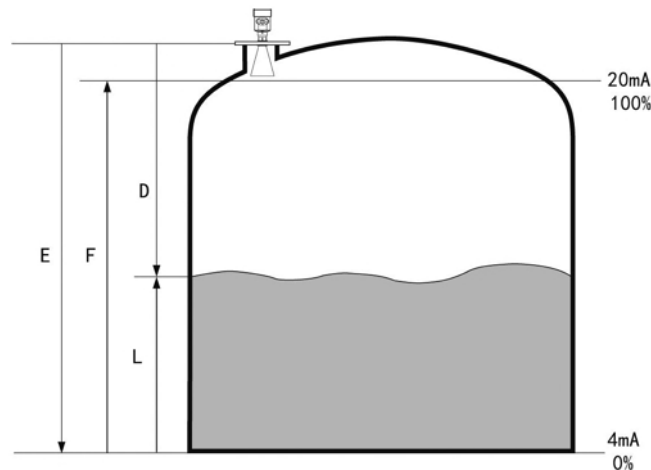
1、 The Measurement Principle.....	1
2、 Product Introduction.....	2
3、 The Installation Guide.....	5
4、 Dimensions of Instruments.....	10
5、 Measurement Conditions.....	12
6、 The Electrical Connection.....	13
7、 Programming and Debugging.....	15
8、 Technical Parameters.....	16
9、 Product Model Selection.....	19
Material level meter selection parameter table.....	25

6 GHz Intelligent Radar Level Meter

1. The Measurement Principle

Antenna system to launch and microwave receiving energy is very low, very short pulse. Radar waves travel with the speed of light. The running time can be through the electronic components are converted into a signal. Measurement of this special time extension method can realize stable, accurate in a very short period of time.

Even if the condition is very complex, the presence of false echo, with the latest micro-processing technology and debugging software also can analyze the level echo accurately.



Microwave antenna to receive the reflected pulse and transmitted to the electronic circuit, a microprocessor to signal processing, to identify the micro pulse generated on the material surface echo. Echo recognition is completed by the pulse system, the accuracy can reach millimeter level. From the material surface distance between D and T pulse is proportional to the time travel:

$$D=C \times T/2$$

Where C is the speed of light

Because of the air tank is a known distance E, L:

$$L=E-D$$

By setting the empty tank height E (= zero), the full height of F (= full scale) and some application parameters, application parameters automatically makes the instrument to measure the environment. 4 - 20mA with a corresponding output.

● Application:

6GHz radar level gauge is suitable for liquid, paste, granule and block material level and non-contact measurement, suitable for changes in temperature, pressure big; there is an inert gas and volatile.

The measurement method of microwave pulse, can work normally in the industrial frequency band range. The beam energy is low, can be installed on all kinds of metal, non-metallic container or pipe, no harm to human body and environment.

2. Product Introduction

● KRD501



Suitable for Medium: Liquid, slightly corrosive liquid
Explosion-proof Grade: Exia IIC T6 Ga/ Exd ia IIC T6 Gb
Measuring Range: 20m
Aerials: The Rod Antenna (PP/PTFE)
Frequency: 6 GHz
Temperature: (-40 ~ 130) °C
Measurement Precision: ±10mm
Process Pressure: (-0.1 ~ 0.3) MPa
The signal Output: (4 ~ 20) mA/HART
The Scene Display: Four LCD /Can be programmed
Power Source: Two-wire (DC24V)
Four-wire (DC24V/AC220V)
Repeatability: ± 1mm
Shell: Aluminum /Plastic
Connection: Flange (optional) / Thread

● KRD502



Suitable for Medium: Liquid, especially for corrosive liquid
Explosion-proof Grade: Exia IIC T6 Ga/ Exd ia IIC T6 Gb
Measuring Range: 20m
Aerials: The Rod Antenna (PTFE)
Frequency: 6 GHz
Temperature: (-40 ~ 180) °C
Measurement Precision: ± 10mm
Process Pressure: (-1.0 ~ 4) MPa
The Signal Output: (4 ~ 20) mA/HART
The Scene Display: Four LCD /Can be programmed
Power Source: Two-wire (DC24V)
Four-wire (DC24V/AC220V)
Repeatability: ± 1mm
Shell: Aluminum/Plastic
Connection: Flange (optional)

● KRD503



Suitable for Medium: Liquid, especially with pressure and Volatile Liquid

Explosion-proof Grade: Exia IIC T6 Ga/ Exd ia IIC T6 Gb

Measuring range: 35m

Aerials: The Horn Antenna

Frequency: 6 GHz

Temperature: (-40 ~ 250) °C

Measurement Precision: $\pm 10\text{mm}$

Process Pressure: (-0.1 ~ 4) MPa

The Signal Output: (4 ~ 20) mA/HART

The Scene Display: Four LCD /Can be programmed

Power Source: Two-wire (DC24V)

Four-wire (DC24V/AC220V)

Repeatability: $\pm 1\text{mm}$

Shell: Aluminum/Plastic

Connection: Flange (optional)

● KRD504



Suitable for Medium: Solid particles or block material,

And it is not suitable for solid powder

Explosion-proof Grade: Exia IIC T6 Ga/ Exd ia IIC T6 Gb

Measuring Range: 35m

Aerials: The Horn Antenna

Frequency: 6 GHz

Temperature: (-40 ~ 250) °C

Measurement Precision: $\pm 20\text{mm}$

Process Pressure: (-0.1 ~ 0.1) MPa

The Signal Output: (4 ~ 20) mA/HART

The Scene Display: Four LCD /Can be programmed

Power Source: Two-wire (DC24V)

Four-wire (DC24V/AC220V)

Repeatability: $\pm 1\text{mm}$

Shell: Aluminum/Plastic

Connection: Cardan Flange (optional)

- **KRD505**



Suitable for Medium: Liquid, especially suitable for low dielectric constant, sticky, with mixing liquid

Explosion-proof Grade: Exia IIC T6 Ga/ Exd ia IIC T6 Gb

Measuring Range: 20m

Aerials: The Horn Antenna

Frequency: 6GHz

Temperature: (-40 ~ 250) °C

Measurement Precision: $\pm 10\text{mm}$

Process Pressure: (-0.1 ~ 4) MPa

The Signal Output: (4 ~ 20) mA/HART

The Scene Display: Four LCD /Can be programmed

Power Source: Two-wire (DC24V)

Four-wire (DC24V/AC220V)

Repeatability: $\pm 1\text{mm}$

Shell: Aluminum /Plastic

Connection: Flange (optional)

- **KRD506**



Suitable for Medium: Solid, especially suitable for high temperature conditions

Explosion-proof Grade: Exia IIC T6 Ga/ Exd ia IIC T6 Gb

Measuring Range: 15m

Aerials: The Horn Antenna

Frequency: 6 GHz

Temperature: (-40 ~ 400) °C

Measurement Precision: $\pm 20\text{mm}$

Process Pressure: (-0.1 ~ 0.1) MPa

The Signal Output: (4 ~ 20) mA/HART

The Scene Display: Four LCD /Can be programmed

Power Source: Two-wire (DC24V)

Four-wire (DC24V/AC220V)

Repeatability: $\pm 1\text{mm}$

Shell: Aluminum /Plastic

Connection: Flange (optional)

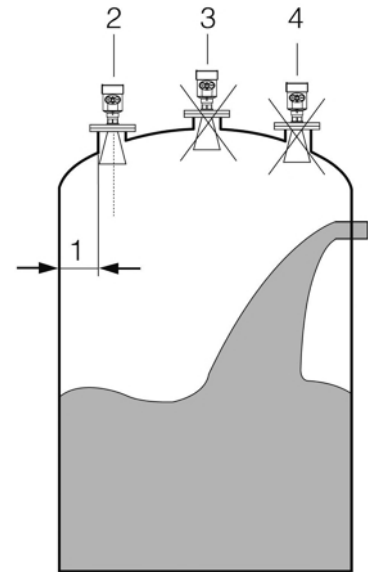
3. The Installation Guide

- **Installation instructions:**

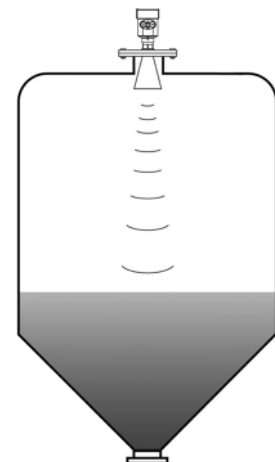
- The recommended position (2), the outer wall of tank wall to install pipe shall meet the following from the tank wall best distance to tank diameter of $1/4$ or $1/6$, the minimum distance from the installation of tank wall as the measurement range of $1/10$.

For example: liquid level of storage tank 10m,
and the tank wall install the minimum distance of 1m.

- Cannot be installed above the feeding port (4).
- Cannot be installed in the central position (3), if installed in the central, yield multiple false echo, clutter echo will lead to real signal loss.
- If you can't keep the instrument and the tank wall of the tank wall distance, the medium will adhesion caused by false echo, when debugging instrument should be false echo storage.

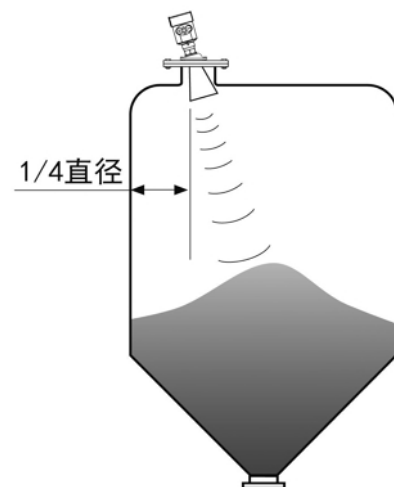


- The top conical tank level, can be installed at the top of the tank is intermediate, can guarantee the measurement to the conical bottom.



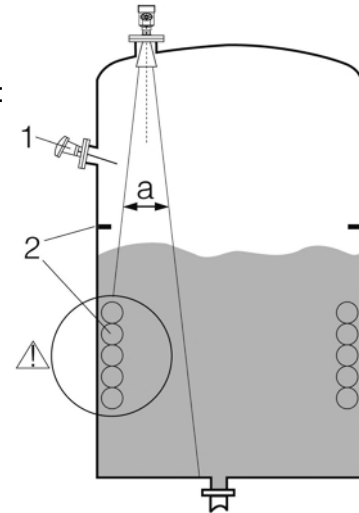
A feed antenna to the vertical alignment surface.
If the surface is rough, stack angle must be used to adjust the angle of cardan flange of the antenna to the alignment surface.

(Due to the solid surface tilt will cause the echo attenuation, even Loss of signal.)



● Tank installation instructions:

- In the signal beam, should avoid the following installation:
Such as: (1) the limit switch, temperature sensor.
- Symmetric devices such as (2):
vacuum ring, a heating coil , Baffle plate etc.
- If the tank (1) (2) interference object, should be
guided wave tube measurement.



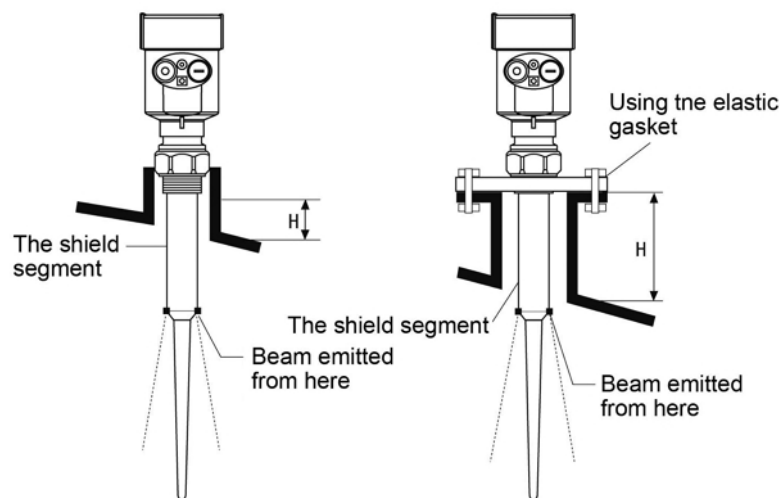
Best installation options:

- Antenna size: larger antenna, beam angle smaller, interfering echoes will be weaker.
- Antenna adjustment: the antenna to adjust to the best measurement position.
- Wave guide: waveguide is used to avoid the interference of echo.

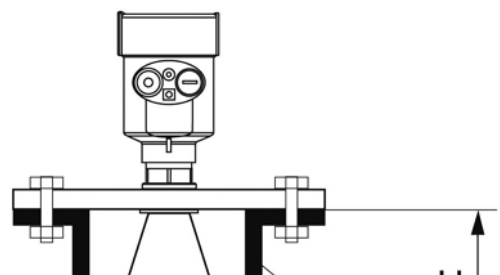
● Tank installation (KRD501, KRD502)

A standard installation

- The radar antenna cannot tilt to the tank wall.
- In order to minimize temperature effect, at the junction of butt joint flange must use the spring washer.
- The rod antenna launching point must reach out to install pipe.
- The vertical placement of the rod antenna beam direction, don't let the tank wall.



● Tank installation (KRD503)

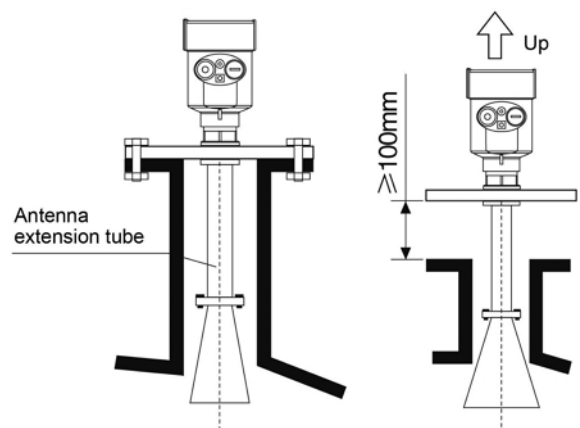


A standard installation

- Horn antenna must be installed pipe extends out, otherwise, should use the antenna extension tube.
- Horn antenna must be adjusted to the Vertical, don't let the radar beam pointed to the tank wall.

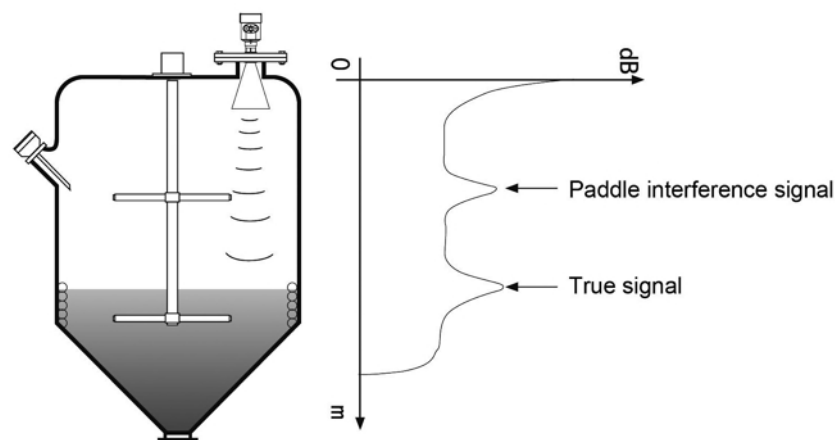
Install short long antenna extension tube

- When the horn length is less than the installation of tube length, tube using antenna.
- If the diameter of the horn tube diameter greater than the installation, you will need to increase meter elevation, extension tube. The antenna and the extension tube needs to be installed from inside the container. Select the extension tube makes the instrument at least elevation 100mm.

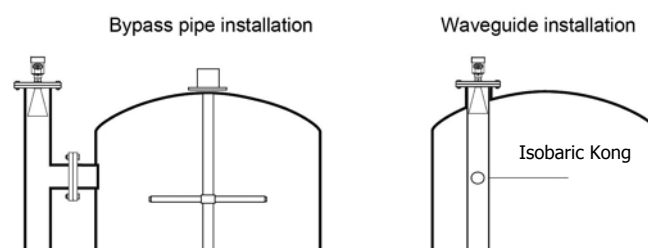


● **Measurement of Waveguide Tube:**

If there is an obstacle, such as a ladder, limit switches, heating equipment, such as a stent within the range of the microwave beam emitted radiation will lead to measurement errors. If affected, the need to add another waveguide measured.



Then measure the wave guide tube (or Bypass pipe) installed inside the container to avoid obstacles, foam, liquid surface fluctuations and large impact on the measurement.



Note:

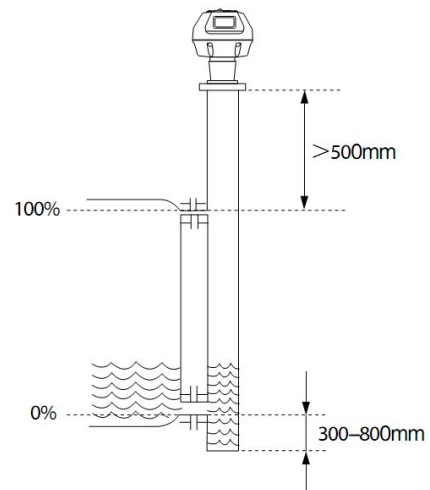
Isobaric pore diameter 5 ~ 10mm.

Waveguide diameter of at least 50mm, and the inner walls must be smooth.

Measuring only good mobility media, viscous media can not be measured with a waveguide.

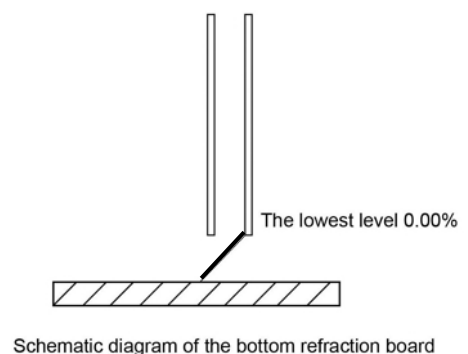
● The bypass pipe installation

- If the sensor is installed in the bypass pipe, need to install the communication part is higher than that of the by-pass pipe and the upper part of the container $\geq 500\text{mm}$;
- by pass pipe at the bottom to be lower than the connecting part of the by-pass pipe and the bottom of the container $\geq 300\text{mm}$.

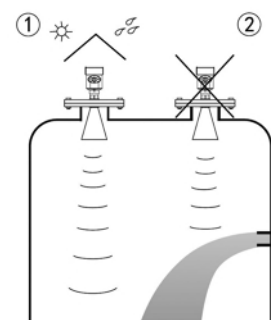


Radar installation site display unit and connected component parallel.

- If the dielectric constant of the medium small (< 4), part of radar signal can penetrate the dielectric constant dielectric. Echo signal when the tank bottom reflection signals when compared to the dielectric reflection of strong, at this time, measurement error. In this case, can be at the bottom of the tank to install refraction board will signal refraction.



● Typical installation errors :



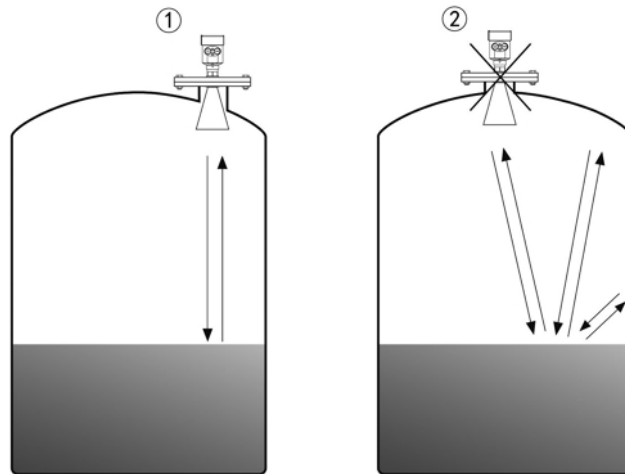
- Conical tank cannot be installed above the feed port.

Note: outdoor installation should adopt sunshade.

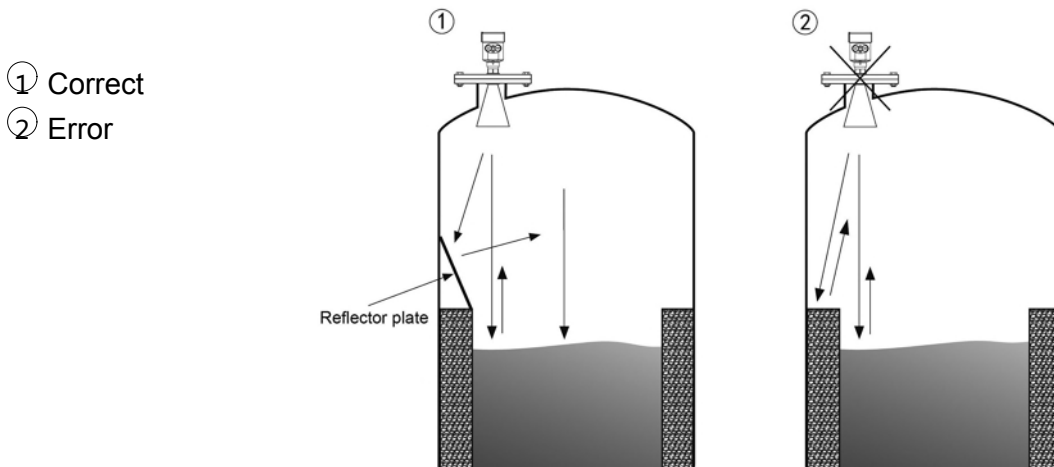
- ① Correct
- ② Error rainproof measures

- The instrument cannot be installed in the arched or domed roof intermediate. In addition to produce indirect echo is also affected by the echoes. Multiple echo can be larger than the real value of signal echo, because through the top can concentrate multiple echo. So cannot be installed in a central location.

- ① Correct
- ② Error



- There are obstacles affecting measurement needed reflection plate.



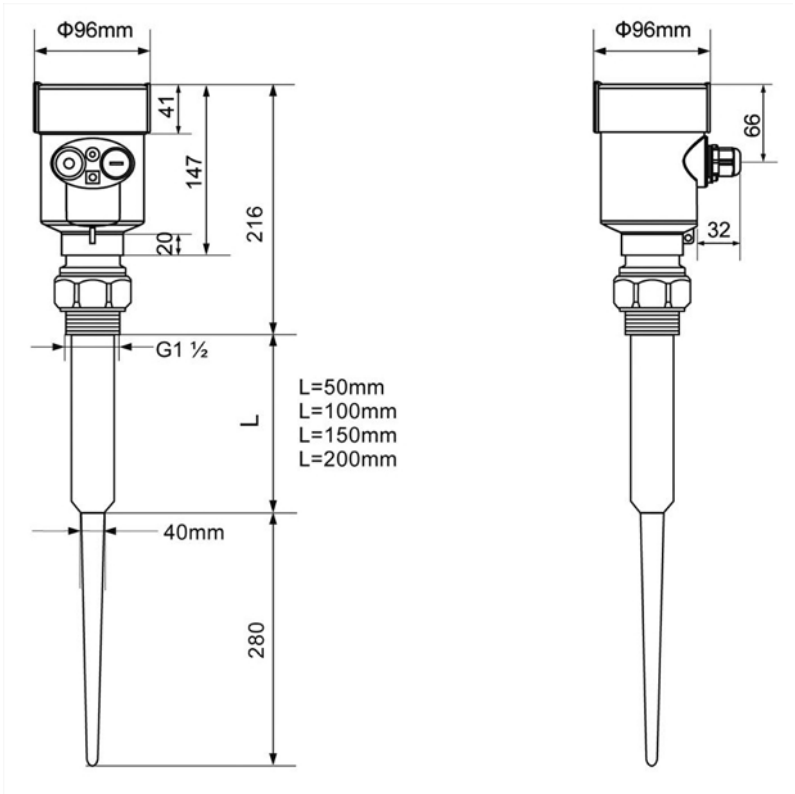
The barriers go signal refraction

- Below is a schematic diagram of the echo signal:



4. Dimensions of Instruments

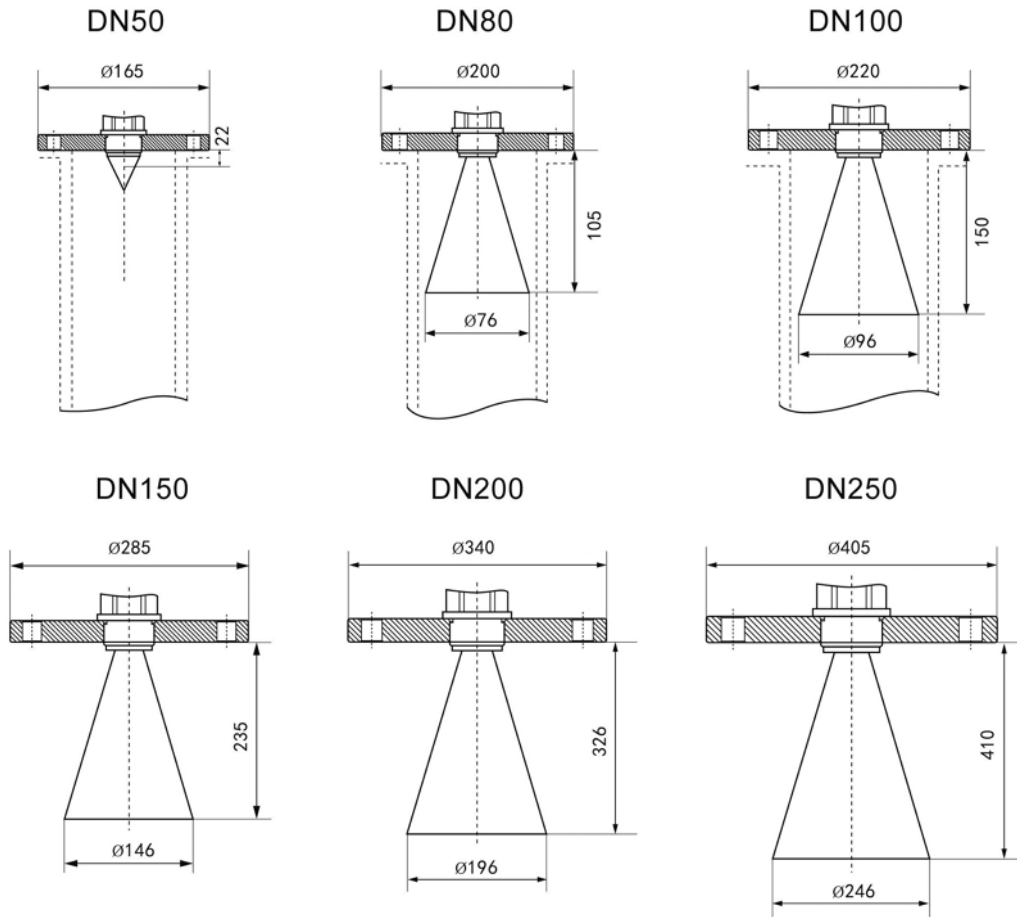
- The rod antenna radar size (unit: mm)



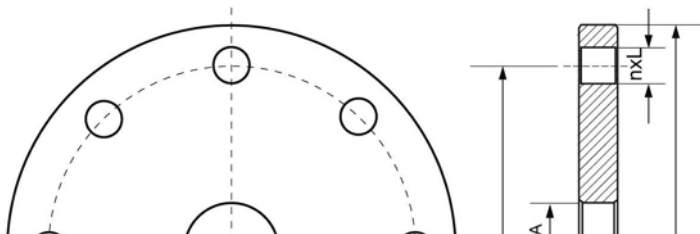
- Horn antenna size (unit: mm)



● **Horn size (unit: mm)**



● **Flange Selection (unit: mm)**

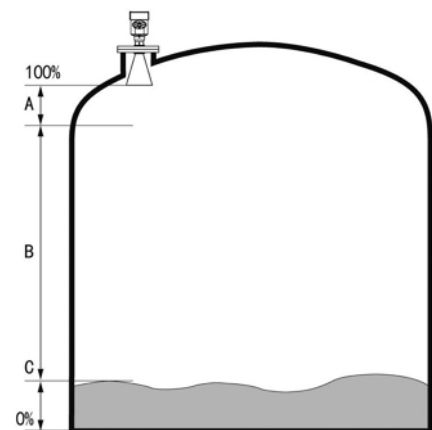


Flange Selection Table			
Specifications	Outside Diameter D	Center Pitch of hole K	Hole diameter L

5. Measurement Conditions

Matters needing attention:

- The general measurement range is calculated starting from the bottom of the tank, under special circumstances, if the tank bottom is a concave or conical, when the level below this point cannot measure.
- Low dielectric constant in a low level, the bottom of the tank can be seen, this time in order to ensure the measuring precision, suggestions will be zero shift.
- Measurement of antenna theory to the position
Of the tip is possible, but taking into account the effect of corrosion and adhesion, the measuring range of the tip distance of $\geq 100\text{mm}$.
- For overflow protection, can define a safe distance and dead area.
- The minimum measurement range has relation with antenna.
- Different concentration, foam can absorb microwave, also can be reflected, but under certain conditions can be measured.
- When no echo signal, the output current is 22mA.



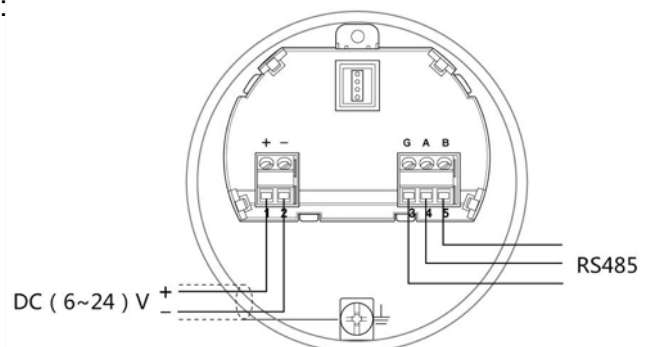
6. The Electrical Connection

- The power supply voltage:

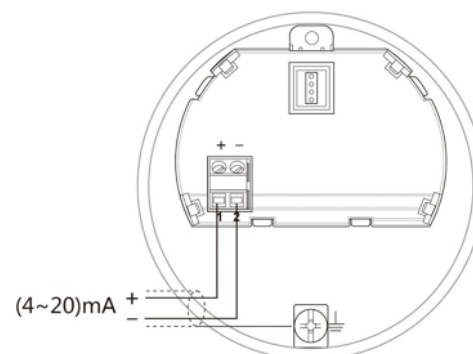
(4~20)mA/HART (Two wire system)	The power supply and the output current signal sharing a two core shield cable. The supply voltage range see technical data. For intrinsically safe type must be a safety barrier between the power supply and the instrument.
(4~20)mA/HART(Four wire system)	Separate power supply and the current signal, respectively using a two-core shielded cable. The supply voltage range see technical data.
RS485 / Modbus	Power supply and Modbus signal line separate respectively using a two-core shielded cabl, the power supply voltage range see technical data.

● Connection mode:

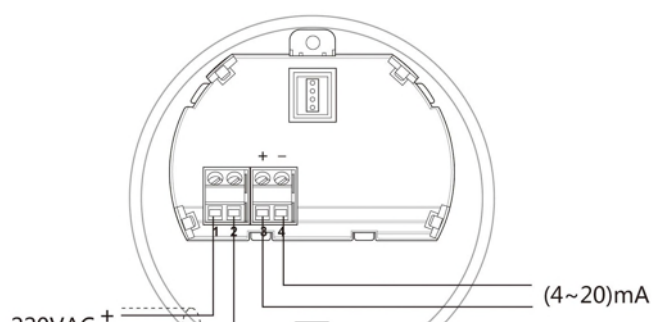
- 24V two wire wiring diagram as follows:



- 220V four wire connection is as below:



- 24V RS485/Modbus wiring diagram as follows:

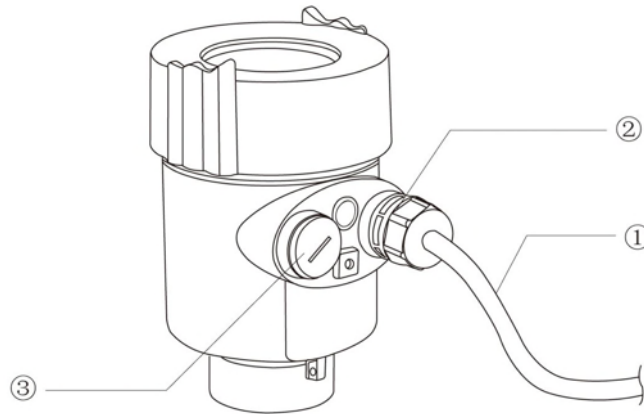


- **Safety instructions:**

- Please observe the local electrical code requirements!
- Please comply with local requirements for personnel health and safety regulations.
All electrical components of instrument operation must be completed by the formal training of professionals.
- Please check the instrument nameplate to provide product specifications meet your requirements. Please make sure that the power supply voltage and instrument nameplate on the requirements.

- **Protection grade:**

This instrument meets the protection class IP66/67 requirements, please ensure the waterproof cable sealing head. The following diagram:



How to install to meet the requirements of IP67:

Please make sure that the sealing head is not damaged.
Please make sure that the cable is not damaged.

Please make sure that the cable for use with electrical connection specification.

Cable into the electrical interface before its curved downward, ensure that the water will not flow into the shell, see the①

Tighten the cable seal head, see the②

Please electrical interface will not use blind plug tight, see the③

7. Programming and Debugging

- **There are three kinds of debugging method:**

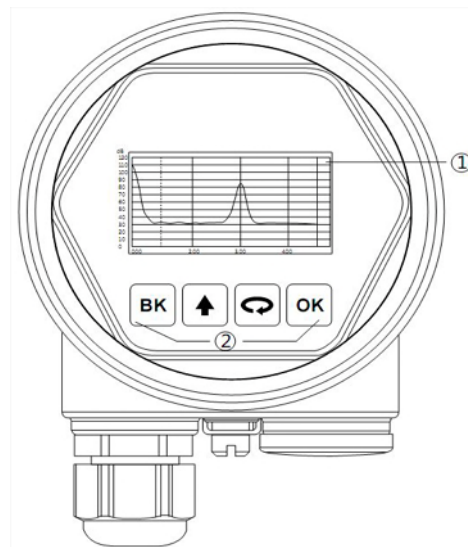
- 1) Display / Keyboard
- 2) Host debugging
- 3) HART handheld programmer

- **Display / Keyboard:**

Please debug the instrumentation by four buttons on the display screen. There are three debug menu languages optional. After debugging is generally used only for display, through the glass window can read measured value very clearly.

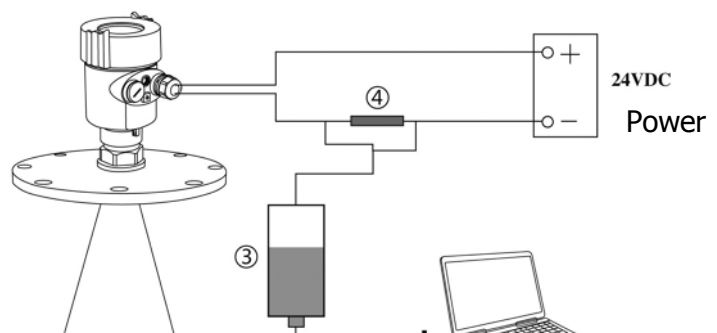
Display / Keyboard

- ① Liquid crystal display(LCD)
- ② The key



- **PC debugging:**

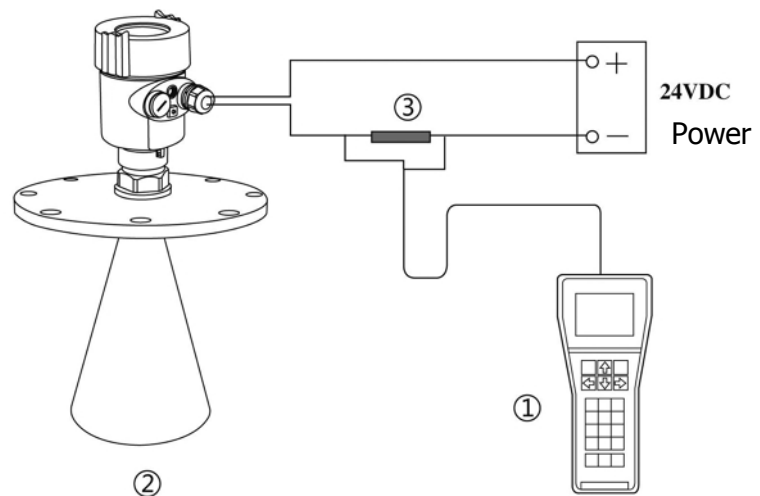
Connected to PC by HART



- ① RS232 interface or USB interface
- ② Radar level meter
- ③ HART adapter
- ④ 250 Ω resistor

● **HART handheld programmer:**

- ① HART handheld programmer
- ② Radar level meter
- ③ 250 Ω resistor



8. Technical Parameters

General Data

Materials

Antenna	PTFE、PP
Shell	Aluminum, plastic, antistatic PP, stainless steel 316
The seal housing and the housing	Silastic
Shell window	Polycarbonate
Ground terminal	Stainless steel

Process connection

KRD501	G1½"A Thread & 1½"NPT Thread
KRD502	PTFE Flanging flange
KRD503	Stainless Steel Flanges
KRD504	Stainless Steel Flanges
KRD505	Stainless Steel Flanges
KRD506	Stainless Steel Flanges

Supply voltage

Two-wire

Standard	(16~26)V DC
Intrinsically Safe	(21.6~26.4)V DC
Power Consumption	max. 22.5mA
Allowable ripple	
- <100Hz	$U_{ss} < IV$
- (100~100K)Hz	$U_{ss} < 10mV$

Four-wire

Intrinsically Safe + Explosion	(22.8~26.4)V DC, (198~242)V AC
Power Consumption	max. 1VA, 1W

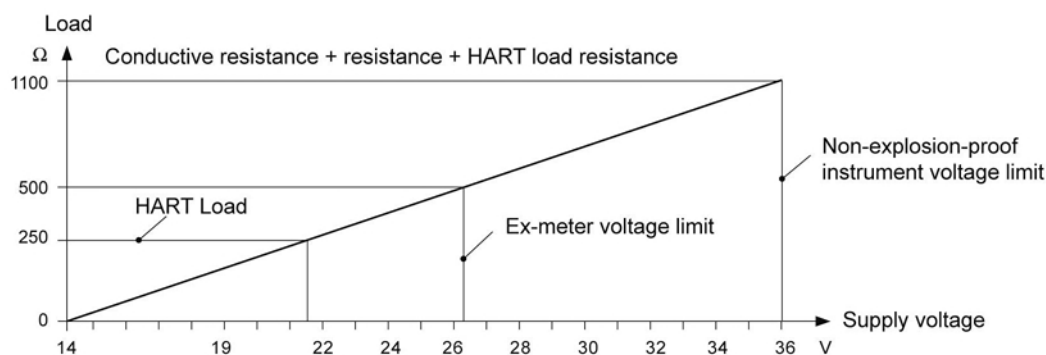
Cable parameters

Cable entry / plug	1 M20x1.5 cable entry (cable diameter 5 ~ 9mm)
	1 blind blocking M20x1.5
Spring terminals	For wire cross-section 2.5mm ²

Output parameters

The output signal	(4~20)mA/HART
Resolution	1.6μA
Fault signal	Current output unchanged; 20.5mA; 22mA; 3.9mA
Two-wire load resistor	See below
Four-wire resistive load	The maximum 500Ω
Integration time	(0 ~ 50) s, adjustable

Two-wire load resistor map



Characteristic parameters

Blind	Antenna end
-------	-------------

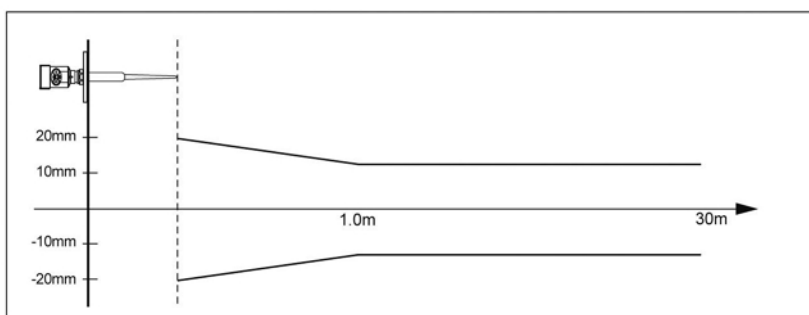
The maximum measuring distance

KRD501	20m (Liquid)
KRD502	20m (Liquid)
KRD503	35m

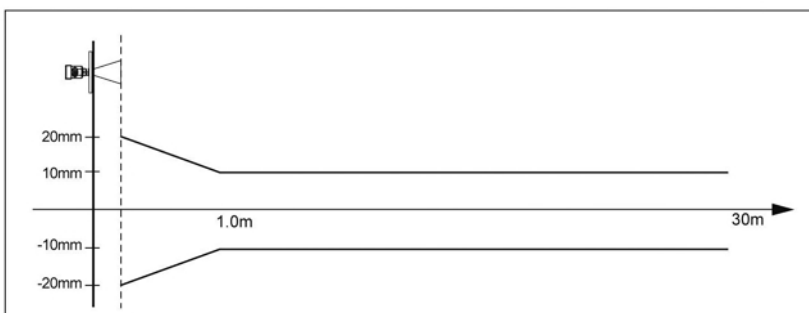
KRD504	35m
KRD505	20m
KRD506	15m
Measurement interval	About 1s (depending on the parameter settings)
Adjustment time	About 1s (depending on the parameter settings)
Resolution	1mm
Accuracy	10mm & <0.1% (See schematic below precision)

Accuracy schematic

KRD501,KRD502 Accuracy



KRD503 Accuracy



Working storage and transport temperature (-40~80) °C

Process temperature (the temperature of the antenna portion)

KRD501 (-40~130)°C

KRD502 (-40~180)°C

KRD503 (-40~250)°C

KRD504 (-40~250)°C

KRD505 (-40~250)°C

KRD506 (-40~400)°C

Relative humidity <95%

Tank pressure Max. 4MPa

Seismic Mechanical shock 10m/s² , (10~150)Hz

9. Product Model Selection

● KRD501

License

- P Standard (non-explosion-proof)
I Intrinsically safe (Exia IIC T6 Ga)
G Intrinsically safe type, flameproof [Exd (ia) IIC T6 Gb]

Antenna Type / Material / Temperature

SP Rod Antenna / PP / -40... 120 °C

SF Rod Antenna / PTFE / -40... 130 °C

Process Connection

G Thread G1½" A

N Thread 1½" NPT

Flange Matching / Material

DN80 FB (PTFE) QB (Stainless Steel)

DN100 FC (PTFE) QC (Stainless Steel)

F0 No Selected

FX Special Custom

Shielding Length

A 50mm

B 100mm

C 150mm

D 200mm

E 250mm

Shell / Protection Grade

L Aluminum /IP67

Q Plastics/IP65

Cable Line

M M 20x1.5

N ½" NPT

Field Display

A Belt

X Without

The Programmer

A Belt

X Without

● KRD502**License**

- P Standard (non-explosion-proof)

I Intrinsically safe (Exia IIC T6 Ga)

G Intrinsically safe type, flameproof [Exd (ia) IIC T6 Gb]

Antenna Type / Material / Temperature

SF Rod antenna / PTEE

Process Connection/ Material

FA DN50 PN16C / PTFE flange & stainless steel 304

FB DN80 PN16 C / PTFE flange & stainless steel 304

FC DN100 PN16 C / PTFE flange & stainless steel 304

FD DN150 PN16 C / PTFE flange & stainless steel 304

Shielding Length

A 50mm

B 100mm

C 150mm

D 200mm

E 250mm

Process Temperature

1 Ordinary type (-40 ~ 130) °C

2 High temperature (-40 ~ 180) °C

Shell / Protection Class

L Aluminum /IP67

Q Plastics/IP65

Cable Line

M M 20x1.5

N 1/2 "NPT

Field Display

A Belt

X Without

The programmer

A Belt

X Without

● **KRD503**

License

P Standard (non-explosion-proof)

I Intrinsically safe (Exia IIC T6 Ga)

G Intrinsically safe type, flameproof [Exd (ia) IIC T6 Gb]

Process Connection/ Material

- G G1½" A Thread
- A DN50 PN16 C flange type / stainless steel 316L
- B DN80 PN16 C flange type / stainless steel 316L
- C DN100 PN16 C flange type / stainless steel 316L
- D DN150 PN16 C flange type / stainless steel 316L
- E DN200 PN16 C flange type / stainless steel 316L
- F DN250 PN16 C flange type / stainless steel 316L
- Y Special Custom

Antenna Type / Material

- 1 No horn antenna, guided wave pipe installation / Stainless steel 316L
- 2 76mm horn antenna /316L stainless steel
- 3 96mm horn antenna /316L stainless steel
- 4 146mm horn antenna /316L stainless steel
- 5 196mm horn antenna /316L stainless steel
- 6 242mm horn antenna /316L stainless steel

Seal / Process Temperature

- 1 Ordinary type (-40 ~ 150) °C
- 2 High temperature (-40 ~ 250) °C

Antenna Extension

- A 100 mm
- B 200 mm
- C 300 mm
- Y Special Custom

Shell / Protection Class

- L Aluminum /IP67
- Q Plastics / IP65

Cable Line

- M M 20x1.5
- N ½" NPT

Field Display

- A Belt
- X Without

The Programmer

- A Belt
- X Without

● **KRD504**

License

- P Standard (non-explosion-proof)

- I Intrinsically safe (Exia IIC T6 Ga)
- G Intrinsically safe type, flameproof [Exd (ia) IIC T6 Gb]

Process Connection / Material

- B DN80 PN16 C flange type / stainless steel 316L
- C DN100 PN16 C flange type / stainless steel 316L
- D DN150 PN16 C flange type / stainless steel 316L
- E DN200 PN16 C flange type / stainless steel 316L
- F DN250 PN16 C flange type / stainless steel 316L
- I Flange 4" 150LBS ANSI convex / stainless steel 316L
- J Flange 6" 150LBS ANSI convex / stainless steel 316L
- K Flange 8" 150LBS ANSI convex / stainless steel 316L
- L Flange 10" 150LBS ANSI convex / stainless steel 316L

Antenna Type / Material

- 1 146mm horn antenna /316L stainless steel
- 2 196mm horn antenna /316L stainless steel
- 3 242mm horn antenna /316L stainless steel

Seal / Process Temperature

- 1 Ordinary type (-40 ~ 150) °C
- 2 High temperature (-40 ~ 250) °C

Shell / Protection Class

- L Aluminum /IP67
- Q Plastics / IP65

Cable Line

- M M 20x1.5
- N ½" NPT

Field Display

- A Belt
- X Without

The Programmer

- A Belt
- X Without

● KRD505

License

- P Standard (non-explosion-proof)
- I Intrinsically safe (Exia IIC T6 Ga)
- G Intrinsically safe type, flameproof [Exd (ia) IIC T6 Gb]

Process Connection / Material

- A DN50 PN16 C flange type / stainless steel 316L
- B DN80 PN16 C flange type / stainless steel 316L
- C DN100 PN16 C flange type / stainless steel 316L
- D DN150 PN16 C flange type / stainless steel 316L
- E DN200 PN16 C flange type / stainless steel 316L
- F DN250 PN16 C flange type / stainless steel 316L
- G Flange 2" 150LBS ANSI convex / stainless steel 316L
- H Flange 3" 150LBS ANSI convex / stainless steel 316L
- I Flange 4" 150LBS ANSI convex / stainless steel 316L
- J Flange 6" 150LBS ANSI convex / stainless steel 316L
- K Flange 8" 150LBS ANSI convex / stainless steel 316L
- L Flange 10" 150LBS ANSI convex / stainless steel 316L

Antenna Type / Material

- 1 No horn antenna, guided wave pipe installation / Stainless steel 316L
- 2 76mm horn antenna /316L stainless steel
- 3 96mm horn antenna /316L stainless steel
- 4 146mm horn antenna /316L stainless steel
- 5 196mm horn antenna /316L stainless steel
- 6 242mm horn antenna /316L stainless steel

Seal / Process Temperature

- 1 Ordinary type (-40 ~ 150) °C
- 2 High temperature (-40 ~ 250) °C

Shell / Protection Class

- L Aluminum /IP67
- Q Plastics / IP65

Cable Line

- M M 20x1.5
- N ½" NPT

Field Display

- A Belt
- X Without

The Programmer

- A Belt
- X Without

● KRD506

License

- P Standard (non-explosion-proof)
- I Intrinsically safe (Exia IIC T6 Ga)
- G Intrinsically safe type, flameproof [Exd (ia) IIC T6 Gb]

Process Connection / Material

- A DN50 PN16 C flange type / stainless steel 316L
- B DN80 PN16 C flange type / stainless steel 316L
- C DN100 PN16 C flange type / stainless steel 316L
- D DN150 PN16 C flange type / stainless steel 316L
- E DN200 PN16 C flange type / stainless steel 316L
- F DN250 PN16 C flange type / stainless steel 316L
- G Flange 2" 150LBS ANSI convex / stainless steel 316L
- H Flange 3" 150LBS ANSI convex / stainless steel 316L
- I Flange 4" 150LBS ANSI convex / stainless steel 316L
- J Flange 6" 150LBS ANSI convex / stainless steel 316L
- K Flange 8" 150LBS ANSI convex / stainless steel 316L
- L Flange 10" 150LBS ANSI convex / stainless steel 316L

Antenna Type / Material

- 1 No horn antenna, guided wave pipe installation / Stainless steel 316L
- 2 76mm horn antenna /316L stainless steel
- 3 96mm horn antenna /316L stainless steel
- 4 146mm horn antenna /316L stainless steel
- 5 196mm horn antenna /316L stainless steel
- 6 242mm horn antenna /316L stainless steel

Seal / Process Temperature

- 1 High temperature (-40 ~ 400) °C

Shell / Protection Class

- L Aluminum /IP67
- Q Plastics / IP65

Cable Line

- M M 20x1.5
- N ½" NPT

Field Display

- A Belt
- X Without

The Programmer

- A Belt
- X Without

Material level meter selection parameter table

Customer information

Company: _____ Contact: _____
Address: _____ Zip code: _____
The Telephone: _____ Fax: _____ Mobile phone: _____
E-mail: _____ Date: _____

License

- ☐ The standard type (Non-explosion-proof) ☐ Intrinsically safe (Exia IIB T5)
☐ Intrinsically safe (Exia IIC T6 Ga) ☐ Intrinsically safe+marine license (Exia IIC T6 Ga)
☐ Intrinsically safe and Flame proof (Exd ia IIC T6 Gb)

Tank / Container Information

The Types of Tank:

- ☐ Tank ☐ Reaction Tank ☐ Separation Tank ☐ Marine Tank

The Tank Structure:

Material of Tank: _____ Pressure: _____

Tank size:

Tank Height: _____ m Diameter: _____

The top of the tank:

- ☐ Vault ☐ Flat ☐ Open ☐ Cone type

The bottom of the tank:

- ☐ Cone bottom ☐ Flat ☐ Slope bottom ☐ Arc bottom

Installation:

- ☐ Top installation ☐ Side installation
☐ The bypass pipe mount ☐ Guided wave pipe installation

Installation takes over the top of the tank (information):

Height of take over : _____ mm Diameter of take over :: _____ mm

Measurement of Medium

Media name: ☐ Liquid ☐ Solid ☐ Mixed Media

Medium temperature: _____ °C

Dielectric Constant: _____

Linked material: ☐ Yes ☐ No

Mixing: ☐ Yes ☐ No

Process Connection

Thread: ☐ G1½" A ☐ 1½" NPT

Flange ☐ Flange (DN=) ☐ Flange (ANSI=)

Power supply:

- ☐ 24V DC Two wire system ☐ 24V DC Four wire system ☐ 220V AC Four wire system

Output: ☐ 4-20mA ☐ HART

Display: ☐ Take the meter display program ☐ Without meter display program