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1. Product Overview

Introduction:

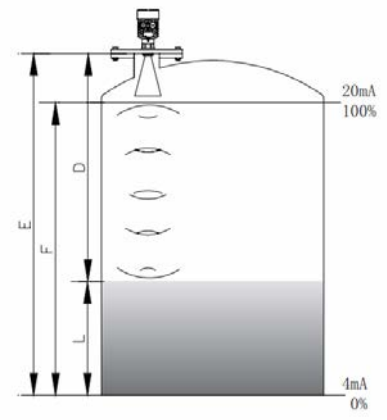
SKRD50 series radar level meter adopts 6.8GHz transmittion frequency technology, output 4-20mA analog signals; the max level is 30m; can be used to measure level of storage tank, buffer tank or process tank.

- **Application**

--Advanced none-contact measuring technology
--Stable material is chased
--Can measure level of liquid and solids
--Can measure the media whose dielectric constant is >1.8
--Measuring range 0—20m(30m is possible)
--2 wire, Loop powered, power supply and output signal using the same cable
--4~20mA output
-- Resolution 1mm
--Free from noise, vapor, powder, vacuum effect
--Can not be affected by density, viscosity and temperature
--Max. Process pressure 4Mpa
--Max. Process temperature 250° C

- **Principle**

The ultra short microwave impulse with very short emission energy can be emitted and received through antenna. The radar wave moves at the velocity of light. The moving time can be converted into substance position signal through electrical components. A special time - extension method can secure stable and precise measurement within very short time.



▸ **Input:** The antenna receives the reflected microwave impulse and transmits it to the electric circuit, the micro processor processes this signal, recognizes the wave echo produced by microwave impulse on the substance surface. The correct microwave echo signal recognition is completed intelligent software, the precision can reach millimeter grade. The distance from the substance surface D is proportional to impulse time stroke T: D=C ×T/2 (C is velocity of light)

As the distance of empty tank E is known, the substance position L is: L=E - D

▸ **Output:** By inputting empty tank height E (=O), full tank height F (=full) and some application parameter to set up, the application parameter will make the gauge adapted to the measuring environment, corresponding to 4 - 20mA output.

2. Introduction

SKRD51

Application:	Process condition is simple, corrosive liquids, slurries and solids. For example: Water tank Acid and alkali tanks Slurry tanks Solid granules Small petrol tanks
Max. range:	20m
Process connection:	G1½" or 1½" NPT
Process temperature:	-40~120° C
Process pressure:	-0.1~3Mpa
Accuracy:	±10mm
Repeatability	±2mm
Frequency range:	6.8GHz
Explosive rating:	Exib IIC T6 Gb
Protection level:	IP67
Output signal:	4~20mA/HART(2 wire)

SKRD52

Application:	Storing corrosive liquids, slurries and solids For example: Water tank,Acid and alkali tanks, Slurry tanks, Solid granules ,Small petrol tanks
Max. range:	20m
Process connection:	Flange
Process temperature:	-40~150° C
Process pressure:	-1.0~20bar
Repeatability	±10mm
Accuracy:	±2mm
Frequency range:	6.8GHz
Explosive rating:	Exib IIC T6 Gb
Protection level:	IP67
Output signal:	4~20mA/HART(2 wire)

SKRD53

Application:	Suitable for all kinds of storing tanks or process measuring environment, liquids, slurries and solids. For example: Crude oil, light oil tank Coal and powder coal bunkers Volatile liquid tank Charcoal level Slurry tank
Max. range:	30m
Process connection:	Flange
Process temperature:	-40~250° C
Process pressure:	-1.0~40Mpa
Accuracy:	±10mm
Repeatability	±2mm
Frequency range:	6.8GHz
Explosive rating:	Exib IIC T6 Gb
Protection level:	IP67
Output signal:	4~20mA/HART(2 wire)

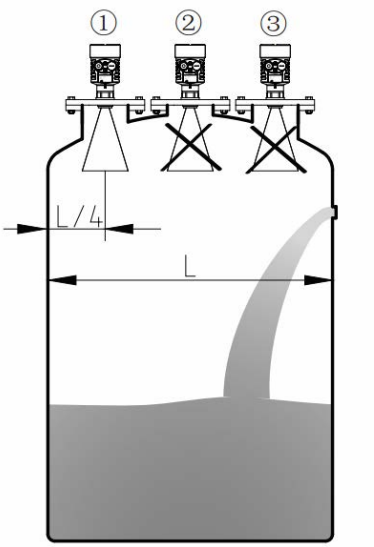
SKRD54

Application:	Suitable for small range powder, particles, blocks, for example: run coal bin, raw coal silo, coke silo.
Max. range:	30m
Process connection:	Gimbal Flange
Process temperature:	-40~250° C
Process pressure:	-1.0~3bar
Repeatability	±15mm
Accuracy:	±2mm
Frequency range:	6.8GHz
Explosive rating:	Exib IIC T6 Gb
Protection level:	IP67
Output signal:	4~20mA/HART(2 wire)

3. Installation Guideline

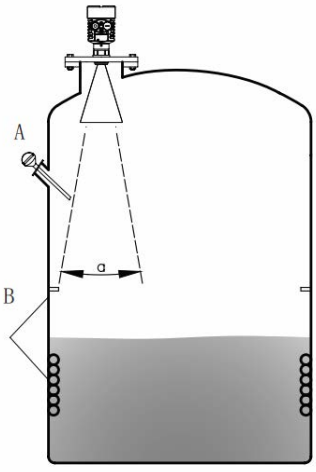
3.1 Installation Instructions

- The radar level meter should be installed in the 1/4 or 1/6 of diameter of the storage tank; better 1/4
- Better distance is①,min. distance between the radar level meter and vessel wall is 500mm;
- Not allowed to install above the material feeding silo③;
- Can not installed in the center of the tank②, if installed in the center, it will result in multiple echoes and affect the measuring effect.
- If the certain distance between the instrument and talk wall can not be guaranteed. The media on the tank wall may cling and result in false echoes. False echoes should be saved when adjusting the radar level meter.



3.2 Installation In the Tank

- Within the signal wave beam, avoid following materials to be installed: A: Limit switch, temperature sensor, etc. Symmetric position B, such as vacuum ring, heating coil, apron, etc.
- If there are A,B interference substances, apply guided wave tube for measurement.



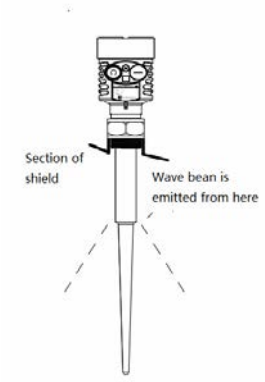
3.3 Optimized installation options

- Antenna size: the bigger the antenna size is, the smaller the wave beam angle is, and the interruption wave echo will be weaker.
- Antenna adjustment: adjust antenna to the optimized measuring position.
- Guided wave tube: the guided wave tube is used to avoid interference wave echo.

3.4 Rod type Radar level meter Installation

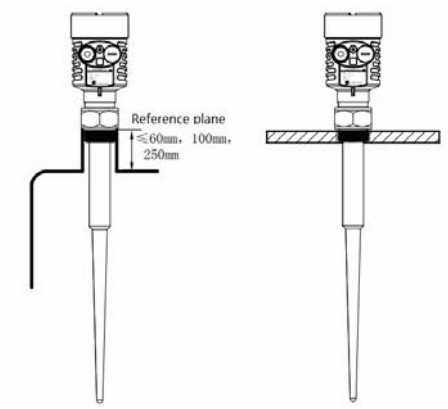
- The radar antenna cannot be inclined towards tank wall.
- In order to minimize the influence of the temperature, place a spring gasket at the connection of the flanges.
- For rod type antenna, the installation short pipe must be extended outside.

Put the rod type antenna vertically; do not let the radar beam point towards the tank wall.



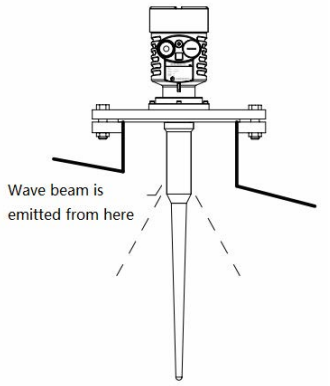
3.5 SKRD 51 Typical Installation

- PTFE Rode type antenna is suitable for corrosive media, such as acids and alkalis; in food industry, sterile vessel required instruments which have small mounting size and do not have any chemical reaction on the media, SKRD51 is a good choice.
- Rode type antenna can directly be mounted on the top of the vessel for liquid measurement, the opening size is G1½",DN50~DN150;Connection pipe should be less than 150mm. Note: PTFE Rode type antenna can bear small mechanical forces. If there is bending force on it, it will deform or break off.



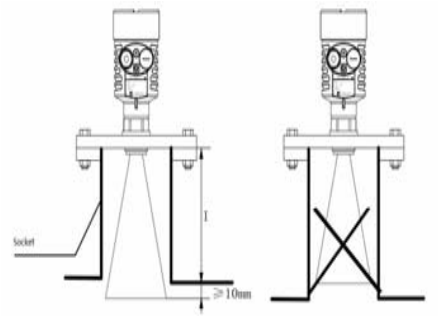
3.6 SKRD 52 Typical Installation

- The place will emit the wave beam should be in the vessel, connection pipe should less than 150mm, flange size can be from DN50~DN250.



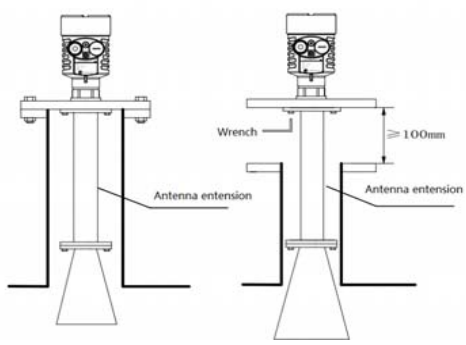
3.7 SKRD 53 Typical Installation

- Horn antenna should extend to the socket 10mm; otherwise antenna extension pipe is required.
- Horn antenna should be vertically mounted; radar beam should not be emitted to the wall of the vessel.



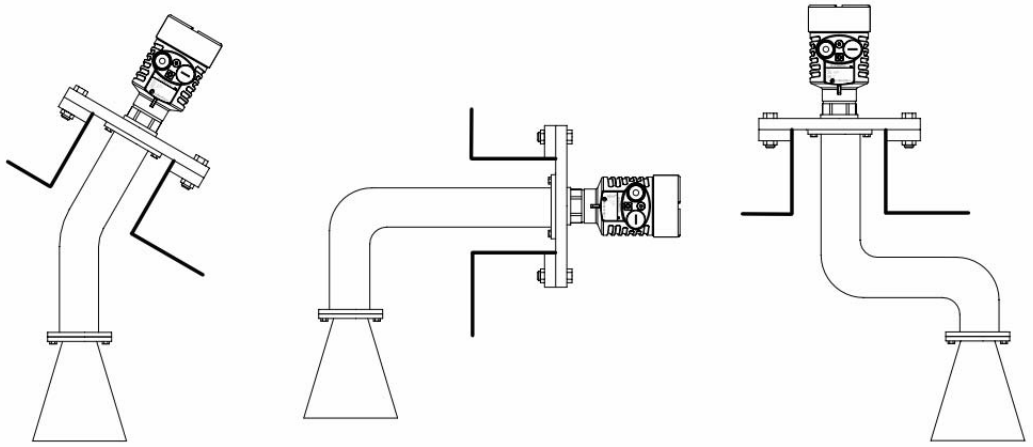
3.8 SKRD 53 Extension type or other type Installation

- Antenna Extension is required when the antenna is shorter than socket
- When the horn diameter is longer than socket diameter, including the antenna in the extension pipe need to be installed from inside the vessel and lift the level meter, the extension pipe should lift at least 100mm of the meter.



3.9 Special type Antenna Extension

- Antenna Extension can be made into 150°,90° or “S” shape



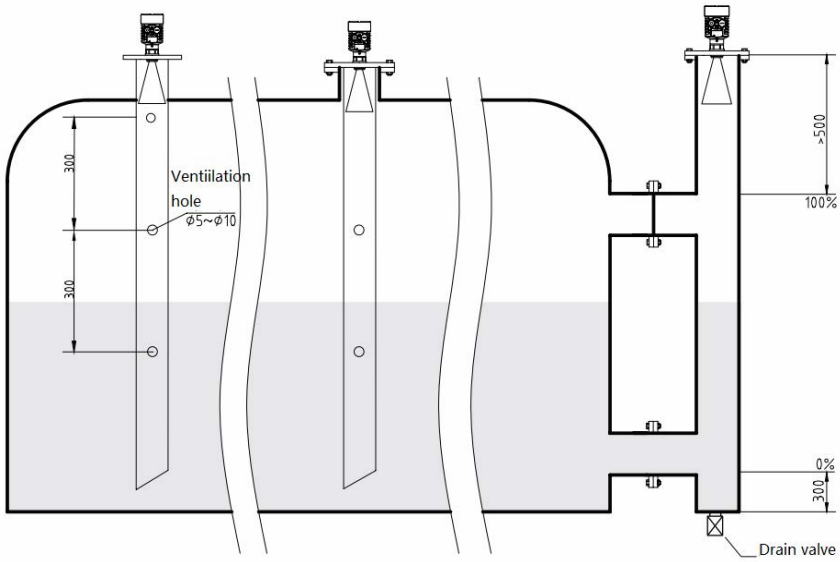
Measuring the level through the plastic vessel wall:

- The dielectric constant of media should large than 10
- The highest level of the media should be 20cm lower than the top of the vessel
- The distance between the vessel top and horn should be longer than 100mm
- Bracket mounting is recommended for easy adjustment
- Adhering and frozen places is better to be avoided, the space between the horn and vessel should have some protection.
- The vessel material should have low dielectric constant, conductive plastic is forbidden.
- The horn is better DN250/10”
- Within the area where beam is covered, any interfering material is avoided.(for example :pipe)

4. Wave Guide Tube Measuring

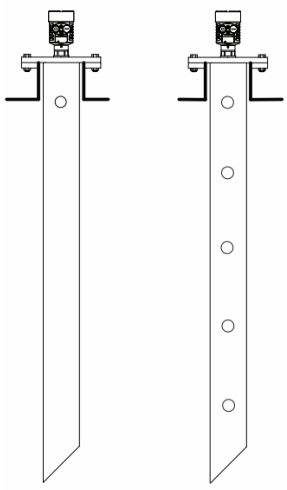
4.1 General Introduction

- If following conditions are appeared, wave guide tube is recommend to use:
  - There is heating coil, heat exchanger or fast moving stirring paddle;
  - There is constant whirlpool;
  - There is false echoes in the vessel;
- The radar signal can be focused in the wave guide tube, so media with small dielectric constant(ε r=1.6…3)can be measured.
- Min. level is required when measuring in the wave guide tubed.
- Besides installation wave guide tube in the vessel, bypass pipe can also be installed wave guide tubed.
- When wave guide tube is used, the max level is reduced 5~20% of the max range.(for example: DN50 horn can only measure 15m instead of 20m; DN100 can measure 18m instead of 20m)



4.2 Sticky Media

- For sticky media, the wave guide tube diameter should be 100mm or 150mm, while for non-sticky media, the diameter can be 50mm
- Wave guide tube is not recommended when the media is too sticky.



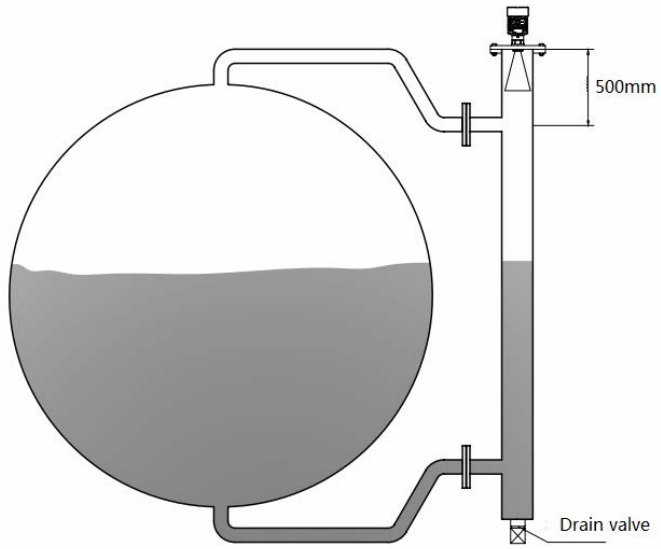
4.3 Mix media measuring in wave guide tube

- If mix or layered media is measured, ventilation holes are needed, the hole shape can be round, oval or rectangle.
- The large rectangle holes may generate false echoes, the rectangle should less than 10mm. round holes are better than rectangle holes for reducing signal noise.

Mono media Mix media

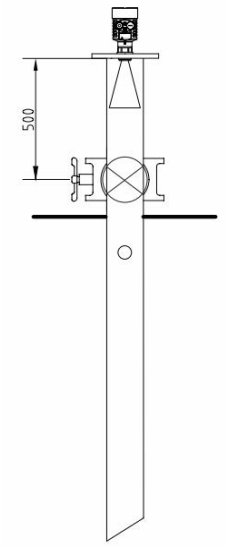
4.4 Bypass pipe Installation

- If the radar level sensor is installed in the bypass pipe, the sensor should be higher than 500mm of the joint where bypass pipe is connected to the vessel. The internal wall of the bypass pipe should be smooth.
- If the dielectric constant of the media is less than 4, the bypass pipe should be 300~800mm longer than the common type bypass pipe. Reflector can also be used to reflect the signals which reach to the bottom of the pipe.
- If there is strong whirlpool which may come from stirring or strong chemical reaction, wave guide tube is recommended. Please note that the media should not be too sticky, if it is too sticky, the bypass pipe should be 100mm or larger.



4.5 Wave guide tube with ball valve

- Radar level meter can be maintained without opening the vessel if ball valve is installed(for example, LPG or poisonous media is measured)
- The diameter of the ball vale should be the same as that of bypass pipe, and the distance between the ball valve and radar flanges should be longer than 500mm.

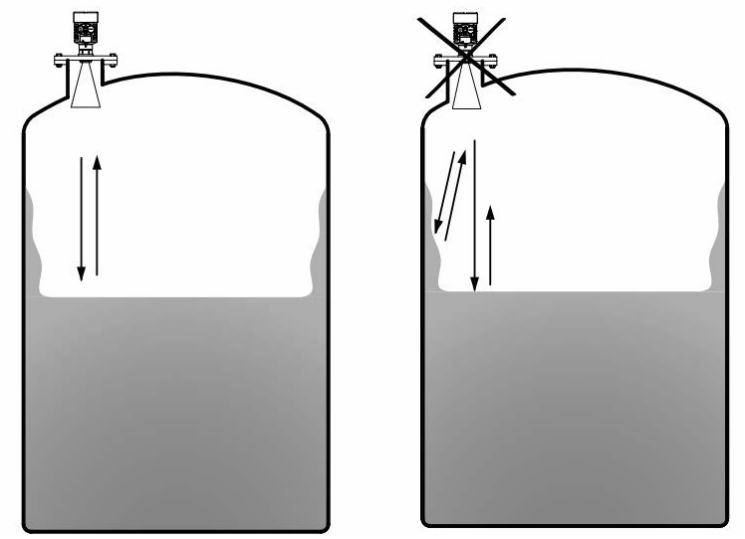


5. Installation Precautions

5.1 False Echoes

False echoes can be generated if improperly installed

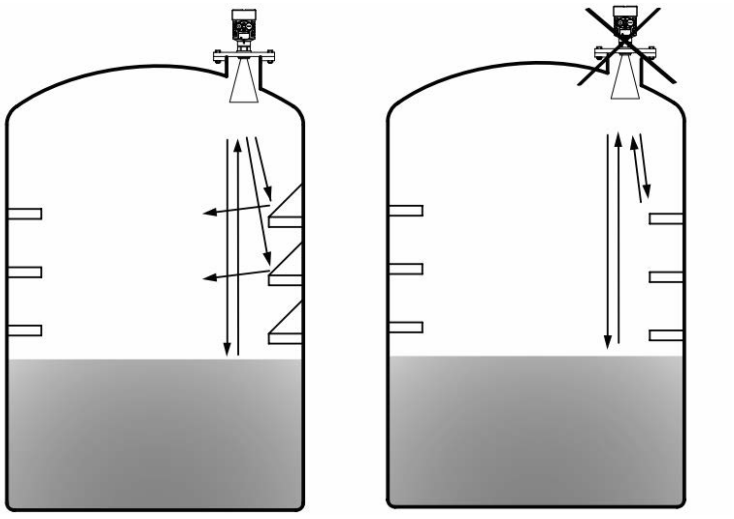
- If the radar level sensor is too close to the vessel wall, the strong false echoes can be generated. The adhering media , rivets, bolts, welded joint can generate false echoes
- The radar level sensor should be vertical to the media. The signals can be weaken if it is not vertical.



Right Wrong

False echoes can be generated when there are ladders, brackets or stirring paddles in the measuring vessel, we should avoid these obstacles or using reflectors.

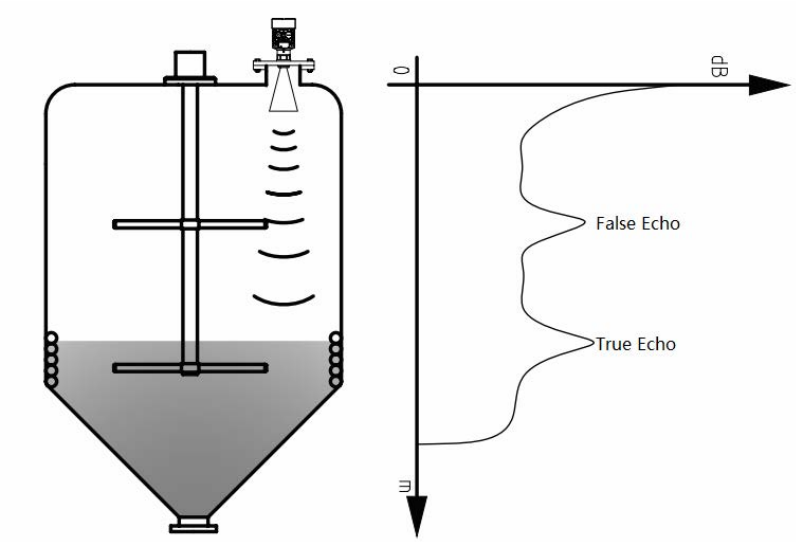
- Devices such as ladders inside the tank can generate the false echoes. We should avoid that
- Brackets in the vessel can also generate the false echoes, reflector is a good choice to avoid that .



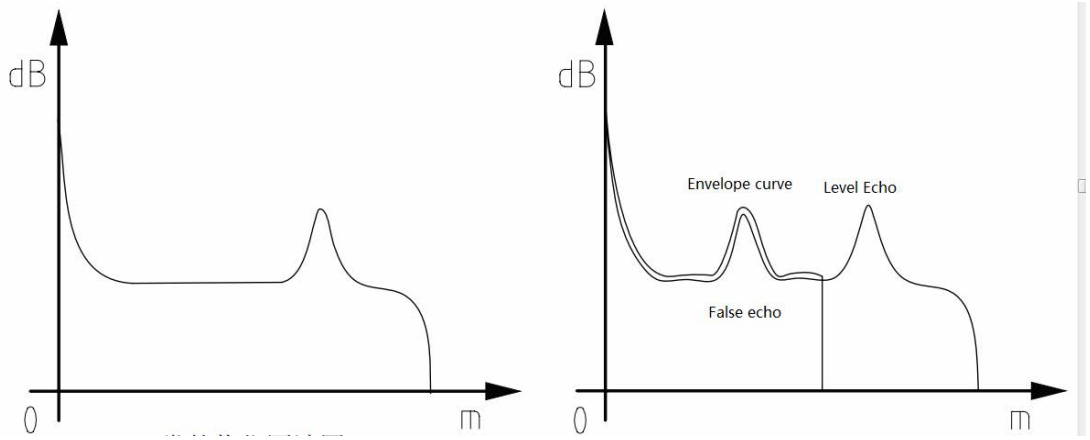
Right Wrong

5.2 Save False Echo

- If there are stirring paddles in the vessel, if we can not avoid the paddles, we need to save the false echo to eliminate the false signal.



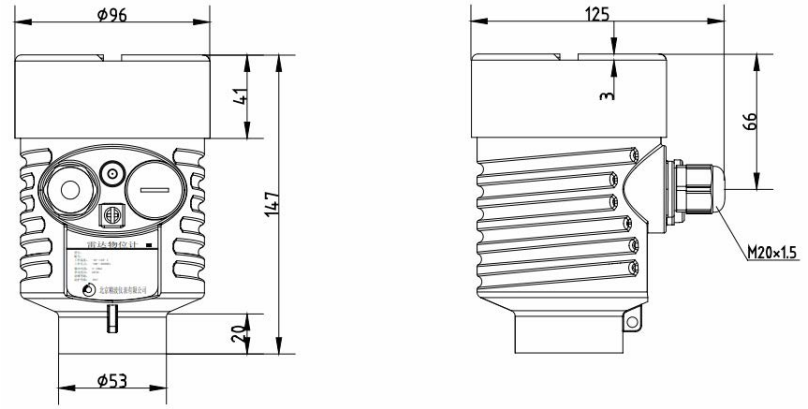
- As the following figure shows, we can save the false echoes between the envelope curves, and obtain the level echo.



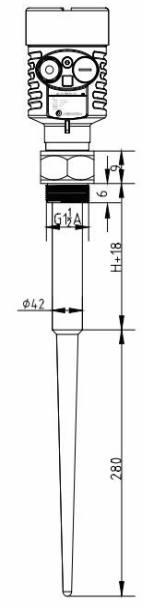
6. Dimensions

Housing

AL Material

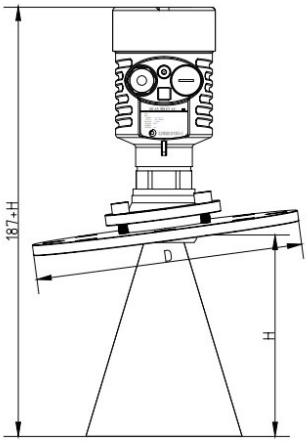


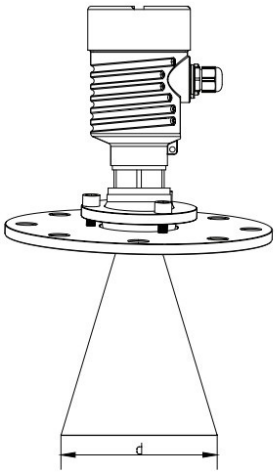
SKRD 51

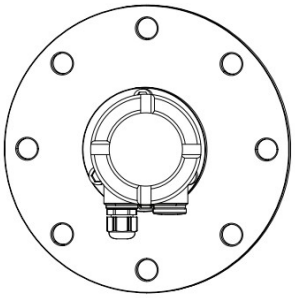


Socket H
50
100
150
200
250

SKRD54

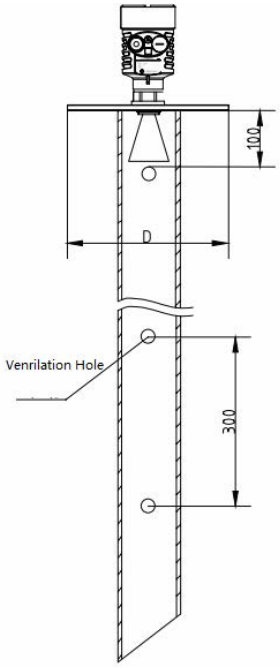




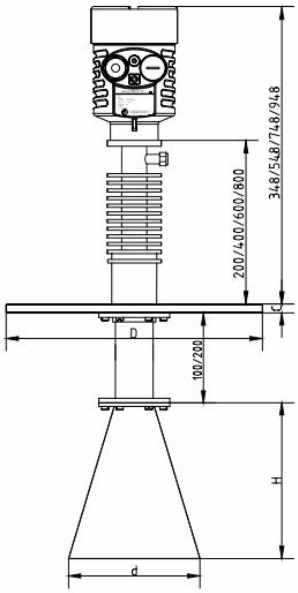


Note:
Flange is gimbal flanges, please refer to flange selection table; Horn dimensions refer to horn dimensions.

SKRD55

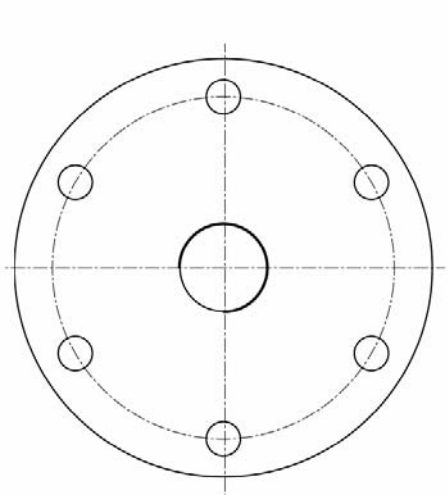


SKRD56

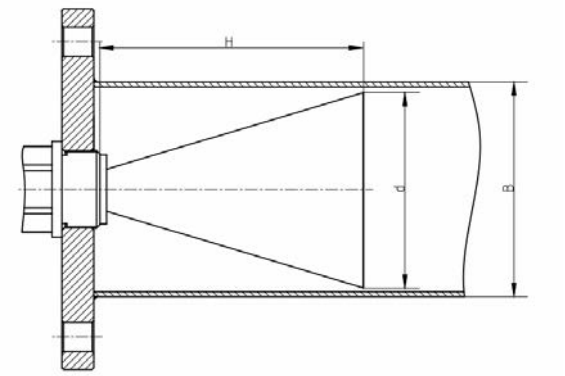


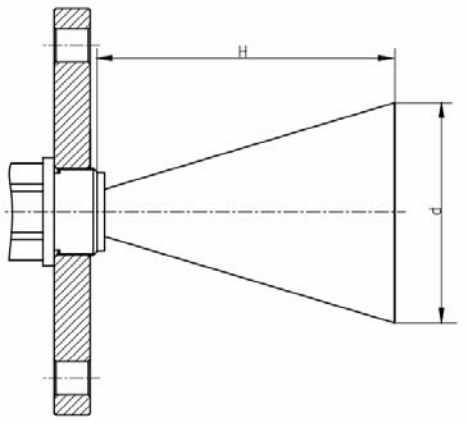
Note: Flange Dimensions refer to flange specification
Horn dimensions refer to horn specification

Flange, Wave guide tube, Horn Dimensions



Flange Specification (GB/T9119-2000)					
Item		D	K	n	L
1	DN50	Φ165	Φ125	4	18
2	DN80	Φ200	Φ160	8	18
3	DN100	Φ220	Φ180	8	18
4	DN150	Φ285	Φ240	8	22
5	DN200	Φ340	Φ295	12	22
6	DN250	Φ405	Φ355	12	26



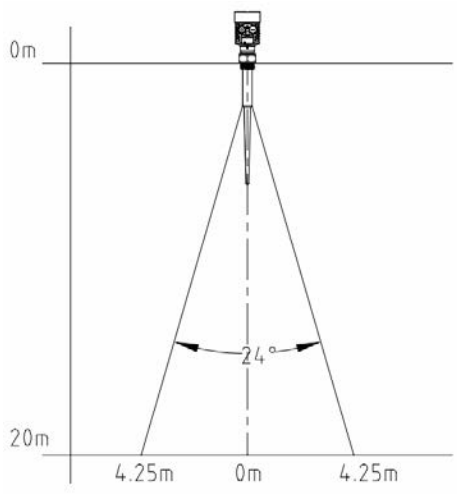


WAVE GUIDE DIMENSIONS		
Item	Specification	B
1	DN50	Φ57
2	DN80	Φ89
3	DN100	Φ108
4	DN150	Φ159
5	DN200	Φ219
6	DN250	Φ273

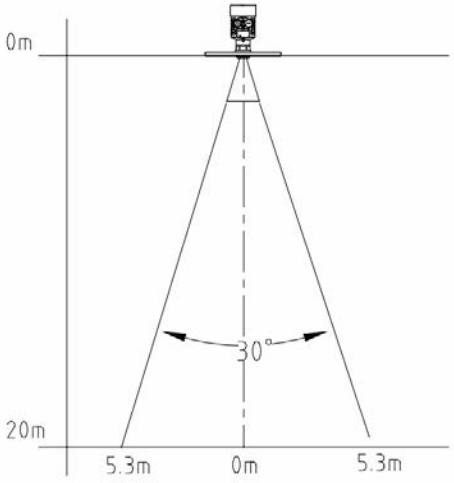
HORN DIMENSIONS			
Item	Model	d	H
1	80	Φ76	105
2	100	Φ96	150
3	150	Φ146	235
4	200	Φ196	326
5	250	Φ246	410

7. Beam Angle & False Echo

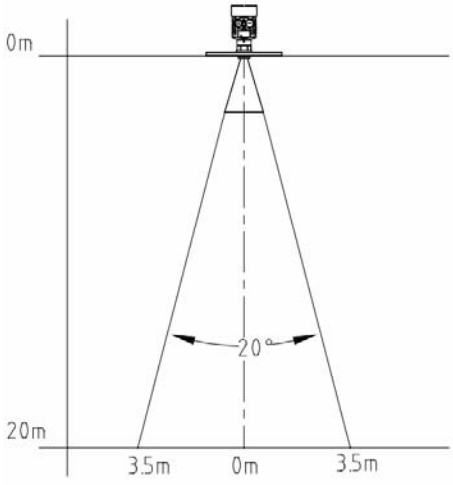
- Radar signals focus by antenna systems, radar beam is just like flashlight beam, it is tapered. Tapered beam angle is determined by antenna size.
- All the objects covered by radar beam have echoes, especially the nearby pipelines, brackets or others have strong echoes. False Echo which is from 6 meters distance is 9 times of that of 18 meters distance.
- Distant false echoes disperse in a large area which will decrease the false echoes, and the will have little influence on the measurement.
- The radar level sensor should be vertically mounted, any devices in the beam angle should be avoided, especially in the 1/3 area nearby the antenna
- If the radar level sensor signals can be vertical to the surface, and there is no any devices , the measurement result is the best.



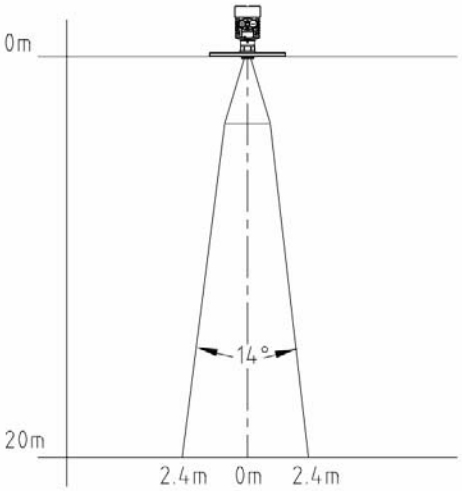
Rod type beam angle



DN100 Horn antenna beam angle



DN150 Horn antenna beam angle

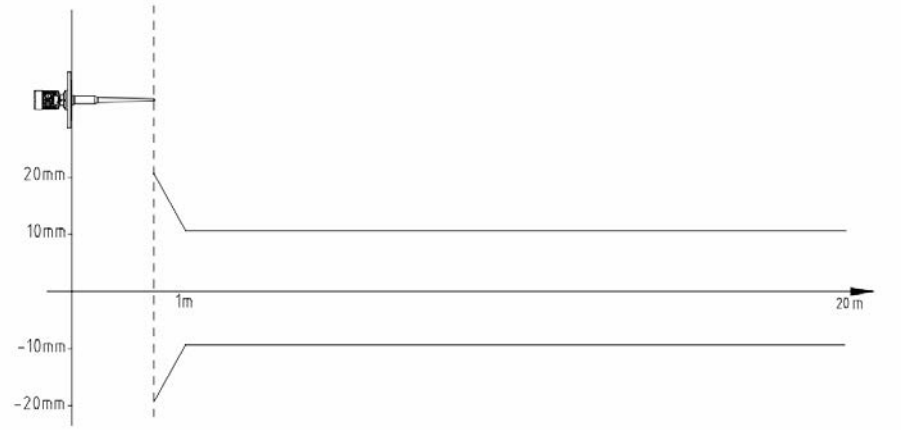


DN250 Horn antenna beam angle

8. Instrument linearity

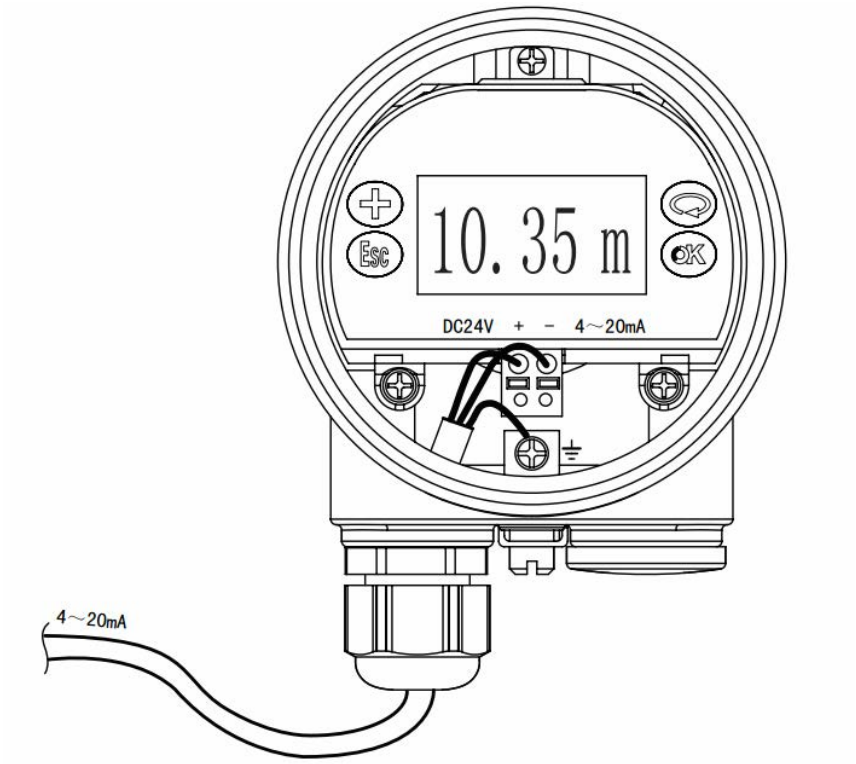
SKRD51

SKRD52



SKRD53

9. Instrument Wiring



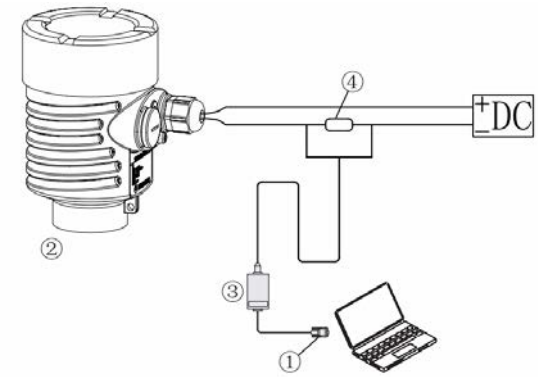
10. Instruments Adjustment

SKRD50 Can be adjusted by following methods:

- Through software PWSOFT
- Through handheld Hart Communicator
- Through Display/Programming modules

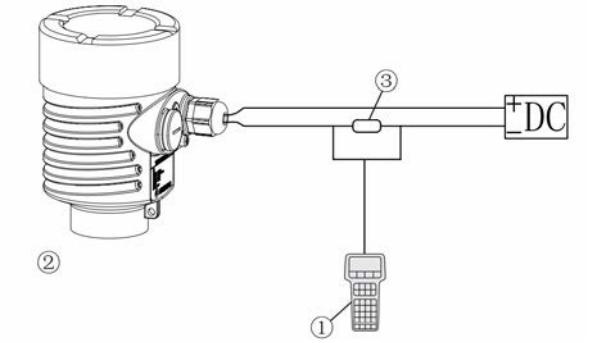
10.1 Through software PWSOFT

- The radar level meter can be adjusted by 4~20mA or HART through PWSOFT, “CONNETCTAT” driver is required.
- If adjust by software, the radar level meter should be powered by 24VDC,at the same time, 250Ω resistance is required in the front of Hart adapter; if it is an integral HART resistance(internal resistance is 250Ω) instrument, external resistance is not required. HART adapter and 4~20mA can parallel connected



①RS232 or USB interface
②SKRD50
③Hart Adapter
④250Ω Resistance

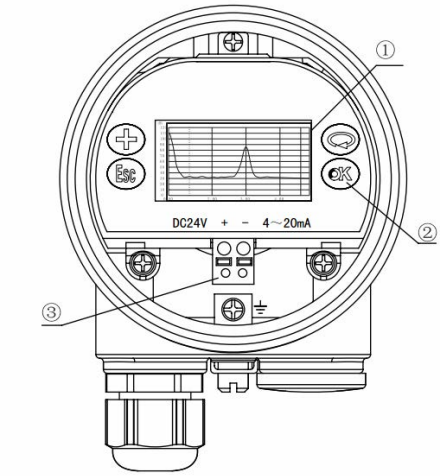
10.2 Through handheld Hart Communicator



①Hart Communicator
②SKRD50
③250Ω Resistance

10.3 Through Display/Programming modules (PWPM)

SKRD consists of 4 bottoms and one display, they can set the value through the menu on the display



①LCD display
②Buttons
③Wiring terminals

11. Technical Specifications

Basic Parameters	Working Frequency:	6.8G Hz
	Beam Angle:	24° SKRD51，SKRD52
		20° SKRD53 with DN150 Flanges
		16° SKRD53 with DN200 Flanges
		14 SKRD53 with DN250 Flanges
	Measuring range:	0~35m
	Repeatability:	±2mm
	Resolution:	1mm
	Sampling	Echo sampling 55 times/second
	Response time:	>0.2s(depend on actual situation)
	Output:	4~20mA
	Accuracy:	±10mm
Antenna Material	SKRD51:	PP or PTFE
	SKRD52:	PTFE
	SKRD53:	Stainless steel
Communication	Hart Communication	
Process Connection	SKRD51(PP or PTFE Rod antenna): G1½" or 1½" NPT SKRD52(PTFE rod antenna):Flange DN50,80,100.150,200,250 SKRD53(Horn antenna): Flange DN50,80,100.150,200,250	
Power supply	Power: 24 V DC(±10%), ripple voltage: 1Vpp Consumption: max.22.5mA	
Environment	Temperature: -40 ~70° C Pressure(gauge pressure)：-1~4 Mpa	
Hazardous Area	Exib IIC T6	
Protection level	IP67	
2-Wire connection	Power supply and output signal using the same cable	
Cable Entry	M20*1.5 or ½" NPT (cable diameter 5~9mm)	

12. Selection & Ordering Information

SKRD 51

Explosive Proof								
P	Standard(Without Approval)							
I	Intrinsically Safe（Exia IIC T6 Gb）							
D	Intrinsically Safe+Flameproof Approval（Exd ia IIC T6 Gb）							
	Antenna/Material/Process Temperature/Antenna length							
	SP	Plastic rod /PP/(-40～100) ° C						
	SF	Plastic rod /PTFE/(-40～120) ° C						
		Process Connection/Material						
		G	Thread G1½”A					
		N	Thread 1½NPT					
		A	PP Flange DN50,PN16					
		B	PP Flange DN80,PN16					
		C	PP Flange DN100,PN16					
		D	PP Flange DN150,PN16					
		E	PP Flange DN200,PN16					
		F	PP Flange DN250,PN16					
		Y	Special Demand					
			Length of Vessel Socket					
			A	50mm				
			B	100mm				
			C	150mm				
			D	200mm				
			E	250mm				
			Y	Special Demand				
				Electronic				
				2	(4～20)mA/ 2-Wire			
				3	(4～20)mA/(22.8～26.4)V DC/HART/2-Wire			
				4	(4～20)mA/(22.8～26.4)V DC/HART/4-Wire			
				5	(4～20)mA/220 V DC/HART/4-Wire			
					Housing/Protection			
					P	Plastic/IP65		
					L	Aluminium/IP67		
						Cable Entry		
						M	M20x1.5	
						N	½NPT	
							Display/Programming	
							A	Yes
							X	No
								Measuring Range(mm)

SKRD 52

Explosive Proof									
P	Standard(Without Approval)								
I	Intrinsically Safe（Exia IIC T6 Gb）								
D	Intrinsically Safe+Flameproof Approval（Exd ia IIC T6 Gb）								
	Antenna/Material/Process Temperature/Antenna length								
	SF	Plastic rod /PTFE/(-40～120) ° C							
		Length of Vessel Socket							
		A	50mm						
		B	100mm						
		C	150mm						
		D	200mm						
		E	250mm						
		Y	Special Demand						
			Process Connection/Material						
			FA	PTFE Stub ends, SS Flange,DN50,PN16					
			FB	PTFE Stub ends, SS Flange,DN80,PN16					
			FC	PTFE Stub ends, SS Flange,DN100,PN16					
			FD	PTFE Stub ends, SS Flange,DN150,PN16					
			FE	PTFE Stub ends, SS Flange,DN200,PN16					
			FF	PTFE Stub ends, SS Flange,DN250,PN16					
				Seal/Process Temperature					
				P	-40~100° C				
				G	-40~150° C (with cooling fin)				
					Electronic				
					2	(4～20)mA/ 2-Wire			
					3	(4～20)mA/(22.8～26.4)V DC/HART/2-Wire			
					4	(4～20)mA/(22.8～26.4)V DC/HART/4-Wire			
					5	(4～20)mA/220 V DC/HART/4-Wire			
						Housing/Protection			
						P	Plastic/IP65		
						L	Aluminium/IP67		
							Cable Entry		
							M	M20x1.5	
							N	½NPT	
								Display/Programming	
								A	Yes
								X	No
									Measuring Range(mm)

SKRD 53

Explosive Proof									
P	Standard(Without Approval)								
I	Intrinsically Safe（Exia IIC T6 Gb）								
D	Intrinsically Safe+Flameproof Approval（Exd ia IIC T6 Gb）								
	Process Connection/Material								
	A	Flange DN50/PN16							
	B	Flange DN80/ PN16							
	C	Flange DN100/ PN16							
	D	Flange DN150/ PN16							
	E	Flange DN200/ PN16							
	F	Flange DN250/ PN16							
	G	G1½”							
	Y	Special Demand							
		Antenna/Material							
		A	Horn Φ76mm/Stainless Steel 304						
		B	Horn Φ96mm/Stainless Steel 304						
		C	Horn Φ146mm/Stainless Steel 304						
		D	Horn Φ196mm/Stainless Steel 304						
		E	Horn Φ242mm/Stainless Steel 304						
			Antenna Extension						
			1	No					
			2	200mm					
			3	300mm					
			4	400mm					
				Seal/Process Temperature					
				P	-40~100°C				
				G	-40~150°C (with cooling fin)				
					Electronic				
					2	(4～20)mA/ 2-Wire			
					3	(4～20)mA/(22.8～26.4)V DC/HART/2-Wire			
					4	(4～20)mA/(22.8～26.4)V DC/HART/4-Wire			
					5	(4～20)mA/220 V DC/HART/4-Wire			
						Housing/Protection			
						P	Plastic/IP65		
						L	Aluminium/IP67		
							Cable Entry		
							M	M20x1.5	
							N	½NPT	
								Display/Programming	
								A	Yes
								X	No
									Measuring Range(mm)

SKRD 54

Explosive Proof									
P	Standard(Without Approval)								
I	Intrinsically Safe（Exia IIC T6 Gb）								
D	Intrinsically Safe+Flameproof Approval（Exd ia IIC T6 Gb）								
	Process Connection/Material								
	D	Gimbal Flange DN150							
	E	Gimbal Flange DN200							
	F	Gimbal Flange DN250							
	Y	Special Demand							
		Antenna/Material							
		D	Horn Φ146mm/Stainless Steel 304						
		E	Horn Φ196mm/Stainless Steel 304						
		F	Horn Φ242mm/Stainless Steel 304						
			Antenna Extension						
			1	No					
			2	200mm					
			3	300mm					
			4	400mm					
				Seal/Process Temperature					
				P	-40~100° C				
				G	-40~150° C (with cooling fin)				
					Electronic				
					2	(4～20)mA/ 2-Wire			
					3	(4～20)mA/(22.8～26.4)V DC/HART/2-Wire			
					4	(4～20)mA/(22.8～26.4)V DC/HART/4-Wire			
					5	(4～20)mA/220 V DC/HART/4-Wire			
						Housing/Protection			
						P	Plastic/IP65		
						L	Aluminium/IP67		
							Cable Entry		
							M	M20x1.5	
							N	½NPT	
								Display/Programming	
								A	Yes
								X	No
									Measuring Range(mm)

SKRD 55

Explosive Proof								
P	Standard(Without Approval)							
I	Intrinsically Safe（Exia IIC T6 Gb）							
D	Intrinsically Safe+Flameproof Approval（Exd ia IIC T6 Gb）							
	Process Connection/Material							
	A	Flange DN50/PN16						
	B	Flange DN80/ PN16						
	C	Flange DN100/ PN16						
	Y	Special Demand						
		Antenna/Material						
		A	DN50 Wave guide tube tube/Stainless Steel 304					
		B	DN80 Wave guide tube tube/Stainless Steel 304					
		C	DN100 Wave guide tube tube/Stainless Steel 304					
			Seal/Process Temperature					
			P	-40~100° C				
			G	-40~150° C (with cooling fin)				
				Electronic				
				2	(4～20)mA/ 2-Wire			
				3	(4～20)mA/(22.8～26.4)V DC/HART/2-Wire			
				4	(4～20)mA/(22.8～26.4)V DC/HART/4-Wire			
				5	(4～20)mA/220 V DC/HART/4-Wire			
					Housing/Protection			
					P	Plastic/IP65		
					L	Aluminium/IP67		
						Cable Entry		
						M	M20x1.5	
						N	½NPT	
							Display/Programming	
							A	Yes
							X	No
								Measuring Range(mm)

SKRD 56

Explosive Proof									
P	Standard(Without Approval)								
I	Intrinsically Safe（Exia IIC T6 Gb）								
D	Intrinsically Safe+Flameproof Approval（Exd ia IIC T6 Gb）								
	Process Connection/Material								
	A	Flange DN50/PN16							
	B	Flange DN80/ PN16							
	C	Flange DN100/ PN16							
	Y	Special Demand							
		Antenna/Material							
		D	Horn Φ146mm/Stainless Steel 304						
		E	Horn Φ196mm/Stainless Steel 304						
		F	Horn Φ242mm/Stainless Steel 304						
			Antenna Extension						
			1	1000mm					
			2	1500mm					
			3	2000mm					
			4	2500mm					
			5	3000mm					
				Seal/Process Temperature					
				P	-40~120° C				
				G	-40~500° C (with cooling fin)				
					Electronic				
					2	(4～20)mA/ 2-Wire			
					3	(4～20)mA/(22.8～26.4)V DC/HART/2-Wire			
					4	(4～20)mA/(22.8～26.4)V DC/HART/4-Wire			
					5	(4～20)mA/220 V DC/HART/4-Wire			
						Housing/Protection			
						L	Aluminium/IP67		
						P	Plastic /IP65		
							Cable Entry		
							M	M20x1.5	
							N	½NPT	
								Display/Programming	
								A	Yes
								X	No
									Measuring Range(mm)

9 Application Questionnaire

Approvals

☐ Standard Version ☐ Intrinsically Safe Version（Exia IIC T6） ☐ Intrinsically Safe Version（Exia IIC T6）
☐ Intrinsically Safe Version+Ship Approval（Exia IIC T6） ☐ Intrinsically Safe Version+Explosion Proof（Exd [ia] IIC T6）

Measured Medium

Name _____
Condition ☐ Liquid (☐ Solid（Form ☐ Mass ☐ Particle ☐ Dust)
Temperature: Min._____℃ Norm._____℃ Max._____℃
Surface ☐ Flat ☐ Turbulent ☐ Agitated Vorte
Dielectric Constant ☐ εr<3 ☐ εr>3

Atmosphere

Atmosphere ☐ Form ☐ Foam ☐ Dust ☐ Deposit ☐ Vapour
Atmosphere Pressure Min. _____ Norm. _____ Max. _____

Vessel

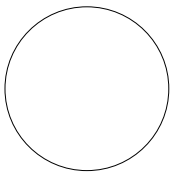
Shape of Top ☐ Flat ☐ Arch ☐ Conical ☐ Horizontal
Height _____ Diameter _____
Critical Information
Nozzle Length: _____ Nozzle Diameter: _____ Measurement Range: _____

Process Connection

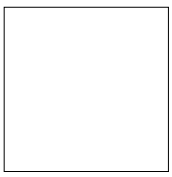
Thread（☐ G¾A ☐ ¾NPT ☐ G1A ☐ G1A、M105x2 ☐ G1½A ☐ 1½NPT ☐ G2A ）
☐ Flange（DN= ） ☐ Swivelling Holder

Installation

Mode: ☐ Top ☐ Side
Filling Stream inlet position and installation position （Please specify in the diagram below）



Circular Vessel



Square Vessel

Power Supply

☐ 220V AC ☐ 2-wire 24V DC ☐ 3-wire 24V DC ☐ 4-wire 24V DC

Communication

☐ (4～20) mA/HART

Display

☐ Yes ☐ No

Customer Information

Contact: _____
Company: _____
Address: _____
P. C.: _____ Tel: _____
Email: _____ Fax: _____

Please give brief explanation on the application of instrument:

Date: