Datasheet

Radar Level Transmitter

SUP-RD902

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Committed to process automation solutions

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Radar Level Transmitter
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SUP-RD902 radar level meter adopted 26G high frequency radar sensor, the maximum measurement range can reach up to 70 meters. Antenna is optimized further processing, the new fast microprocessors have higher speed and efficiency can be done signal analysis, the instrumentation can be used for reactor, solid silo and very complex measurement environment.

Applications

- Chemical industry
- Solids level measurement
- Sewage treatment
- Mining industry
- Paper and Pulp Industry
- Boiler Engineering
- Liquid and solid powder measure
- Acids, bases or other corrosive media

Radar Level Transmitter

Features

- Small antenna size, easy to install;
- Imost no corrosion, bubble effect;
- Serious dust environment on the high level meter work has little effect;
- Beam angle is small, the energy is concentrated;
- The measuring range is smaller, for a measurement will yield good results;
- High signal noise ratio, the level fluctuation state can obtain a better performance;
- High frequency measurement of solids and low dielectric constant of the medium;

Principle

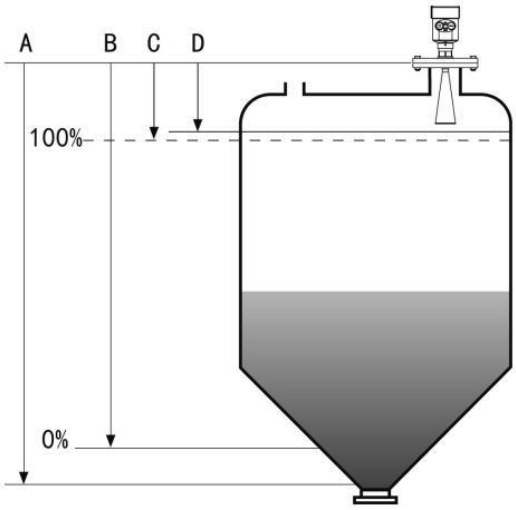
Radar level transmitter antenna microwave pulse is narrow, the downward transmission antenna. Microwave exposure to the medium surface is reflected back again by the antenna system receives, sends the signal to the electronic circuit automatically converted into level signals (because the microwave propagation speed, electromagnetic wave to reach the target and the reflected back to the receiver this time is almost instantaneous).

A Range set

B Low adjustment

C High

D Blind area



Datum measurement: Screw thread bottom or the sealing surface of the flange.

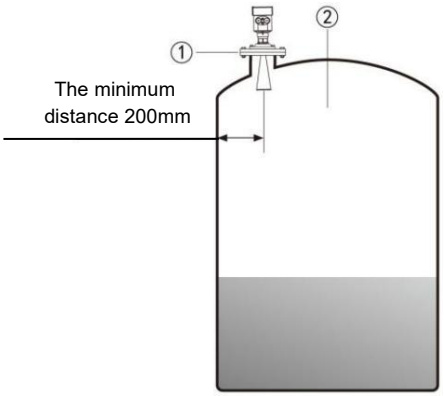
Note: *Make sure the radar level meter the highest level cannot enter the measuring blind area (Figure D shown below).*

Parameters	
Application	Slightly corrosive liquid
Measuring range	30 m
Process connection	Thread, flange
Process temperature	Process Temperature (at the antenna):(-40 to 130)°C for standard model / (-40 to 230)°C for high-temperature model
Process pressure	-0.1 ~ 4.0 MPa
Accuracy	± 3mm
Ingress protection	IP67
Frequency range	26GHz
Supply	2-wire（DC24V）/ 4-wire（DC24V /AC220V）
Signal output	4-20mA /HART（2-wire / 4-wire）RS485/ Modbus
Outer covering	Aluminum / plastic / stainless steel

Installation

Be installed in the diameter of the 1/4 or 1/6.

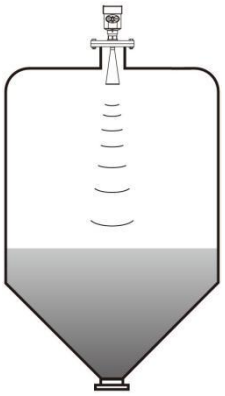
Note: The minimum distance from the tank wall should be 200mm.



Note: ① Datum

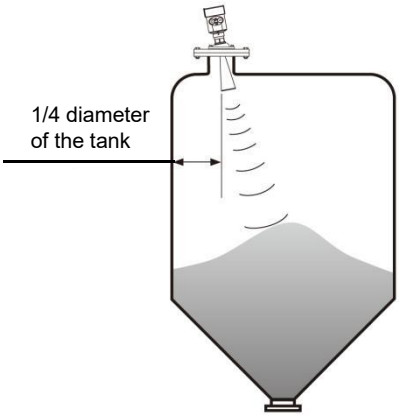
② The container center or axis of symmetry

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



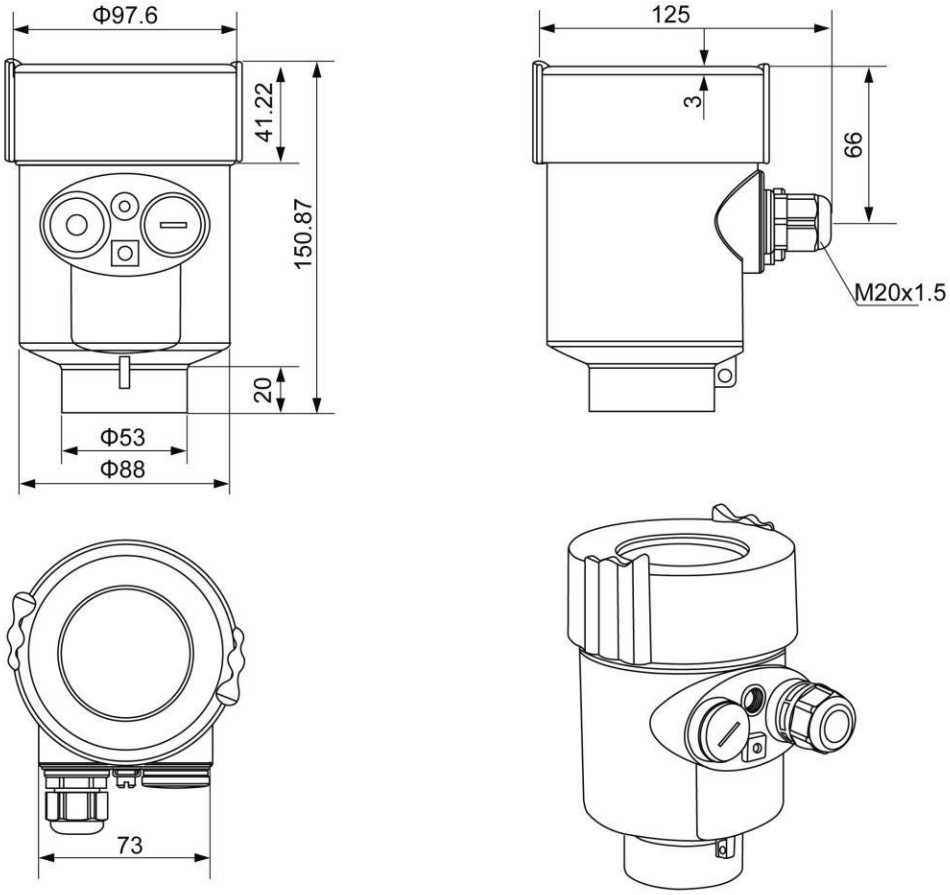
- A feed antenna to the vertical alignment surface. If the surface is rough, stack angle must be used to adjust the angle of cardan flange of the antenna to the alignment surface.

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

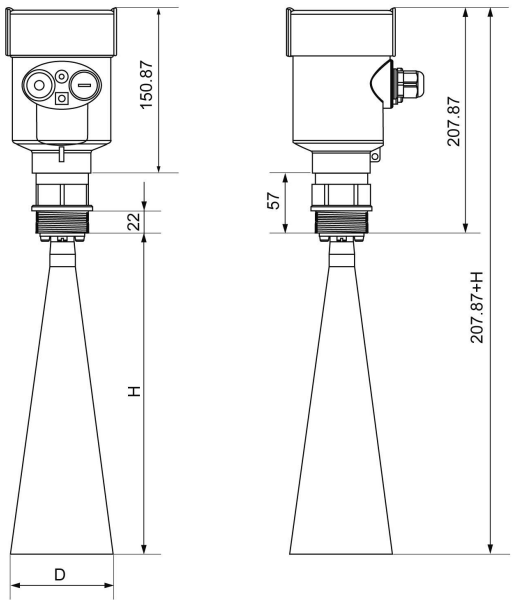


Dimension

- **The outer shell**:

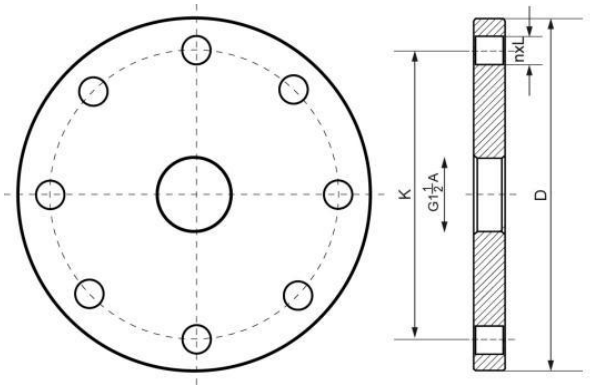


- **Appearance size:**



Flange	Trumpet diameter D	Trumpet height H
DN50	Φ46	140
DN80	Φ76	205
DN100	Φ96	290

■ Flange type:



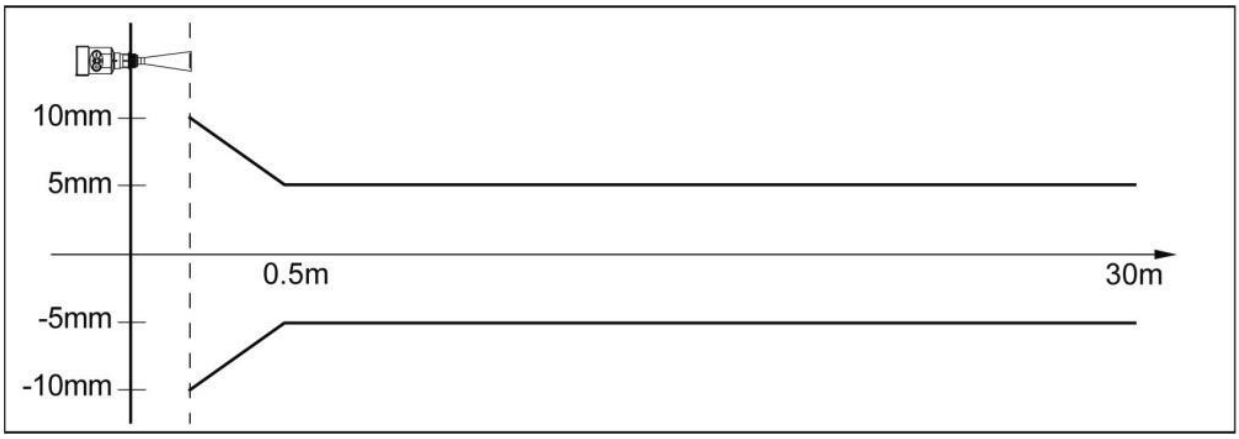
Flange Selection Tables

Specification	Outer diameter D	Hole center distance K	Number of Holes n	Hole diameter L
DN50	Φ165	Φ125	4	18
DN80	Φ200	Φ160	8	18
DN100	Φ220	Φ180	8	18
DN125	Φ250	Φ210	8	18
DN150	Φ285	Φ240	8	22
DN200	Φ340	Φ295	12	22
DN250	Φ405	Φ355	12	26

Meter Linearity

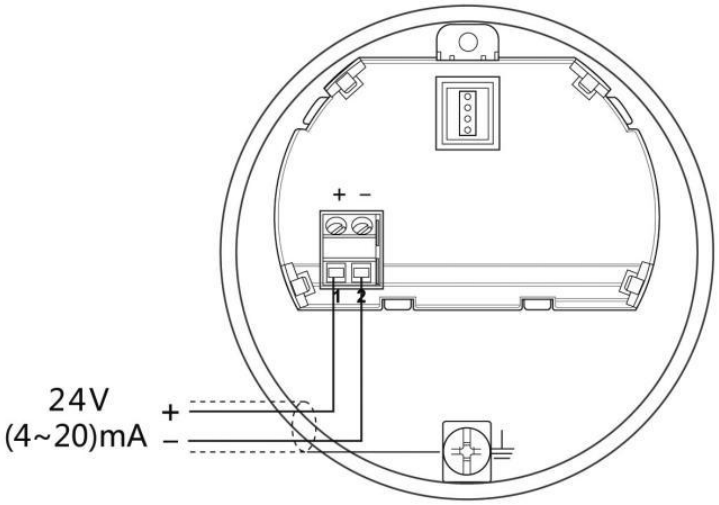
■ SUP-RD902

Emission angle	Depending on the size of the antenna
-℄46mm	18°
-℄76mm	12°
-℄96mm	8°
-℄121mm	6°
Precision	See chart

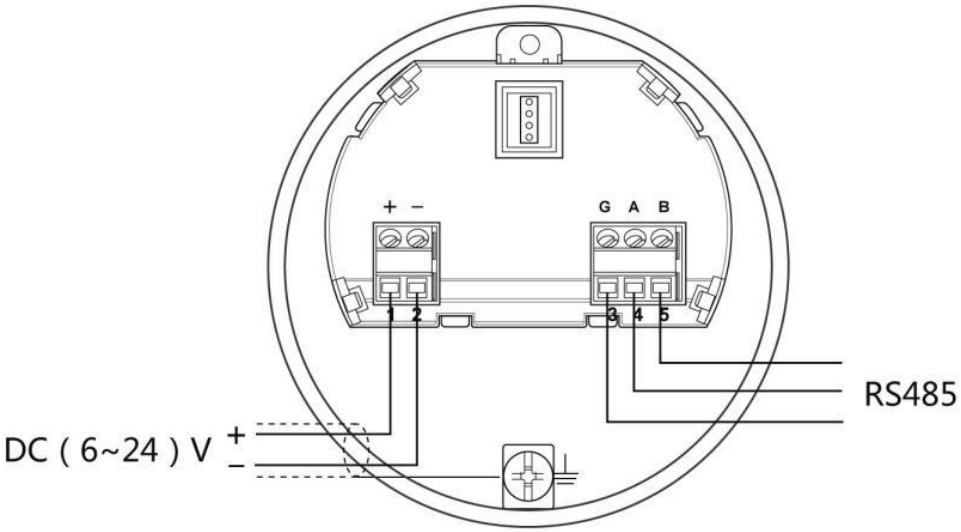


Wiring

- 24V two wire wiring diagram as follows:



- 6~24V RS485/Modbus wiring diagram as follows:



Ordering code

SUP-RD902-A-05-KC-A2-LG-TE-WH-E4											Description
SUP-RD902	-	-	-	-	-	-	-	-	-	-	
Measuring Medium	A										Liquid
Measurement Range		05									5m
		10									10m
		15									15m
		20									20m
		30									30m
		XX									Other
Antenna Type			KC								Horn Mouth H205mm×Φ76mm 304SS
			KD								Horn Mouth H205mm×Φ76mm SS316L
			KJ								Horn Mouth H290mm×Φ96mm 304SS
			KK								Horn Mouth H290mm×Φ96mm SS316L
Output and Power Supply				A2							Two-wire 4-20mA+HART
				SC							4-20mA+HART，24VDC
				R2							RS485，24VDC
				XX							Other
Thread Type					LG						G1 1/2 304SS
					LN						NPT1 1/2 304SS
					LH						G1 1/2 SS316L
					LP						NPT1 1/2 SS316L
					FE						HG/T20592 PN10/25 DN80 304SS
					HA						HG/T20592 PN10/25 DN80 Swivel 304SS
					FK						HG/T20592 PN10/25 DN80 SS316L
					HE						HG/T20592 PN10/25 DN80 Swivel SS316L
					FF						HG/T20592 PN10/16 DN100 304SS
					HB						HG/T20592 PN10/16 DN100 Swivel 304SS
					FL						HG/T20592 PN10/16 DN100 SS316L
					HF						HG/T20592 PN10/16 DN100 Swivel SS316L
					XX						Other
High Temperature Resistance						TE					-40-130℃
						TH					-40-230℃
Electrical Interface, Housing Material, and Ingress Protection							WH				M20×1.5 Cable Gland, Aluminum Alloy, IP67
Explosion-Proof Option								00			None
								E4			CNEX Ex db ⅡC T6 Gb