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Hebei Huachuang M&C Technology Co.,LTd

IOT Level Transmitter

Guided Wave Radar Level Transmitter

26G High Frequency Radar Level Transmitter





# Certification



## Company profile

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

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

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

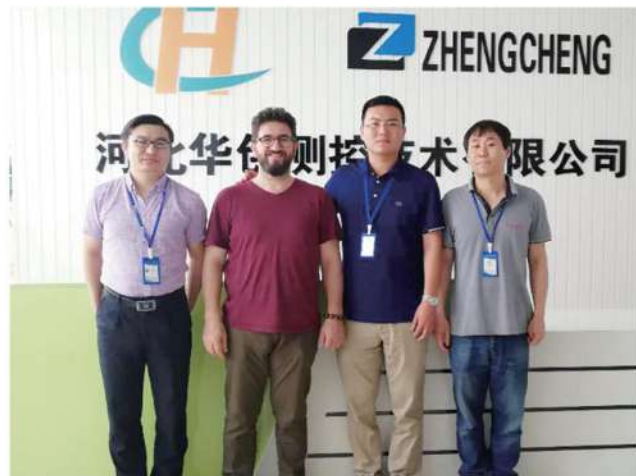
Huachuang is willing to grow up with you together to embrace the glorious future!



Splendid moment

Approaching HCCK

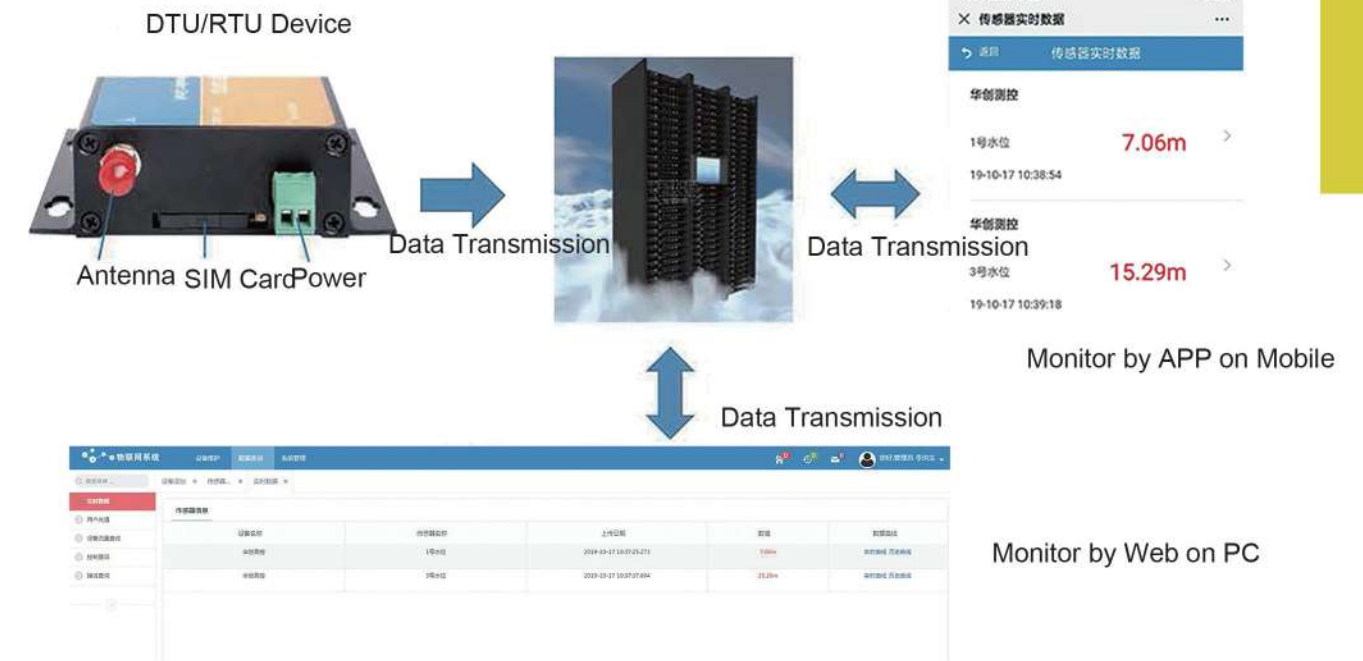
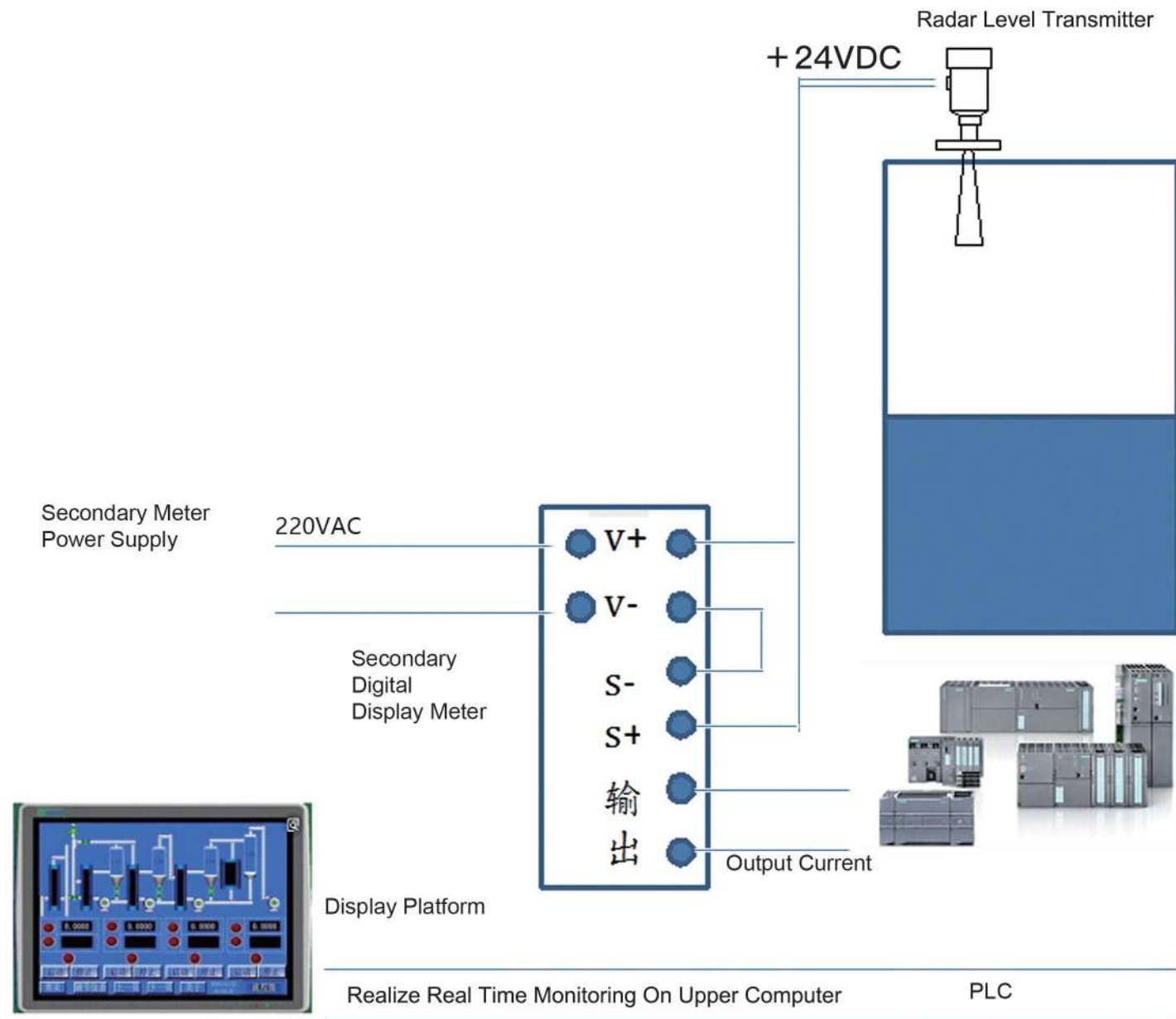
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## Centralized Management System

In order to facilitate customer monitoring and control of multiple monitoring points, save labor costs,



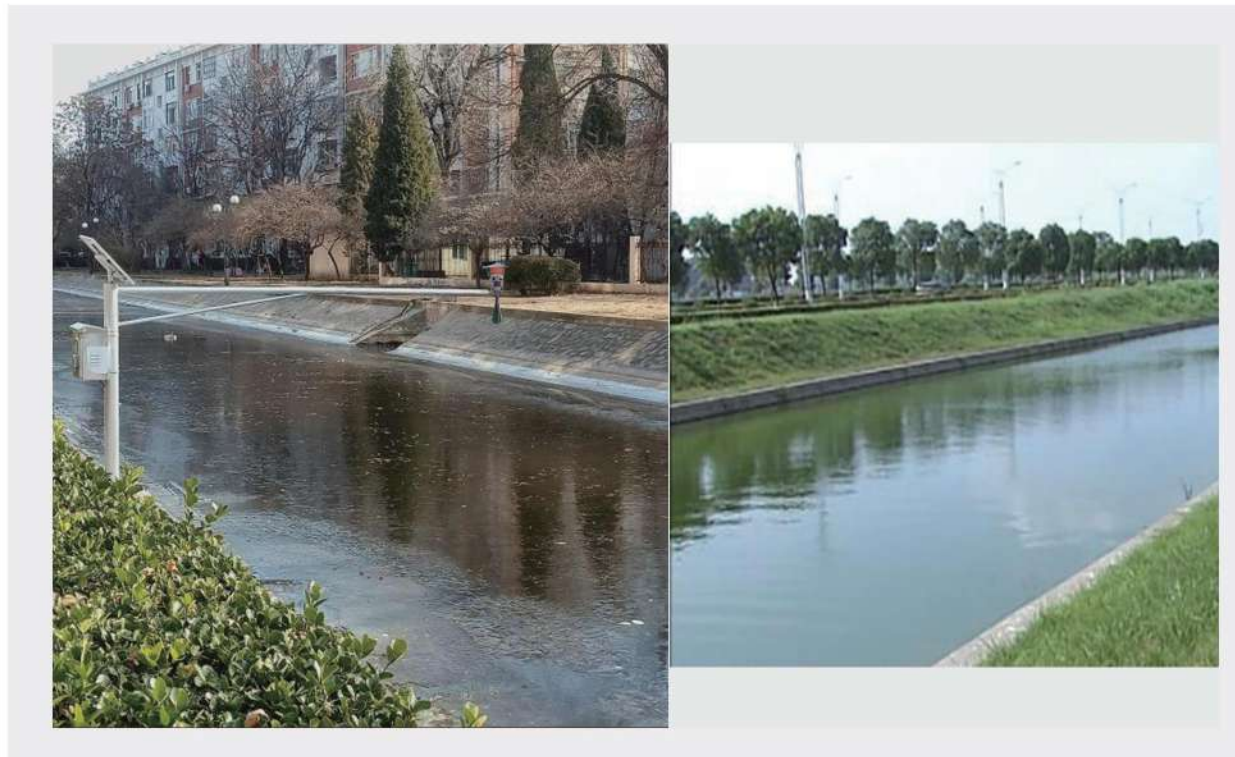
## Overview

IOT system uses low energy consumption level sensor in the field and connected with DTU or RTU device, the solar power supply system will control the circuit to charge the lithium battery which will provide power supply for all the devices. DTU or RTU could transfer the measuring signals to the cloud data-base through GPRS,2G,3G,4G network. Users could check the monitoring data through WEB on PC or Wechat on mobile, meanwhile it can preset the alarm parameters and send message to users by SMS or Wechat.

# HCIOT-71 IOT Level Transmitter



Application	River, reservoir, tide, unattended areas
Measuring Range	0 ~ 120m
Signal Output	RS485 MBUSRTU wireless transmission
Power supply	solar power + lithium battery / electric supply
Display method	Monitoring through Web on PC or App on Mobile
Signal transmission	GPRS, 2G, 3G, 4G,



Unit	Code	Parameters
Transmission distribution box	DT	Solar power supply DTU transmission
	RT	Solar power supply RTU transmission
	DP	Local power supply DTU transmission
	RP	Local power supply RTU transmission
	Y	Special terms
Dimension of installation bracket	0	Without
	1	2m*2m
	2	3m*2m
	3	4m*3m
	y	Special terms
Material Of Installation Bracket	O	Without
	T	Galvanized poling
	B	Stainless poling
	Y	Special terms
Solar panel	O	Without
	L	20W-30W
	M	60W-70W
	N	100W
	Y	Special Custom
Lithium battery	O	Without
	A	28AH
	B	40AH
	C	52AH
	D	65AH
	E	80AH
Y	Special Custom	
Memory function	0	Without
	1	with
Rainfall pulse function	0	Without
	1	with

# Guided Wave Radar Level Transmitter

## Overview

The guided wave radar level transmitter is used for liquid, solid particles and small size oil tanks, all kinds of conductive and non-conductive mediums. Such as coal bunker, ash bin, oil tanks and etc. Guided wave radar level transmitter offers continuously measurement of the level of liquids, particles and slurries. The measurement won't be affected by the medium type, temperature, inert gas, steam, dust, foam and so on. The accuracy could reach to 3mm, the measuring range can be 30 meters, high temperature resistance could be 250 centigrade and high pressure resistance can be 20 kgs.

## Principle

Guided wave radar level transmitter is a level measuring instrument based on time travel principle, the radar wave runs at the speed of light, the running time can be converted into a level signal by electronic components. When the pulse reaches the surface of the material, the pulse is reflected back and is received by the receiving container inside the instrument, the distance the signal is converted to level signals.

Reflected pulse signal along the cable or rod probe type transmit to the instrument electronic circuit parts, the microprocessor processes the signal, identify the microwave pulse echo generated in the material surface. Correct identification of the echo signal are completed the implementation by the pulse software, the distance D from the material surface and the pulse travel time T is proportional:

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

Where C is the speed of light

Because the empty distance E is known, the level L is:

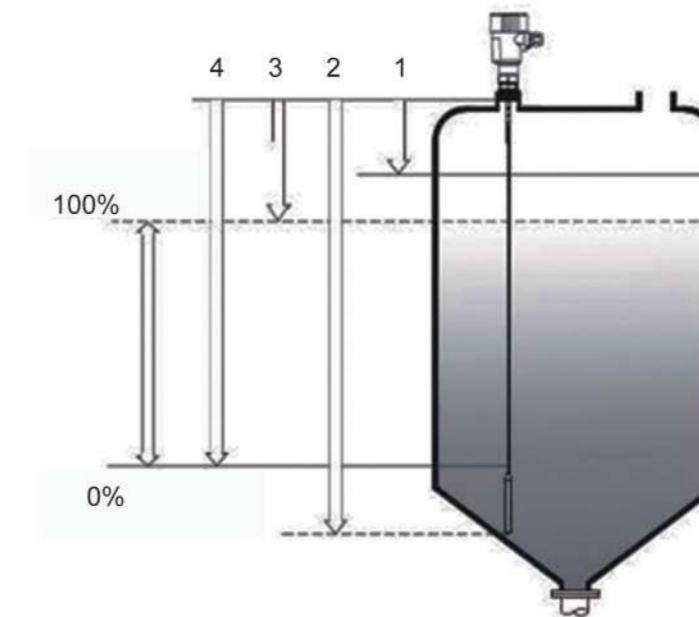
$$L=E-D$$

By entering the empty height of E (= zero), full tank height F (= hundred) and the application to set some parameters, application parameters will automatically adapt the instrument to measure the environment, corresponding to the 4-20mA output.

Explanation:

- 1--- Blind Zone
- 2--- Measurement Range
- 3--- Max Adjustment
- 4--- Min Adjustment

- Blind spot is the minimum distance between the top of the highest material surface materials and measurement reference point.
- The bottom of the blind refers to a distance near the very bottom of the cable can not be accurately measured.
- Between the top and bottom of the blind is blind effective measure distances.



Note: In order to ensure the accuracy of level measurement, the material should be located between the top and bottom of the blind.

# HCDAR-51 Radar Level Transmitter



Application	Solids, Powders, Liquids
Measuring Range	0 ~ 30m
Connection Process	Thread, Flange
Medium Temperature	(-40 ~ 250) °C
Process Pressure	(-0.1 ~ 2) MPa
Accuracy	±3mm
Signal Output	(4 ~ 20) mA HART
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	500MHZ ~ 1.8GHZ

Unit	Code	Parameters
Instrument Type	P	Standard
	I	Intrinsically Safe Explosion-Proof Type
Housing/ Protection Class	L	Die-Casting Aluminium With Epoxy Coating/IP68
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67
Material	6	Stainless Steel 316L
	Y	Special Custom
Process Connection	G	G 1½A Thread
	N	1½ NPT Thread
	A	Flange DN50
	B	Flange DN80
	C	Flange DN100
	D	Flange DN150
	E	Flange DN200
	Y	Special Custom
Seal/Process Temperature	P	Ordinary Type/(-40~120°C)
	G	High Temperature/(-40~250°C) With Heat Sink
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire
	3	(4 ~ 20)mA 220V AC/Four-Wire (Dual Chamber Housing)
	Y	Special Custom
Cable Inlet	M	M20*1.5
	N	1/2 NPT
Scene Display/ Programmed	A	LCD Without Backlight
	X	LCD With Backlight
Cable Length	XXX	User Specified Unit : m
Special Custom	Y	Special Custom



## HCDAR-52 Radar Level Transmitter



Application	Solids, Powders, Liquids
Measuring Range	0 ~ 6m
Connection Process	Thread, Flange
Medium Temperature	(-40 ~ 250) °C
Process Pressure	(-0.1 ~ 2) MPa
Accuracy	±3mm
Signal Output	(4 ~ 20) mA HART
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	500MHZ ~ 1.8GHZ

Unit	Code	Parameters
Instrument Type	P	Standard
	I	Intrinsically Safe Explosion-Proof Type
	L	Die-Casting Aluminium With Epoxy Coating/IP68
Material	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67
	6	Stainless Steel 316L
Process Connection	Y	Special Custom
	G	G 1½A Thread
	N	1½ NPT Thread
	A	Flange DN50
	B	Flange DN80
	C	Flange DN100
	D	Flange DN150
	E	Flange DN200
Seal/Process Temperature	Y	Special Custom
	P	Ordinary type/(-40~120°C)
Electronic Unit	G	High Temperature/(-40~250°C) With Heat Sink
	2	(4 ~ 20)mA 24V DC/HART Two-Wire
	3	(4 ~ 20)mA 220V AC/ Four-Wire Dual Chamber Housing
Cable Inlet	Y	Special Custom
	M	M20*1.5
Scene Display/ Programmed	N	1/2 NPT
	A	LCD Without Backlight
Rod Length	X	LCD With Backlight
	XXX	User Specified Unit : m
Special Custom	Y	Special Custom





# HCDAR-53 Radar Level Transmitter



Application	Solid Powder, Low Dielectric Constant Liquid
Measuring Range	0 ~ 30m
Connection Process	Flange
Medium Temperature	(-40 ~ 250) °C
Process Pressure	(-0.1 ~ 2) MPa
Accuracy	±3mm
Signal Output	(4 ~ 20) mA HART
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	500MHZ ~ 1.8GHZ

Unit	Code	Parameters
Instrument Type	P	Standard
	I	Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67
Material	6	Stainless Steel 316L
	Y	Special Custom
Process Connection	B	Flange DN80
	C	Flange DN100
	D	Flange DN150
	E	Flange DN200
	Y	Special Custom
Seal/Process Temperature	P	Ordinary Type/(-40~120°C)_
	G	High Temperature/(-40~250°C)
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire
	3	(4 ~ 20) mA 220V AC/ Four-Wire Dual Chamber Housing
	Y	Special Custom
Cable Inlet	M	M20*1.5
	N	1/2 NPT
Scene Display/ Programmed	A	LCD Without Backlight
	X	LCD With Backlight
Cable Length	XXX	User Specified Unit : m
Special Custom	Y	Special Custom



# HCDAR-56 Radar Level Transmitter



Application	Low Dielectric Constant Liquid, Surface Fluctuation Liquid
Measuring Range	0 ~ 3m
Connection Process	Thread、Flange
Medium Temperature	(-40 ~ 250) °C
Process Pressure	(-0.1 ~ 2) MPa
Accuracy	±3mm
Signal Output	(4 ~ 20) mA HART
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	500MHZ ~ 1.8GHZ

Unit	Code	Parameters
Instrument Type	P	Standard
	I	Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber/IP67
Material	6	Stainless Steel 316L
	Y	Special Custom
Process Connection	G	G 1½ Thread
	A	Flange DN50
	B	Flange DN80
	C	Flange DN100
	D	Flange DN150
	E	Flange DN200
	Y	Special Custom
Seal/Process Temperature	P	Ordinary Type/(-40~120°C)
	G	High Temperature/-40~250°C With Heat Sink
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire
	3	(4 ~ 20)mA 220V AC/ Four-Wire Dual Chamber Housing
	Y	Special Custom
Cable Inlet	M	M20*1.5
	N	1/2 NPT
Scene Display/ Programmed	A	LCD Without Backlight
	X	LCD With Backlight
Rod Length	XXX	User Specified Unit : m
Special Custom	Y	Special Custom



## Comparison Table HCDAR-5X



HCDAR-51  
Radar Level Transmitter



HCDAR-52  
Radar Level Transmitter



HCDAR-53  
Radar Level Transmitter



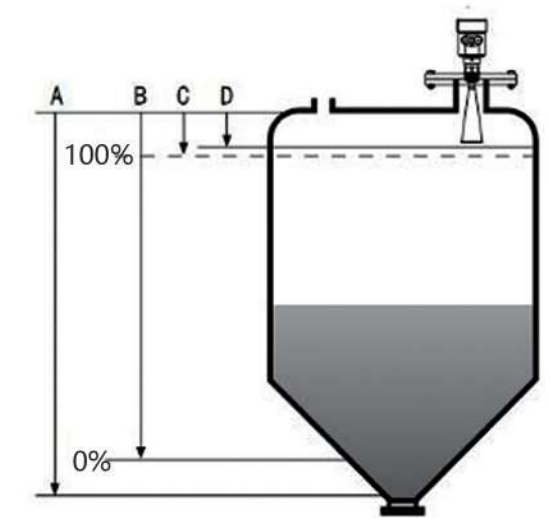
HCDAR-56  
Radar Level Transmitter

Application	Solids, Powders, Liquids	Solids, Powders, Liquids	Solid Powder, Low Dielectric Constant Liquid	Low Dielectric Constant Liquid, Surface Fluctuation Liquid
Measuring Range	0 ~ 30m	0 ~ 6m	0 ~ 30m	0 ~ 3m
Connection Process	Thread、Flange	Thread、Flange	Flange	Thread□Flange
Medium Temperature	(-40 ~ 250) °C	(-40 ~ 250) °C	(-40 ~ 250) °C	(-40 ~ 250) °C
Process Pressure	(-0.1 ~ 2) MPa	(-0.1 ~ 2) MPa	(-0.1 ~ 2) MPa	(-0.1 ~ 2) MPa
Signal Output	(4 ~ 20) mA HART	(4 ~ 20) mA HART	(4 ~ 20) mA HART	(4 ~ 20) mA HART
Accuracy	±3mm		±3mm	
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga		Ex ia IIC T1-T6 Ga	
Protection Grade	IP68		IP68	
Frequency Range	500MHZ ~ 1.8GHZ		500MHZ ~ 1.8GHZ	

## 26G High Frequency Level Transmitter



- A Range Set
- B Low adjustment
- C High adjustment
- D Blind Area



Datum measurement: Thread bottom or the sealing surface of the flange.

Note: Make sure the material cannot enter the measuring blind area (Figure D shown above).

### Overview

This series of HCDAR-6X adopted 26G high frequency radar sensor, the maximum measurement range can reach up to 70 meters. Antenna is optimized further processing, the new 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.

### 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)



### The characteristics of 26G radar transmitters

1. Non-contact radar, no wear, no pollution.
2. Small antenna size, easy to install;
3. A shorter wavelength, the reflection of solid surface inclination is better.
4. The measuring range is smaller, for a measurement will yield good results.
5. Beam angle is small, the energy is concentrated, can enhance the ability of echo and to avoid interference.
6. Could measuring strong corrosive liquids.
7. Almost not affected by water vapor in the atmosphere, the temperature and pressure changes.
8. Can measure accurately under the environment of dust.
9. High signal-to-noise ratio, the level fluctuation state can obtain better performance.
10. High frequency, can measure solid and low dielectric constant mediums.

# HCDAR-61 Radar Level Transmitter



Application	Corrosive Liquids
Measuring Range	0 ~ 20m
Connection Process	Thread, Flange
Medium Temperature	(-40 ~ 120) °C
Process Pressure	(-0.1 ~ 0.3) MPa
Accuracy	±5mm
Signal Output	(4 ~ 20)mA HART/RS485 MODBUS
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	26GHZ



Unit	Code	Parameters
Instrument Type	P	Standard
	I	Intrinsically Safe Explosion-Proof Type
Housing/ Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67
Material	6	Stainless Steel 316L
	7	PTFE
	8	PP
	Y	Special Custom
Sensor	A	Rod Type PVDF
	B	Rod Type PTFE
Process Connection	G	G 1½A Thread
	N	1 ½ NPT Thread
	A	Flange DN50
	B	Flange DN80
	C	Flange DN100
	D	Flange DN150
	E	Flange DN200
	Y	Special Custom
	Signal Strength	P
T		Enhanced Type
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire
	3	(4 ~ 20)mA 220V AC/ Four-Wire Dual Chamber Housing
	4	RS485 MODBUS-RTU Communication Protocol /Four-Wire
	Y	Special Custom
Cable Inlet	M	M20*1.5
	N	1/2 NPT
Scene Display/ Programmed	A	LCD Without Backlight
	X	LCD With Backlight
Range	XXX	User Specified Unit : m
Special Custom	Y	Special Custom

# HCDAR-62 Radar Level Transmitter



Application	Liquid, Slurry
Measuring Range	0 ~ 70m
Connection Process	Thread, Flange
Medium Temperature	(-40 ~ 350) °C
Process Pressure	(-0.1 ~ 2) MPa
Accuracy	±3mm
Signal Output	(4 ~ 20)mA HART/RS485 MODBUS
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	26GHZ



Unit	Code	Parameters		
Instrument Type	P	Standard	I	Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68		
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67		
Material	6	Stainless Steel 316L		
	Y	Special Custom		
Sensor Type	1	Directional Type		
Process Connection	G	G 1½A Thread	N	G 1½A Thread
	A	Flange DN50	B	Flange DN80
	C	Flange DN100	D	Flange DN150
	Y	Special Custom		
Antenna Type	A	Horn Antenna Φ 46	B	Horn Antenna Φ 78
	C	Horn Antenna Φ 98	D	Horn Antenna Φ 125
	E	Horn Antenna Φ 96 Longer	Y	Special Custom
Seal/Process Temperature	P	Viton/(-40 ~ 150)°C		
	G	Kalre/(-40 ~ 350)°C (With Heat Sink)		
Signal Strength	P	Ordinary Type		
	T	Enhanced Type		
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire		
	3	(4 ~ 20)mA 220V AC/		
	4	(4 ~ 20)mA 220V AC/Four-Wire Dual Chamber Housing RS485 MODBUS-RTU Communication Protocol /Four-Wire		
	Y	Special Custom		
Cable Inlet	M	M20*1.5		
	N	1/2 NPT		
Scene Display/ Programmed	A	LCD Without Backlight		
	X	LCD With Backlight		
Range	XXX	User Specified Unit : m		
Special Custom	Y	Special Custom		

# HCDAR-63 Radar Level Transmitter



Application	Solid Particles, Solid Powder, All kinds Of Dust Environment
Measuring Range	0 ~ 70m
Connection Process	Flange
Medium Temperature	(-40 ~ 350) °C
Process Pressure	(-0.1 ~ 2) MPa Directional
Accuracy	±15mm
Signal Output	(4 ~ 20)mA HART/RS485 MODBUS
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	26GHZ



R15

Unit	Code	Parameters	
Instrument Type	P	Standard	I Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68	
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67	
Material	6	Stainless Steel 316L	
	Y	Special Custom	
Sensor Type	1	Directional Type	2 Directional Purge Type
	3	Universal Type	4 Universal Purge Type
Process Connection	G	G 1 ½A Thread (Directional)	N 1 ½ NPT Thread (Directional)
	B	Flange DN80	C Flange DN100
	D	Flange DN150	E Flange DN200
	Y	Special Custom	
	Antenna Type	B	Horn Antenna Φ 78
D		Horn Antenna Φ 125	E Horn Antenna Φ 96 Longer
Y		Special Custom	
Seal/Process Temperature	P	Viton/(-40 ~ 150)°C	
	G	Kalre/(-40 ~ 350)°C (With Heat Sink)	
Signal Strength	P	Ordinary Type	T Enhanced Type
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire	
	3	(4 ~ 20)mA 220V AC/Four-Wire Dual Chamber Housing	
	4	RS485 MODBUS-RTU Communication Protocol /Four-Wire	
Cable Inlet	Y	Special Custom	
	M	M20*1.5	
Scene Display/Programmed	N	1/2 NPT	
	A	LCD Without Backlight	
Range	X	LCD With Backlight	
	XXX	User Specified Unit : m	
Special Custom	Y	Special Custom	

# HCDAR-64 Radar Level Transmitter



Application	Solid Material, Solid Powder, All kinds Of Dust Environment
Measuring Range	0 ~ 70m
Connection Process	Thread, Flange
Medium Temperature	(-40 ~ 350) °C
Process Pressure	(-0.1 ~ 2) MPa
Accuracy	±15mm
Signal Output	(4 ~ 20)mA HART/RS485 MODBUS
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	26GHZ

Unit	Code	Parameters	
Instrument Type	P	Standard	I Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68	
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67	
Material	6	Stainless Steel 316L	
	Y	Special Custom	
Sensor Type	1	Directional Type	2 Directional Purge Type
	3	Universal Type	4 Universal Purge Type
Process Connection	G	G 1½ A Thread (Directional)	N 1½ NPT Thread (Directional)
	E	Flange DN200	F Flange DN250
	Y	Special Custom	
Antenna Type	F	Paraboloidal Φ 198	G Paraboloidal Φ 242
	Y	Special Custom	
Seal/Process Temperature	P	Viton/(-40 ~ 150)°C	
	G	Kalre/(-40 ~ 350)°C (With Heat Sink)	
Signal Strength	P	Ordinary Type	
	T	Enhanced Type	
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire	
	3	(4 ~ 20)mA 220V AC/Four-Wire Dual Chamber Housing	
	4	RS485 MODBUS-RTU Communication Protocol /Four-Wire	
Cable Inlet	Y	Special Custom	
	M	M20*1.5	
Scene Display/Programmed	N	1/2 NPT	
	A	LCD Without Backlight	
Range	X	LCD With Backlight	
	XXX	User Specified Unit : m	
Special Custom	Y	Special Custom	





# HCDAR-65 Radar Level Transmitter



Application	River Channel Reservoir Lake Tide
Measuring Range	0 ~ 70m
Connection Process	Stents
Medium Temperature	(-40 ~ 120) °C
Process Pressure	Atmospheric Pressure
Accuracy	±5mm
Signal Output	(4 ~ 20)mA HART/RS485 MODBUS
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	26GHZ

Unit	Code	Parameters	
Instrument Type	P	Standard	I Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68	
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67	
Sensor	A	Hydrologic Special Antenna	
Stents	Z	With	
	E	Without	
Signal Strength	P	Ordinary Type	
	T	Enhanced Type	
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire	
	3	(4 ~ 20)mA 220V AC/ Four-Wire Dual Chamber Housing	
	4	RS485 (12-36)V AC MODBUS-RTU Communication Protocol /Four-Wire	
	Y	Special Custom	
Cable Inlet	M	M20*1.5	
	N	1/2 NPT	
Field Display/Programmed	A	LCD Without Backlight	
	X	LCD With Backlight	
Range	XXX	User Specified Unit : m	
Special Custom	Y	Special Custom	



# HCDAR-66 Radar Level Transmitter



Application	Liquid, Slurry, Dew Occasions
Measuring Range	0 ~ 20m
Connection Process	Flange
Medium Temperature	(-40 ~ 120) °C
Process Pressure	(-0.1 ~ 2) MPa
Accuracy	±3mm
Signal Output	(4 ~ 20)mA HART/RS485 MODBUS
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	26GHZ

Unit	Code	Parameters	
Instrument Type	P	Standard	I Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68	
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67	
Material	6	Stainless Steel 316L	
	Y	Special Custom	
Process Connection	G	G 1½A Thread	N G 1½A Thread
	B	Flange DN80	C Flange DN100
	D	Flange DN150	E Flange DN200
	Y	Special Custom	
Antenna Type	B	Water droplets antenna Φ 76	
	Y	Special Custom	
Process Temperature	P	Viton/(-40 ~ 120)°C	
Signal Strength	P	Ordinary Type	
	T	Enhanced Type	
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire	
	3	(4 ~ 20)mA 220V AC/ Four-Wire Dual Chamber Housing	
	4	RS485 MODBUS-RTU Communication Protocol /Four-Wire	
	Y	Special Custom	
Cable Inlet	M	M20*1.5	
	N	1/2 NPT	
Field Display/ Programmed	A	LCD Without Backlight	
	X	LCD With Backlight	
Range	XXX	User Specified Unit : m	
Special Custom	Y	Special Custom	



# HCDAR-67 Radar Level Transmitter



Application	Solid Particles, Liquid, Slurry, Steam, Condensation Occasions
Measuring Range	0 ~ 20m
Connection Process	Flange
Medium Temperature	(-40 ~ 120) °C
Process Pressure	(-0.1 ~ 0.3) MPa
Accuracy	±5mm
Signal Output	(4 ~ 20)mA HART/RS485 MODBUS
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga
Protection Grade	IP68
Frequency Range	26GHZ

Unit	Code	Parameters
Instrument Type	P	Standard
	I	Intrinsically Safe Explosion-Proof Type
Housing/Protection Grade	L	Die-Casting Aluminium With Epoxy Coating/IP68
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67
Material	6	Stainless Steel 316L
	7	Four Fluorine
	Y	Special Custom
Antenna Type	A	Flange DN50
	B	Flange DN80
	C	Flange DN100
Seal/Process Temperature	P	Viton/(-40 ~ 120)°C
Signal Strength	P	Ordinary Type
	T	Enhanced Type
Electronic Unit	2	(4 ~ 20)mA 24V DC/HART Two-Wire
	3	(4 ~ 20)mA 220V AC/ Four-Wire Dual Chamber Housing
	4	RS485 MODBUS-RTU Communication Protocol /Four-Wire
	Y	Special Custom
Cable Inlet	M	M20*1.5
	N	1/2 NPT
Field Display/ Programmed	A	LCD Without Backlight
	X	LCD With Backlight
Range	XXX	User Specified Unit : m
Special Custom	Y	Special Custom



## Comparison Table HCDAR-6X



HCDAR-61  
Radar Level Transmitter



HCDAR-62  
Radar Level Transmitter



HCDAR-63  
Radar Level Transmitter



HCDAR-64  
Radar Level Transmitter



HCDAR-65  
Radar Level Transmitter



HCDAR-66  
Radar Level Transmitter



HCDAR-67  
Radar Level Transmitter

Application	Corrosive Liquids	Liquid, Slurry	Solid Particles, Solid Powder, All kinds Of Dust Environment	Solid Material, Solid Powder, All kinds Of Dust Environment	River Channel Reservoir Lake Tide	Liquid, Slurry, Dew Occasions	Solid Particles, Liquid, Slurry, Steam, Condensation Occasions
Measuring Range	0 ~ 20m	0 ~ 70m	0 ~ 70m	0 ~ 70m	0 ~ 70m	0 ~ 20m	0 ~ 20m
Connection Process	Thread, Flange	Thread, Flange	Flange	Thread, Flange	Stents	Flange	Flange
Medium Temperature	(-40 ~ 120)°C	(-40 ~ 350)°C	(-40 ~ 350)°C	(-40 ~ 350) °C	(-40 ~ 120) °C	(-40 ~ 120) °C	(-40 ~ 120) °C
Process Pressure	(-0.1 ~ 0.3)MPa	(-0.1 ~ 2)MPa	(-0.1 ~ 2)MPa Directional	(-0.1 ~ 2) MPa	Atmospheric Pressure	(-0.1 ~ 2) MPa	(-0.1 ~ 0.3) MPa
Signal Output	(4 ~ 20)mA HART/ RS485 MODBUS	(4 ~ 20)mA HART/ RS485 MODBUS	(4 ~ 20)mA HART/ RS485 MODBUS-RTU	(4 ~ 20)mA HART/ RS485 MODBUS	(4 ~ 20)mA HART/ RS485 MODBUS	(4 ~ 20)mA HART/ RS485 MODBUS	(4 ~ 20)mA HART/ RS485 MODBUS
Accuracy	±5mm	±3mm	±15mm	±15mm	±5mm	±3mm	±5mm
Explosion-Proof Grade	Ex ia IIC T1-T6 Ga			Ex ia IIC T1-T6 Ga			
Protection Grade	IP68			IP68			
Frequency Range	26GHZ			26GHZ			