

Product Overview

Guided Wave Radar Level Transmitter



Catalog

01 Guided Wave Radar Level Transmitter

03 [ZAXFLEX H51](#)

05 [ZAXFLEX H52](#)

07 [ZAXFLEX H53](#)

Guided Wave Radar Level Transmitter

Overview

The guided wave radar level transmitter is used for liquid, solid particles and small size 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 antenna 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:

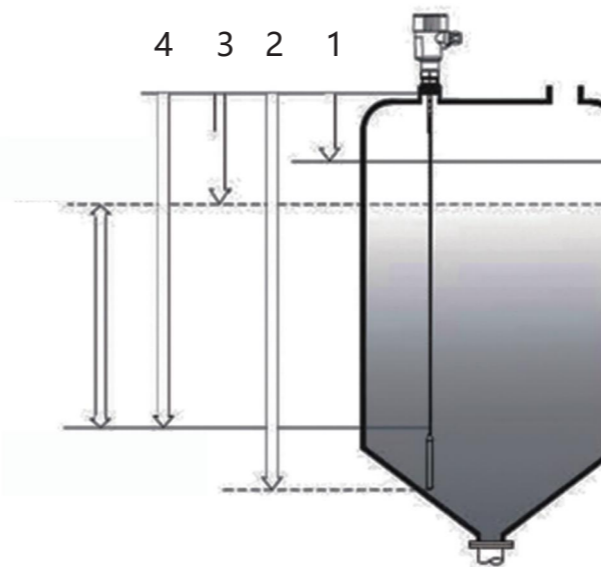
$$L=E-D$$

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.

ZAXFLEX H51 Radar Level Transmitter



Application	Solids, Powders, Liquids
Measuring Range	0~30m
Process Connection	Thread, Flange
Medium Temp	(-40~250) °C
Process Pressure	(-0.1~2) MPa
Accuracy	±3mm
Signal Output	(4~20) mA HART
Explosion-Proof	Ex db ia IIC T6 Gb;Ex tb IIIC T80°C Db
Protection Grade	IP68
Frequency Range	500MHZ~1.8GHZ



Unit	Code	Parameters		
Instrument Type	P	Standard		
	I	Intrinsically Safe		
	D	Flameproof		
	F	Dust Ignition-proof		
Housing/Protection	L	Die-Casting Aluminium With Epoxy Coating/IP68		
	G	Die-Casting Aluminium With Epoxy Coating Dual Chamber /IP67		
	D	Stainless steel /IP68		
Material	4	Stainless Steel 304		
	6	Stainless Steel 316L		
	9	304 Lining Material PTFE		
	Y	Special Custom		
Process Connection	Q	G1A Thread	W	NPT1 Thread
	G	G 1½A Thread	N	1½ NPT Thread
	A	Flange DN50	J	Flange DN65
	B	Flange DN80	C	Flange DN100
	F	Flange DN125	E	Flange DN200
	D	Flange DN150	Y	Special Custom
	H	Flange DN250		
Seal/Process Temp	P	Ordinary Type/(-40~120°C)		
	G	High Temperature/(-40~250°C) With Heat Sink		
Electronic Unit	2	(4~20)mA 24VDC/HART Two-Wire		
	3	(4~20)mA 220VAC/Four-Wire (Dual Chamber Housing)		
	Y	Special Custom		
Cable Inlet	M	M20*1.5		
	N	NPT1/2		
Display	A	LCD Without Backlight		
	X	LCD With Backlight		
Cable Length	XXX	User Specified Unit : m		
Special Custom	Z	Special Custom		

ZAXFLEX H52 Radar Level Transmitter



Application	Solids, Powders, Liquids
Measuring Range	0~6m
Process Connection	Thread, Flange
Medium Temp	(-40~250) °C
Process Pressure	(-0.1~2) MPa
Accuracy	±3mm
Signal Output	(4~20) mA HART
Explosion-Proof	Ex db ia IIC T6 Gb;Ex tb IIIC T80°C Db
Protection Grade	IP68
Frequency Range	500MHZ~1.8GHZ



Unit	Code	Parameters		
Instrument Type	P	Standard		
	I	Intrinsically Safe		
	D	Flameproof		
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Housing/Protection	L	Die-Casting Aluminium With Epoxy Coating/IP68		
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	D	Stainless steel /IP68		
Material	4	Stainless Steel 304		
	6	Stainless Steel 316L		
	9	304 Lining Material PTFE		
	Y	Special Custom		
Process Connection	Q	G1A Thread	W	NPT1 Thread
	G	G 1½A Thread	N	1½ NPT Thread
	A	Flange DN50	J	Flange DN65
	B	Flange DN80	C	Flange DN100
	F	Flange DN125	E	Flange DN200
	D	Flange DN150	Y	Special Custom
	H	Flange DN250		
Seal/Process Temp	P	Ordinary Type/(-40~120°C)		
	G	High Temperature/(-40~250°C) With Heat Sink		
Electronic Unit	2	(4 ~ 20)mA 24VDC/HART Two-Wire		
	3	(4 ~ 20)mA 220VAC/Four-Wire (Dual Chamber Housing)		
	Y	Special Custom		
Cable Inlet	M	M20*1.5		
	N	NPT1/2		
Display	A	LCD Without Backlight		
	X	LCD With Backlight		
Rod Length	XXX	User Specified Unit : m		
Special Custom	Z	Special Custom		

ZAXFLEX H53 Radar Level Transmitter



Application	Low Dielectric Constant Liquid, Surface Fluctuation Liquid
Measuring Range	0~3m
Process Connection	Thread、Flange
Medium Temp	(-40~250) °C
Process Pressure	(-0.1~2) MPa
Accuracy	±3mm
Signal Output	(4~20) mA HART
Explosion-Proof	Ex db ia IIC T6 Gb;Ex tb IIIC T80°C Db
Protection Grade	IP68
Frequency Range	500MHZ~1.8GHZ



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