

# Guided Wave RADAR Level Transmitter

## RLT8200



Measuring range up to 30 meters



Quick Response Time



Process Pressure: (-)1 ~ 40 bar



Sensor Housing (IP67 degree protection)

**Product  
Datasheet**

# ROCKSENSOR AT A GLANCE (ABOUT US)

Rocksensor is one of the global leaders specializing in Process Instrumentation, Research and Development and Designing of Industrial Automation Equipment. We provide highly precise pressure sensors and transmitters, flow metres, level transmitters and temperature transmitters with a prime focus to help our clients efficiently, safely and economically run complex industrial processes.

Rocksensor, headquartered in Switzerland, has its footprint in various geographical regions such as the US, Russia, South Korea, Italy, Germany, Singapore, Malaysia, Morocco, China, Taiwan, Australia, UAE, Brazil and India. Our clients come from some of the major industries such as Oil and Gas, Petrochemicals, Pharmaceuticals, FMCG, Automobiles, Water, Cement, Metal & Mining, and mainly from the Power Industry like Nuclear, Thermal, Hydro, and Solar.

Rocksensor deals in a wide range of highly accurate industrial automation instruments ensuring that even the complex industrial processes happen efficiently.

To fulfill the needs of our clients we make sure that our instruments work in even the harsh environmental conditions offering accurate recordings and communication.

We, at Rocksensor, believe in creating bonds that last a lifetime and create a success story for each and every client. Rocksensor aims to achieve a perfect fit in the global market landscape and establish our footprints across the globe.



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KEY APPLICATION INDUSTRIES

Oil and Gas sector	Chemicals
Cement	Power
Metal	Water
Pulp and Paper	Pharmaceutical
Agriculture	Fertilizer
Textiles	Plastics and HVAC

## 1. Introduction

The RLT8200 is a radar sensor for contact continuous level measurement of bulk solid. It is particularly suitable for level measurement in vessels under complex process conditions.

## 2. Area of Application

The RLT8200 is a radar sensor for continuous level measurement of all kind of bulk solid and powder. The sensor delivers precise and reliable measured values even in applications with dust, noise and buildup. It is a truly cost effective level sensor for your measuring task.

## 3. Feature and Benefit

- High Processing Ability

With two chips, RLT8200 achieves higher processing ability.

- Multi-Track

Due to new Multi-Track wave tracking algorithm, RLT8200 gets highest reliability.

- Waves Memo

With wave management function. To help understand abnormal output, RLT8200 storage wave automatically.

## 4. Function

The RLT8200 guided radar transmitter is designed for continuous level measuring of conductive or nonconductive liquids. The RLT8200 is a "downward-looking" measuring system that functions according to the TDR principle (Time Domain Reflectometry). High frequency microwave impulses are guided along a steel cable or rod. When they reach the product surface, the microwave pulses are reflected and received by the processing electronics. Level distance is directly proportional to the flight time of the pulse.

## 5. Technical Data

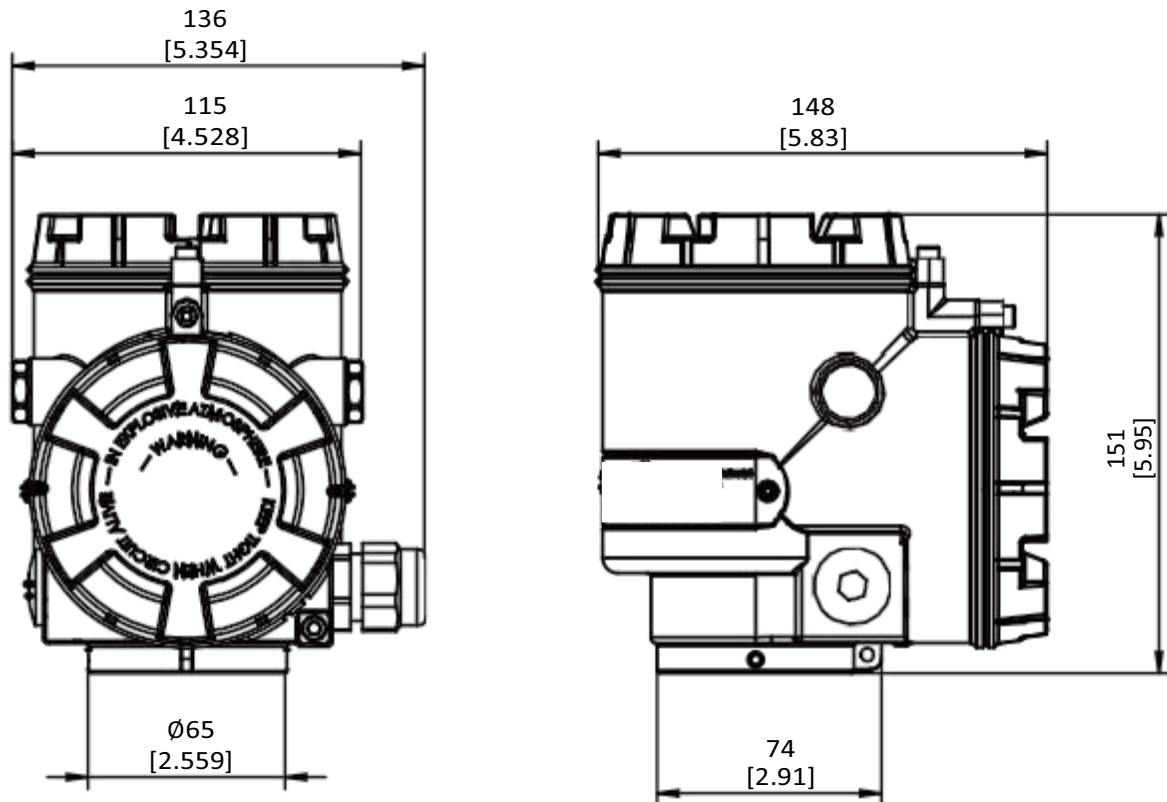
<b>Measuring Range (Cable/ Rod Probe)</b>	0 ~ 30m/ 0 ~ 6m
<b>Sample Frequency</b>	16Hz
<b>Response Time</b>	<2s
<b>Resolution</b>	1mm
<b>Deviation</b>	±3mm
<b>Repeatability</b>	±1.5mm
<b>Frequency</b>	100MHz ~ 1.8GHz
<b>Ambient Temperature</b>	(-)40°C ~ 70°C
<b>Process Temperature</b>	(-)40°C ~ 200°C
<b>Process Pressure</b>	(-)1 ~ 40bar
<b>Ingress Protection Level</b>	IP67
<b>Transmitter Housing</b>	Single Chamber (Std.)/ Double chamber(optional)

## 6. Material

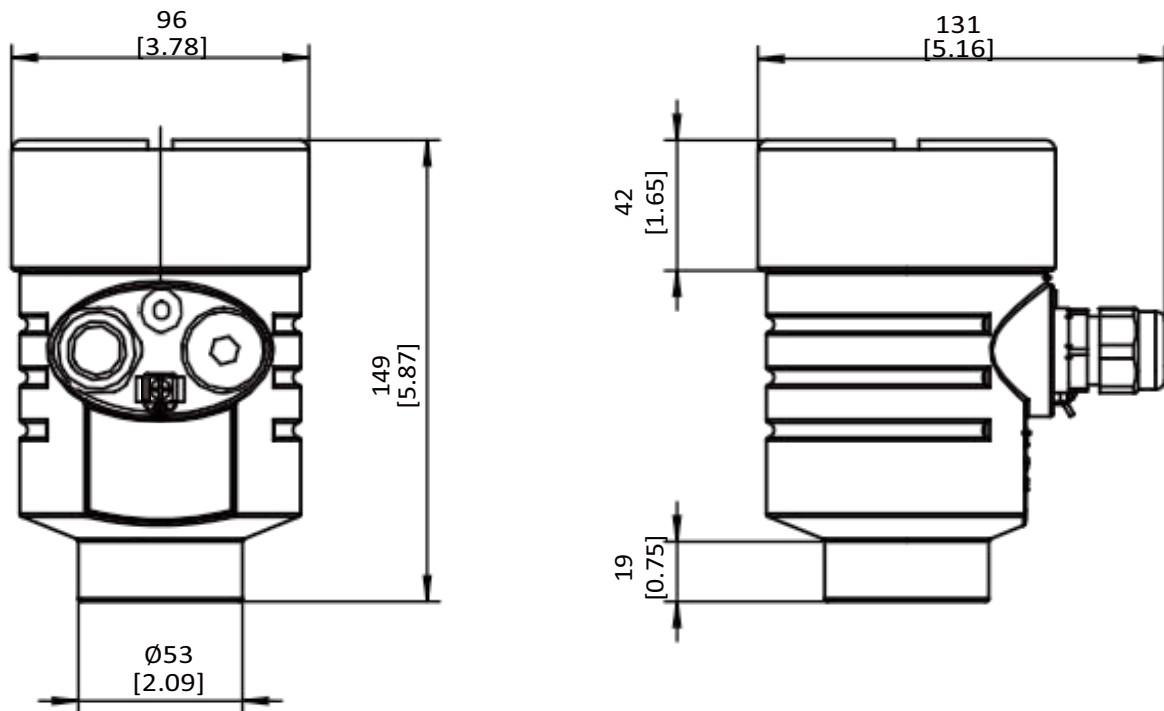
The wetted parts of the instrument are made of 316L stainless steel and PTFE. The process seal is made of FKM.

## 7. Housing Version

The housings are available as single chamber version and double chamber version in stainless steel or aluminium. They are available with protection ratings up to IP 67 (1 bar).



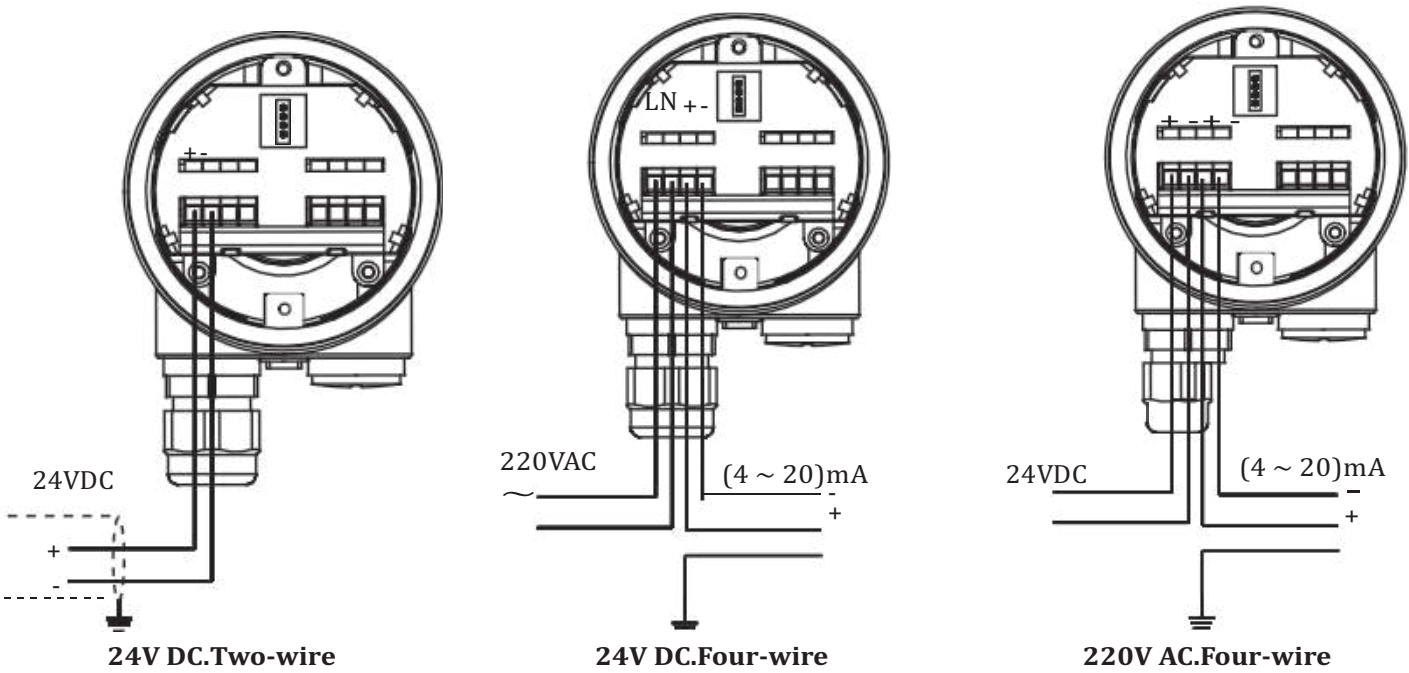
Double Chamber Housing



Single Chamber Housing

## 8. Electric Connection

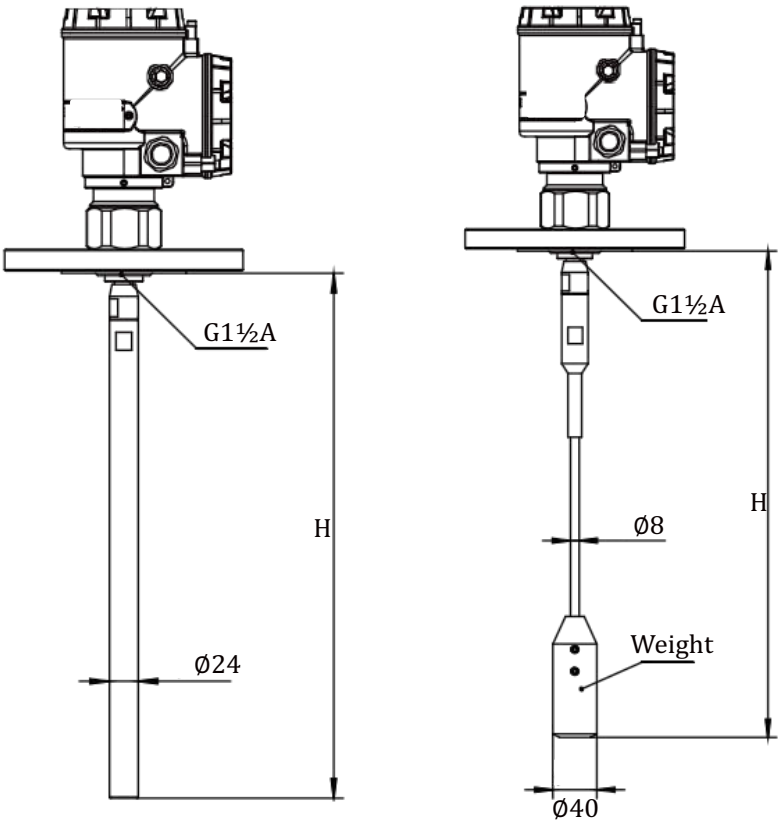
The instruments are available in different electronics versions. 4 ~ 20mA/ HART in two and four-wire version with 24 VDC and four-wire with 220VAC.



## 9. Operation

The adjustment of the instrument is carried out via the LCD display, tank side display, tank side hub & HART communicator.

## 10. Dimensions



## 11. Model Selection Table

RLT8200		Guided Wave Radar									
Code		1	2	3	4	5	6	7	8	9	10
<b>Language</b>											
English	A										
<b>Approval</b>											
Standard	XX										
Ex ia IIC T6 Ga	CX										
Ex dia [iaGa] IIC T6/ T2 Gb	DX										
Ex iaD tD A21 IP67 T80°C/ T290°C	EX										
<b>Antenna Version/ Material</b>											
Ø8mm probe cable + weight/ SS316	A										
Ø12mm probe cable + weight/ SS316	F										
Ø16mm probe rod/ SS316	L										
Customized	T										
<b>Process Fitting</b>											
Thread G1½A	TI										
Thread 1½ NPT	NP										
Flange DN50	DD										
Flange DN80	DF										
Customized	TT										
<b>Process Seal/ Temperature</b>											
VITON Fluorine rubber/ (-)40°C ~ 80°C	A										
VITON Fluorine rubber/ (-)40°C ~ 150°C	F										
KALREZ fluoro ether rubber/ (-)20°C ~ 200°C	L										
Customized	T										
<b>LCD Display</b>											
X	Without display										
A	With display										
<b>Cable Entry/Gland/Connecting</b>											
M	M20x1.5 /with/without										
N	½NPT/with/ without										
<b>Housing/ Protection</b>											
A	Single chamber/ Aluminum/ IP67										
B	Double chamber/ Aluminum/ IP67										
W	Double chamber/ SS316 / IP67										
<b>Auxiliary Accessories</b>											
X	Without										
T	Tank side monitor entry										
<b>Electronics</b>											
H	Two-wire 4-20mA/ HART; 24 VDC										
B	Four wire 4-20mA/ HART: 220 VAC										
I	Four wire 4-20mA/ HART: 24 VDC										
W	Wireless: GPRS; Wireless C Mesh										
T	Customized										

**Example:** RLT8200-AXXATTAWXAMX

A - Language: English

XX - Approval: Standard

A - Antenna Version/ Material: Ø8mm probe cable + weight/ SS316

TT - Process Fitting: Customized

A - Process Seal/ Temperature: VITON Fluorine rubber/ (-)40°C ~ 80°C

W - Electronics: Wireless; GPRS; Wireless C Mesh

X - Auxiliary Accessories: Without

A - Housing/ Protection: Single Chamber/ Aluminum / IP67

M - Cable Entry/ Gland/ Connecting: M20x1.5/ with/ without

X - LCD Display: Without display

\*For any customisation, contact our sales team



## Field Instrumentation Range



### Pressure Measurement

- Smart Differential Pressure Transmitter
- Smart Gauge Pressure Transmitter
- Smart Absolute Pressure Transmitter
- Miniature Pressure Transducer without display
- Sanitary Gauge/ Absolute Pressure Transmitter

- Submersible Pressure Transmitter
- Remote Seal Differential P.T. with capillary
- Remote Seal Differential P.T. Direct Mount
- Remote Seal Gauge/Absolute P.T. with capillary
- Remote Seal Gauge/Absolute P.T. Direct Mount



### Flow Measurement

- Coriolis Mass Flowmeter
- Thermal Gas Mass Flowmeter
- Positive Displacement Flowmeter
- Electromagnetic Flowmeter
- Vortex Flowmeter

- Turbine Flowmeter
- Variable Area Flowmeter
- Clamp On Ultrasonic Flowmeter
- Inline Ultrasonic Flowmeter
- Portable Ultrasonic Flowmeter



### Level Measurement

- RADAR Level Transmitter Horn Antenna
- Compact RADAR Level Transmitter
- RADAR Level Transmitter Sanitary
- RADAR Level Transmitter
- Guided Wave RADAR Level Transmitter
- Guided Wave RADAR Level Transmitter
- RADAR Level Transmitter Lens Antenna

- RADAR Level Transmitter Rod Antenna
- Ultrasonic Level Transmitter
- Microwave Barrier Level Switch
- Admittance Level Switch Series
- Vibrating Rod Level Switch Series
- Tuning Fork Level Switch Series



### Temperature Measurement

- Head Mount Temperature Transmitter
- Temperature Transmitter for Sanitary Applications

- DIN Rail Temperature Transmitter
- Field Mount Temperature Transmitter

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