

26GHz Radar Level Transmitter

RLT6300



Frequency: 26GHz



Response time: <2s



Ambient Temperature: (-)40°C ~ 70°C



Protection level: IP67

**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 & temperature transmitters with a prime focus to help our clients efficiently, safely and economically run complex industrial processes.

Rocksensor headquartered in Germany (originated in Switzerland), has its footprint in various geographical regions such as the US, Russia, South Korea, Italy, Germany, Singapore, Malaysia, 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 global market landscape and establish our footprints across the globe.



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KEY APPLICATION INDUSTRIES

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

1. Area of application

The RLT6300 is radar sensor for continuous level measurement of aggressive liquids under high pressure. It is suitable for applications in storage tanks, vessels, dosing vessels and reactors, especially suitable for difficult processing conditions.

2. Feature and benefit

Twin-chips

With two chips, RLT6300 achieves higher processing ability.

Multi-Track

Due to new multi-Track wave tracking algorithm, RLT6300 gets highest reliability.

Waves Memo

With wave management function. To help understand abnormal output, RLT6300 stores waves automatically.

3. Function

Measuring system operates based on the time-of-flight method (ToF). It measures the distance from the reference point (process connection) to the product surface. Radar impulses are emitted by an antenna, reflected off the product surface and received again by the radar system.

The time from emission to reception of the signal is proportional to the level in the vessels. A special time stretching procedure allows a reliable and precise measurement of the extremely short signal running times.

4. Technical data

Parameters	Details
Measuring range	0 ~ 70 m
Sample frequency	54Hz
Response time	<2s
Resolution	1mm
Deviation	±3mm
Repeatability	±1.5mm
Frequency	26GHz
Ambient temperature	(-)40°C ~ 70°C
Process temperature	(-)40°C ~ 150°C
Process pressure	-1 ~ 16 bar
Protect level	IP67

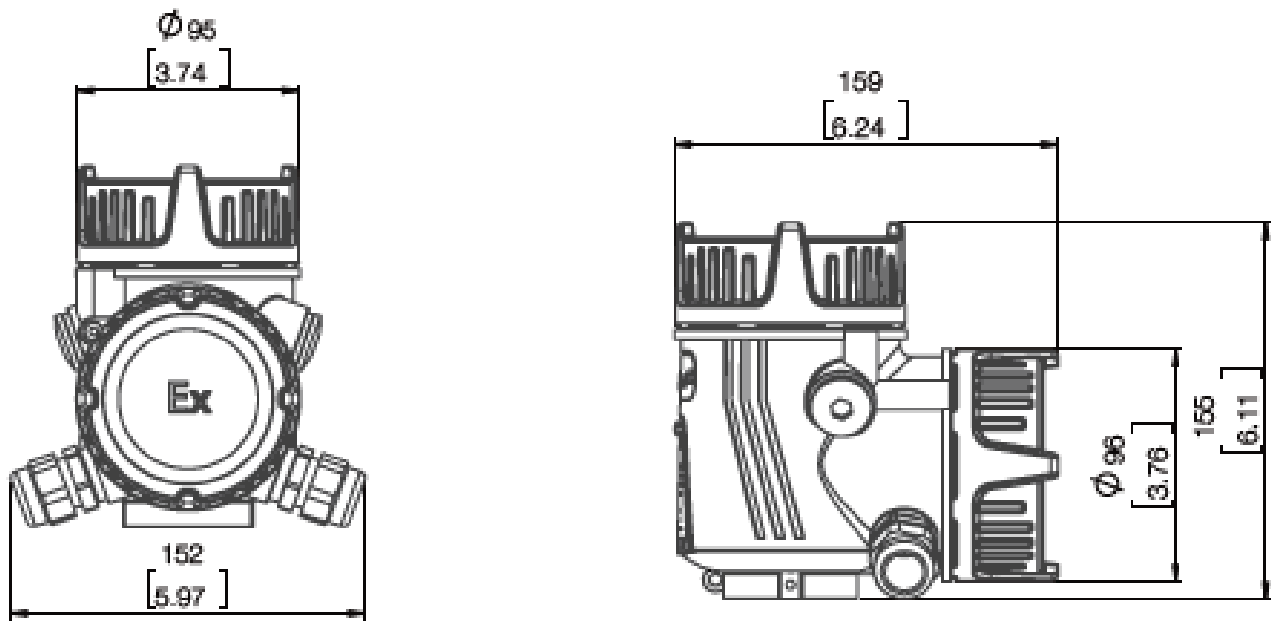
5. Material

The antenna is made of PTFE and the process seal is made of FKM.

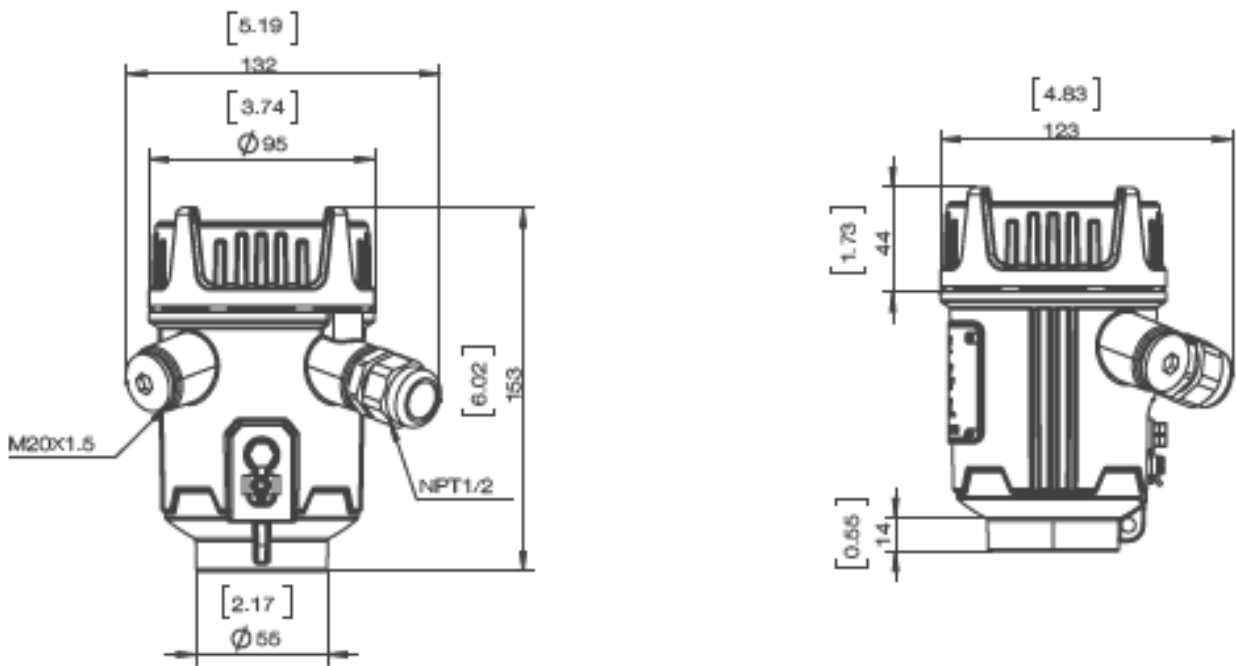
6. Housing version

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 IP67 (1bar).

Double Chamber Housing

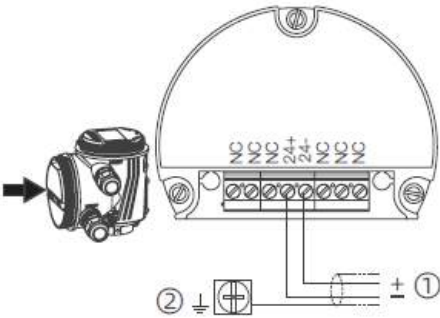


Single Chamber Housing



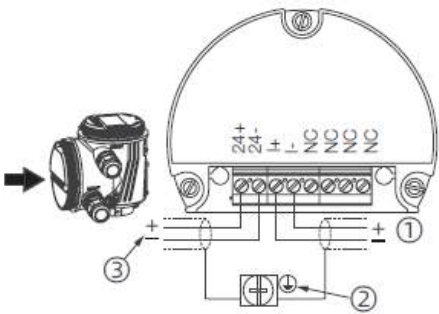
7. Electrical Connection

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



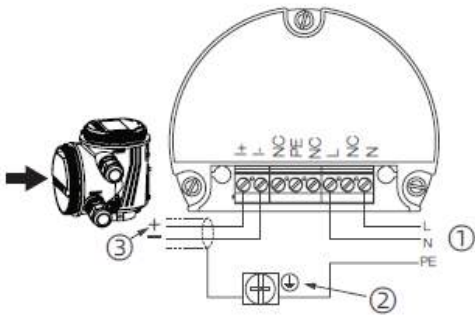
Wiring for two-wire, 24VDC

- 1. 24V power supply line
- 2. Grounding screw inside the ca



Wiring for four-wire, 24VDC

- 1. Current signal line
- 2. Grounding screw inside the case
- 3. 24V power supply line

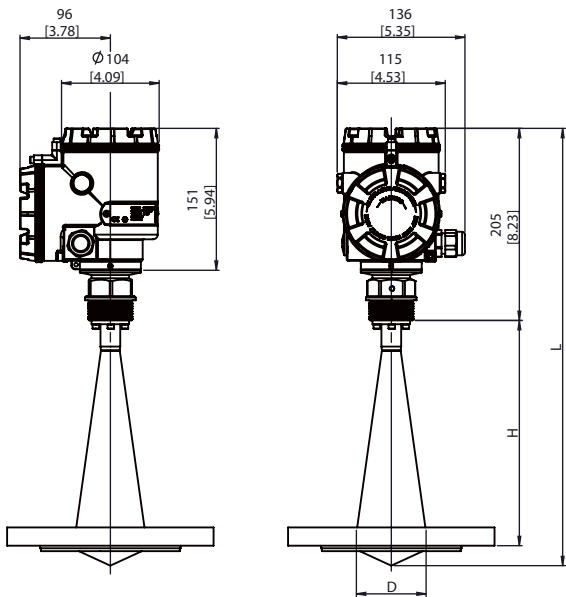


Wiring for four-wire, 220VAC

- 1. Current signal line
- 2. Grounding screw inside the case
- 3. 220V power supply line

8. Operation

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



Antenna type	D	H
DN80	75	230
DN100	98	310

9. Model Selection Table

RLT6300		Radar Level Transmitter							
Code		1	2	3	4	5	6	7	8
Accuracy									
±2mm	A								
Approval									
Standard	XX								
Ex ia IIC T2/T6 Ga	CX								
Ex db ia (ia Ga) IIC T6/T2 Gb	DX								
Antenna version/ Material/ Process Temperature/Process Pressure									
Molded Horn Antenna/TFM-PTFE/ -40 ~ +130°C/-1 ~ 20bar	N								
Hygienic Molded Horn Antenna/ TFM-PTFE + Viton/ -25 ~ +130°C/-1 ~ 16bar	V								
Hygienic Molded Horn Antenna/TFM-PTFE+ EPDM/ -40 ~ +130°C/-1 ~ 16bar	E								
Process Connection									
Tri-Clamp 2"	CA								
Tri-Clamp 3"	CB								
Tri-Clamp 4"	CC								
Hygienic Connector, with Locking Flange Connection DN32, PN16	LB								
Hygienic Connector, with Compression Nut F40, PN16	LA								
Flange Connection DN50	FC								
Flange Connection DN80	FD								
Flange Connection DN100	FE								
Flange Connection DN150	FK								
Flange Connection 2" 150Ib RF	AE								
Flange Connection 3" 150Ib RF	AI								
Flange Connection 4" 150Ib RF	AK								
Flange Connection 6" 150Ib RF	AM								
Customization	TT								
LCD Display									
X	Without display								
A	With display								
B	Remote Display								
Cable Entry/ Cable Gland/ Connection Cable									
M	M20×1.5/ with/ without								
N	½NPT/ without/ without								
Housing Material / Protection Rating									
A	Single chamber/ Aluminum/ IP67								
B	Double chamber/ Aluminum/ IP67								
W	Double chamber/ SS316L/ IP67								
Electronics									
H	Two-Wire 4...20mA/RS485; 24 VDC								
U	Two-Wire 4...20mA/HART; 24 VDC								
B	Four-Wire 4...20mA /RS485; 220 VAC								
S	Four-Wire 4...20mA/HART; 220 VAC								
I	Four-Wire 4...20mA/RS485; 24 VDC								
P	Four-Line 4...20mA/HART; 24 VDC								
T	Customization								

Example: RLT6300-C-AXXVLAPWNA

RLT6300 - Radar Level Transmitter

A - Accuracy : ±2mm

XX - Approval : Standard

V - Antenna version/ Material/ Process Temperature/ Process Pressure : Hygienic Molded Horn Antenna/ TFM-PTFE + Viton/ -25 ~ +130°C/-1 ~ 16bar

LA - Process Connection : Hygienic Connector, with Compression Nut F40, PN16

P - Electronics : Four-Line 4...20mA/HART; 24 VDC

W - Housing Material/ Protection Rating : Double Chamber/ SS316L/ IP67

N - Cable Entry/ Cable Gland/ Connection Cable : ½NPT/ without/ without

A - LCD Display : With Display

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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