

Compact RADAR Level Transmitter

RLT6400C



Measuring range up to 35m



With Bluetooth connectivity



Output: 4~20 mADC/ HART/RS485/Bluetooth



Sensor Housing (IP67/ IP68 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
- Cement
- Metal
- Pulp and Paper
- Agriculture
- Textiles
- Chemicals
- Power
- Water
- Pharmaceutical
- Fertilizer
- Plastics and HVAC

1. Introduction

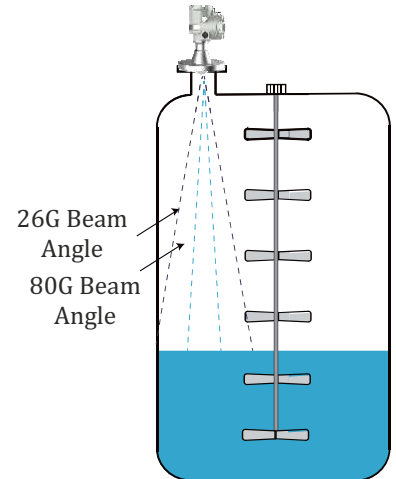
It is based on Frequency Modulated Continuous Wave (FMCW) technology, which transmits a continuous radar signal with the frequency increasing over time to create a signal sweep. The signal is then reflected back to the antenna, to calculate the level.

2. Typical Application

Continuous level measurement of liquids in simple applications with lower demands on pressure and temperature ranges.

3. Measuring Principle

The radar uses 80GHz Frequency Modulated Continuous Wave. The FMCW radar emits a high frequency signal whose frequency increases linearly during the measurement phase (called the frequency sweep). The signal is emitted, reflected from the measuring surface & received with a time delay, t . Delay time, $t=2d/c$, where d is the distance to the product surface & c is the speed of light in the gas above the product. For further signal processing the difference Δf is calculated from the actual transmit frequency & the receive frequency. The difference is directly proportional to the distance.



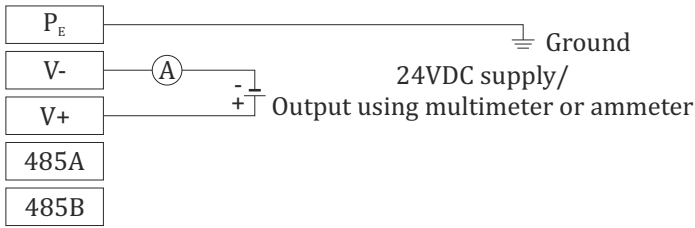
4. Advantages and Features

- With Zero Dead Zone: Isolated emitting & receiving signal enable full range measurement without dead zone. Unaffected by buildup or condensation near sensor.
- EverCheck: Real time self-monitoring on voltage, current and chip. Output warning when abnormality present.
- WavesMemo: Wave management concept. To help understand abnormal output, the RLT6400C stores echo automatically.
- MultiTrack: Due to new MultiTrack wave tracking algorithm, RLT6400C get highest reliability.

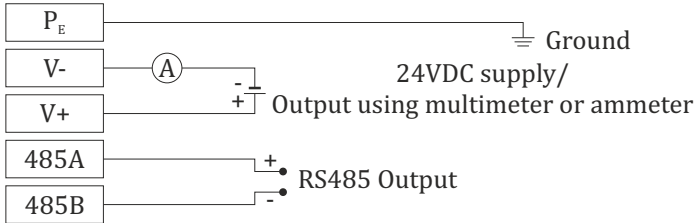
5. Technical Specifications

Measuring Range	0 ~ 35m
Process Fitting & Beam Angle	Thread G1½, Mounting strap, Beam angle: 8°
Power	<0.5W
Response Time	<2s
Frequency	76 ~ 81GHz
Media-contracting Materials	Antenna: PP/ Seal: PP
Process Temperature	(-)40°C ~ 80°C
Process Pressure	(-)1bar ~ 2bar
Resolution	1mm
Accuracy	±2mm
Repeatability	±1mm
Signal Output	4-20 mA/ HART/ RS485
Display & Adjustment	With/ Without Display (Optional: Bluetooth or HART)
Protect Level	IP67/ IP68
Electrical Connection	G1
Explosion Proof Grade	EX ia IIC T6 Ga

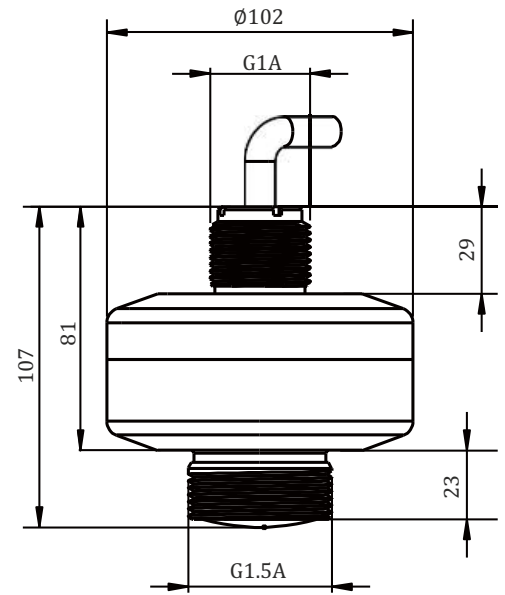
6. Wiring & Dimensions



For 4 ~ 20 mA Output



For RS485 Output



Dimensional Diagram

7. Model Selection Table

RLT6400C	Compact Radar Level Transmitter						
Code	1	2	3	4	5	6	7

Version	
Max. 8m	D
Max. 15m	R
Max. 30m	U
Max. 35m(Customized)	T

Approval	
Standard	XX
Ex ia IIC T6 Ga	CX
Customized	TT

Antenna Material	
PP	Z

Electronics	
18~36VDC/4...20mA, 2-wire	H
18~36VDC/4...20mA, 4-wire	U
Customized(Battery powered)	T

Protection.	
R	IP67
S	IP68

Cable Length	
M	5M
N	10M
T	Customized

Communication	
A	RS485
B	HART/ Bluetooth/ GPRS/ GSM/ Wifi
T	Customized

Example: RLT6400C-DXXZTAMR

D - Version: Max. 8m

XX - Approval: Standard

Z - Antenna Material: PP

T - Electronics: Customized (Battery powered)

A - Communication: RS485

M - Cable Length: 5M

R - Protection: IP67

*For any customisation, contact our sales team