



YPL INSTRUMENTS PVT LTD

80GHz FMCW Radar Level Transmitter

About Product

The YPL-RLT26-NC Non-Contact Radar Level Transmitter is designed for continuous level measurement using high-frequency radar technology. The instrument measures the distance between the transmitter and the surface of the process medium without direct contact.

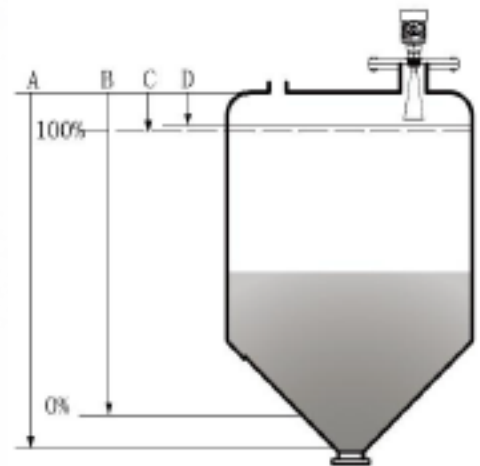
The narrow radar beam associated with 80 GHz designs can be beneficial for tanks with internal obstructions, narrow nozzles, and demanding installation geometries. Final performance depends on the antenna, process conditions, and device configuration.

Working Principle

The transmitter emits microwave radar signals toward the surface of the process medium. The signal reflects from the surface and returns to the transmitter.

The instrument calculates the distance to the surface based on the travel time of the radar signal.

- A. Setting measuring range
- B. Low level adjustment
- C. High level adjustment
- D. Dead band



Key Features

- Non-contact continuous level measurement.
- 80 GHz radar operating frequency band.
- Suitable for industrial liquid & solid level applications.
- 4–20 mA and HART communication option.
- Configurable measurement range and tank geometry.
- Optional local display, subject to selected construction.
- Hazardous-area versions subject to valid certification.
- Flanged and threaded process connection options, subject to design.



General Specifications

Parameter	General Specifications
Measuring Principle	FMCW (Frequency Modulated Continuous Wave) Radar
Measurement Type	Non-contact continuous level measurement
Operating Frequency	76–82 GHz W-band; nominal 80 GHz
Application	Liquids, slurries, pastes, powders and bulk solids, subject to application suitability
Measurement Variables	Level, distance; volume/mass calculation available depending on electronics
Maximum Measuring Range	Up to 30 m / 60 m / 100 m or more, depending on antenna and model
Accuracy	Typically up to ± 2 mm; selected high-accuracy configurations may offer better performance
Repeatability	Typically ± 1 mm or better, model dependent
Resolution	Typically 1 mm or better
Minimum Measuring Distance / Dead Zone	Model and antenna dependent; typically approximately 0.1–0.3 m
Beam Angle	Typically approximately 3°, 6°, 8° or 10° depending on antenna size
Antenna Type	Lens antenna / encapsulated lens antenna / other suitable high-frequency antenna
Antenna Material	PTFE, PEEK, PP or other material according to process application

Process Connection	Threaded / flanged
Process Connection MOC	SS316/SS316L or as per application
Process Temperature	Model dependent; typically up to +120°C, +200°C or higher with suitable construction
Power Supply	Between 18–30 V DC
Output Signal	4–20 mA
Communication	HART; RS485/Modbus optional depending on model
Electrical Configuration	2-wire loop-powered preferred configuration
Display	Integral LCD/graphic display, optional depending on model
Configuration	Local keypad/display, HART communicator or manufacturer configuration software
Enclosure Material	Die Cast Aluminium / SS304 / SS316, according to model
Cable Entry	M20 × 1.5 / ½" NPT or as specified
Mounting	Top-mounted on tank, vessel, silo or process equipment
Typical Applications	Oil & Gas, Refineries, Petrochemicals, Chemicals, Power, Water, Pharmaceuticals, Fertilizers, Cement and General Process Industries

Model No.: YPL-RLT26-NC-1

	Application	Liquid
	Measuring Range	0.10~30 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 85°C...1000°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	±1 mm
	Beam Angle	8°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-2

	Application	Liquid and bulk solid
	Measuring Range	0.08-0.30~120 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 85°C...1000°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	±1 mm
	Beam Angle	3°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-3

	Application	Liquid
	Measuring Range	0.10~30 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 125°C...200°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	±1 mm
	Beam Angle	8°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-4

	Application	Liquid
	Measuring Range	0.10~30 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 85°C...1000°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	±1 mm
	Beam Angle	3°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-5

	Application	Liquids with high temp.
	Measuring Range	0.10-0.30~120 meters
	Process Connection	Screw thread or Flange(PTFE)
	Medium Temp.	-40°C~ 200°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	±1 mm
	Beam Angle	8°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-6

	Application	liquid and bulk solid
	Measuring Range	0.08-0.30~120 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 200°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	±1 mm
	Beam Angle	3°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-7

	Application	Liquid
	Measuring Range	0.08~85 meters
	Process Connection	Screw thread or Swivel Type Flange
	Medium Temp.	-40°C~ 85°C...1000°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	1 mm
	Beam Angle	±3°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-8

	Application	Corrosive Liquids with foam, steam
	Measuring Range	0.08~30 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 85°C...1000°C
	Process Pressure	-0.1 ~ 2.5 MPa
	Accuracy	±1 mm
	Beam Angle	±3°
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-9

	Application	Strong corrosive Liquid
	Measuring Range	20 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 150°C
	Process Pressure	-0.4 ~ 0.4MPa
	Accuracy	±3mm
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-10

	Application	liquids, corrosive liquids
	Measuring Range	30 meters
	Process Connection	Screw thread or Swivel Type Flange
	Medium Temp.	-40°C~250°C
	Process Pressure	-0.1 ~ 4MPa
	Accuracy	±3mm
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-11

	Application	Corrosive Liquids with foam, steam
	Measuring Range	70 meters
	Process Connection	Screw thread or Flange
	Medium Temp.	-40°C~ 250°C
	Process Pressure	Atmospheric
	Accuracy	±15mm
	Signal output	4~20mA two wire with HART/RS485modbus

Model No.: YPL-RLT26-NC-12

	Application	Large range of solid
	Measuring Range	80 meters
	Process Connection	Flange (≥DN80)
	Medium Temp.	-40°C~ 150°C
	Process Pressure	-0.1 ~ 0.5MPa
	Accuracy	±15mm
	Signal output	4~20mA two wire with HART/RS485modbus

Model Selection_RLT26 (Radar Level Transmitter)														
YPL-RLT26	NC	4	TI	4	A	FL	4"	A	S6	L	X	X	X	W
NON Contact Type	NC													
Model Selection														
From 1 to 12 (80 Gzh)		4												
Mountings														
Top - Internal			TI											
Measuring Range (Meter)														
As required		4												
Out Put														
4 ~ 20mA linear Output (2 Wire)					A									
4 ~ 20mA linear Output (4 Wire)					B									
Modbus RS485					C									
Process Connection Type														
Flanged						FL								
Threaded						TH								
Process Connection Size														
As Required & Based on Model Selection							4"							
Process Connection Rating														
150#								A	CS					
300#								B	S4					
600#								C	S6					
900#								D	PP					
Others								E	0					
Certification														
												W		Weather Proof Enclosure
												E		Explosion Proof Enclosure
Special Features														
												Y		Provided
												X		Not Required
Cooling Fins														
												Y		Provided
												X		Not Required
Guide Pipe														
												P		Provided
												X		Not Required
Type of Application														
												L		Liquid
												S		Solid
Flange MOC														

Sample Model Decodification:
YPL-RLT26-NC-4-TI-4-A-FL-4"-A-S6-L-X-X-X-W
YPL-RLT26 - Series
NC - Non Contact Type
4 - Type of Model
TI - Mounting (Top Internal)
4 - Measuring Range in Mtr
A - Output (4~20mA) 2 Wire
FL - Process Connection Flanged
4" - Process Connection Size
A - Process Connection Rating (150#)
S6 - Process Connection MOC SS316
L - Application Liquid
X - Guide Pipe Not Provided
X - Cooling Fins Not Provided
X- Special Features Not Provided
W - Weather Proof

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