



Non Contact Radar Level Transmitter

Redefining each and every Radar Level Transmitter so that it is no longer a product, but rather a Solution

What is Inside

- ✓ World of EIP 80 GHz Radar Level Tx
- ✓ What makes our Radar Unique
- ✓ 40 Years of Excellence - Simplified
- ✓ Awarded as the TOP Manufacturer of Radar 2024



More Information



Email Us
info@eipenviroindia.com

Visit Our Website
www.eipenviroindia.com



Understanding Radar Level Measurement

Purpose and Principle

A radar level transmitter measures the level of liquids or solids in a tank using microwave radar signals.

It emits radio waves that reflect off the material surface and return to the sensor.

The time taken for the echo to return is used to calculate the distance to the material.

Radar level transmitters are non contact and suitable for harsh environments.

They provide accurate, continuous level measurement of the process liquid and solids with minimal maintenance.

➞ Non Contact Radar - Type

PULSE

- 6.3 GHz
- 26 GHz

FMCW

- 80 GHz
- 140 GHz

Pulse Radar uses a Magnetron to send short bursts of energy and measures the time it takes for the echo to return.

FMCW (Frequency Modulated Continuous Wave) Radar uses a Solid State Chirp Antenna to continuously transmits varying frequencies and analyzes frequency shifts for ultra-precise readings.

FMCW Radar offers higher accuracy and better performance in challenging environments.

A Quest for High Frequency Radar

Introducing our
**80GHz Radar
CW59X Series
Beam Angle of 3°**

Smaller Beam Angle

More Focussed Energy

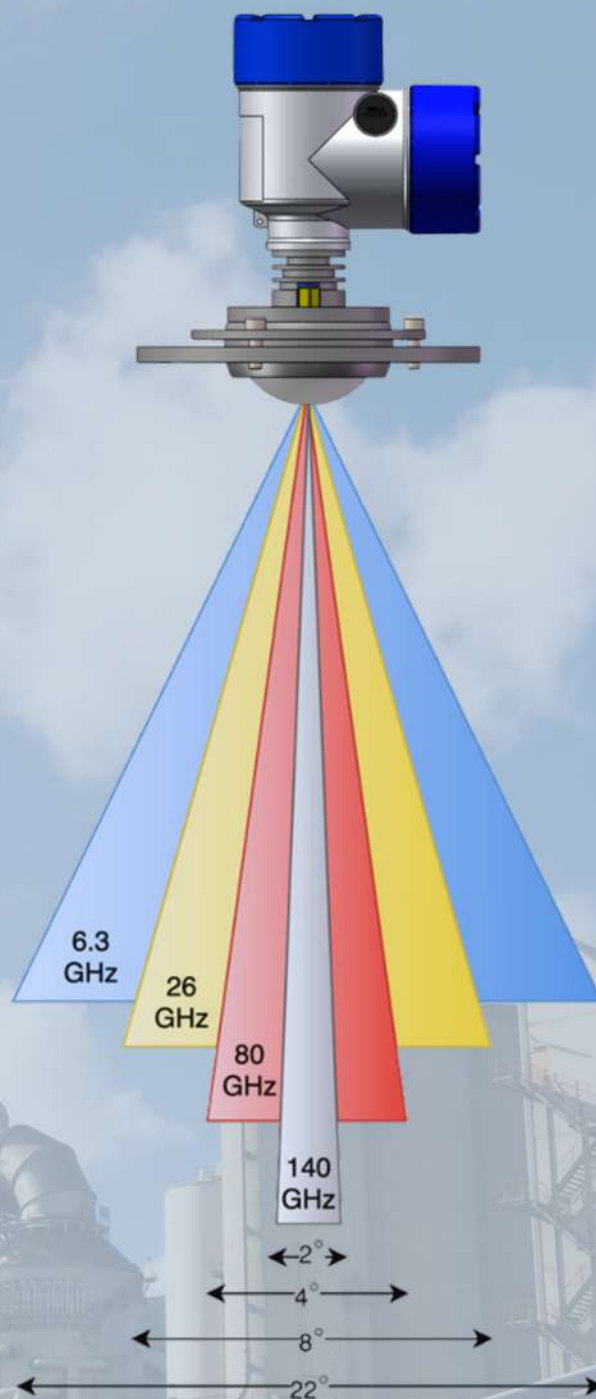
High Power Beam

Better Dust Penetration

SEALED LENS ANTENNA

Our 80GHz Radars are designed with a completely sealed Lens Antenna having a flush face so that there is no protrusion or projection in the vessel

The CW59X is a series of FMCW Radar Level Transmitters designed for superior performance in Powders, Bulk Solids, Liquids and Slurries. Its advanced technology uses a 80 GHz frequency Chirp Antenna with a beam angle of 3-4°, ensuring a peak performance for measuring ranges of upto 120m with an accuracy of +/- 1mm and temperatures upto 1200° C. The Radars have an Overfill Protection on request. Solid Level Radars have Air Purge and Swivel for selected models. What sets our Radars apart is - **Advanced Noise Cancellation Algorithm.**



ALL THE INFORMATION YOU NEED FOR YOUR NEXT RADAR

RADAR MODEL	CW59L-LC	CW59L	CW59S
Application	Liquids / Slurries / Solids	Liquids / Slurries	Liquids / Slurries / Solids
Range	0-10/15/20/40m	0-40m	0-70/85/120m
Opr. Frequency	80 GHz	80 GHz	80 GHz
Power Supply	15-36VDC (2 Wire)	15-36VDC (2 Wire)	15-36VDC (2 Wire)
Output	4-20mA (2/4 wire) / RS485 Modbus	4-20mA (2/4 wire) / RS485 Modbus	4-20mA (2/4 wire) / RS485 Modbus
Accuracy	Upto +/-1mm	Upto +/-1mm	Upto +/-1mm
Resolution	1mm	1mm	1mm
Repeatability	Upto +/-1mm	Upto +/-1mm	Upto +/-1mm
Opr. Temp.	-40°C to +100°C	-40°C to +250°C (400°C/ 1200°C on request)	-40°C to +250°C (400°C/ 1200°C on request)
Opr. Pressure	-1 Bar to +5 Bar	-10 Bar to +40 Bar	-10 Bar to +40 Bar
Configuration / Zero and Span Adjustment	HART 7.0/ Display Keypad/ Bluetooth Android & iOS App	HART 7.0/ Display Keypad/ Bluetooth Android & iOS App	HART 7.0/ Display Keypad/ Bluetooth Android & iOS App
Housing	Aluminium / SS316	Aluminium / SS316	Aluminium / SS316
Sensor (Standard)	PTFE Lens Antenna + PVDF Conn.	PTFE Lens Antenna + PVDF / SS Conn.	PTFE Lens Antenna + SS Conn.
Response Time	Less than 1 Sec	Less than 1 Sec	Less than 1 Sec
Load Impedance	700 Ohms	700 Ohms	700 Ohms
Protection	IP67 / 68 Ex db IIC T6 Gb Ex ia IICT6 Ga*	IP67 / 68 Ex db IIC T6 Gb Ex ia IICT6 Ga*	IP67 / 68 Ex db IIC T6 Gb Ex ia IICT6 Ga*
Failure Output	3.9mA/Hold/22mA	3.9mA/Hold/22mA	3.9mA/Hold/22mA



*ATEX Optional

DECODING - CW59L-LC

CW59L-LC – 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 -XX

APPROVALS

- P Standard
- F Explosion Proof (Ex db IIC T6 Gb)
- I Intrinsic Safe (Ex ia IIC T6 Ga)
- G Explosion Proof (Ex db IIC T6 Gb) + Intrinsic Safe (Ex ia IIC T6 Ga)

TEMPERATURE

- A -40° to 100°C

ANTENNA / SENSOR

- D PTFE Lens Antenna with PVDF Connection

PROCESS CONNECTION SIZE**

- GC Thread G 1½A (for Liquid Application)
- GD Thread G 3A (for Solid Application)

OUTPUT

- B 4-20mA HART (2 Wire, 24 VDC)
- R RS485 Modbus

HOUSING/ ENCLOSURE

- D Aluminum (2 Chamber)
- G SS316

CABLE ENTRY

- M M20
- N ½" NPT

DISPLAY

- A Integral LCD Display with Keypad
- B Integral LCD Display with Keypad + Remote Loop Powered Indicator

RANGE

- XX Maximum Range in meters (10/15/30/40)

****Flange - as per Customer Requirement**

DECODING - CW59L

CW59L- 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8

APPROVALS

- P Standard
- F Explosion Proof (Ex db IIC T6 Gb)
- I Intrinsic Safe (Ex ia IICT6 Ga)
- G Explosion Proof (Ex db IIC T6 Gb) + Intrinsic Safe (Ex ia IICT6 Ga)

TEMPERATURE

- B -40° to 200°C
- C -40° to 250°C
- D -40° to 400°C / -40° to 1200°C (Only with G)

ANTENNA / SENSOR

- C PTFE Lens Antenna with SS316L Connection (PTFE Seal)
- E SS316L Horn Antenna with PTFE Seal
- G Ceramic with Horn Antenna / or Special HT Bracket

PROCESS CONNECTION SIZE**

- GC Thread G 1½A
- GE Thread G 3A

OUTPUT

- B 4-20mA HART (2 Wire, 24 VDC)
- C 4-20mA HART (4 Wire, 24 VDC) - 230/ 110 VAC through SMPS
- R RS485 Modbus

HOUSING/ ENCLOSURE

- D Aluminum (2 Chamber)
- G SS316

CABLE ENTRY

- M M20
- N ½" NPT

DISPLAY

- A Integral LCD Display with Keypad
- B Integral LCD Display with Keypad + Remote Loop Powered Indicator

****Flange - as per Customer Requirement / Welded Flange as per Request**

DECODING - CW59S

CW59S- 1 – 2 – 3 – 4 – 5 – 6 – 7

APPROVALS

- P Standard
- F Explosion Proof (Ex db IIC T6 Gb)
- I Intrinsic Safe (Ex ia IIC T6 Ga)
- G Explosion Proof (Ex db IIC T6 Gb) + Intrinsic Safe (Ex ia IIC T6 Ga)

TEMPERATURE + ANTENNA / SENSOR

- B -40° to 200°C
- E -40° to 250°C (PTFE Lens Antenna + SS316L / SS316L Horn)
- H -40° to 400°C / -40° to 1200°C (Only with FG)

PROCESS CONNECTION

- FC DN100 SS316L Flange + Gimbal Swivel + Air Purge
- FD SS316L Flange + Air Purge (Flange Size as per Requirement)
- FG Ceramic with Horn Antenna / or Special HT Bracket

OUTPUT

- B 4-20mA HART (2 Wire, 24 VDC)
- C 4-20mA HART (4 Wire, 24 VDC) - 230/ 110 VAC through SMPS
- R RS485 Modbus

HOUSING/ ENCLOSURE

- D Aluminum (2 Chamber)
- G SS316

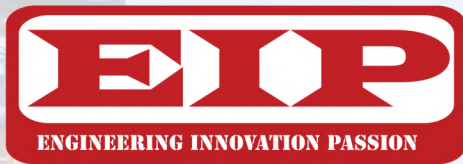
CABLE ENTRY

- M M20
- N ½" NPT

DISPLAY

- A Integral LCD Display with Keypad
- B Integral LCD Display with Keypad + Remote Loop Powered Indicator

****Flange can be provided as per Customer Requirement / Welded Flange is also available as per Request**



EIP ENVIRO LEVEL CONTROLS PVT LTD

EIP as a name was established in the year 1983 and built on the foundation of solving the level measurement problems for its customers with advanced yet affordable solutions. Currently situated in the heart of industrial estate of Noida, with four manufacturing units, EIP's focus on the niche called "level measurement" has led to their diverse portfolio of such solutions, of which Radar Level Transmitter is one of the biggest game changers.

Since the last four decades EIP's Level Measurement Solutions have helped countless process industries improve efficiency, reduce costs, and ensure safety—making EIP as one of the **Top Radar Level Transmitter Manufacturers in India.**



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