



Level Measurement Solutions
for over *3* Decades

CW 59-HIGH FREQUENCY RADAR LEVEL TRANSMITTER

Non-Contact Radar with Superior Performance



The CW-59 Series is a FMCW non-contact radar level sensor designed specifically for superior performance in powders, solids and Liquids. Its advanced technology uses an 80 GHz frequency focused in a narrow 4° beam angle. This ensures reliable performance at measuring ranges up to 120mtr and accuracy within +/-2mm. The CW-59 is ideal for continuous level measurement in tall and narrow vessels where there is excessive noise or dust.

Reliable level measurement. 80 GHz of power.

There are various versions of the CW-59 Series including a metal-jacketed lens antenna, a plastic horn antenna, and a 1-1/2" NPT threaded model. There are countless configurations of the CW-59 offering a diverse selection of approvals, mounting options, specialized seals, output options, and housings. Offers a wide variety mounting plates for 0°, 10°, 30° and 45° angled roofs as well as swiveling flanges and mounting straps that allow for aiming.

CW-59 for Solids and Liquids

- Powerful 80 GHz non-contact radar
- Measuring distance up to 120mtr
- 4° beam angle for precise targeting
- Reliable accuracy within +/- 2mm
- High temperatures up to 400 Deg C
- Hazardous location approvals



Narrow 4° Beam Angle

The narrow 4° beam angle allows for precise aiming to avoid the flow stream, internal structure, or sidewall buildup. Narrow focusing also simplifies setup, as the signal will reflect only from the measured material being targeted. The CW-59 is resistant to interference, while its advanced filters ensure rapid signal processing and a fast update rate. Its advanced firmware constantly tracks echoes and automatically eliminates false echoes for reliable performance.

Sealed System is Maintenance Free

The antenna lens is encased in a sealed antenna system. This makes it resistant to dust buildup and virtually maintenance free. The CW-59 has a flush face that does not protrude into the vessel which prevents potential damage to the sensor. The lens is made of durable material for ruggedness and long lasting performance. It is chemical resistant for tough applications and has FDA approval, making it suitable for food and pharmaceutical use.

The CW-59 comes standard with an air purge connection, which is only necessary for extreme conditions with high dust that will cause dust buildup on the lens. It is designed for low air consumption to save on compressed air costs, ensuring fast and efficient cleaning for high dust applications.

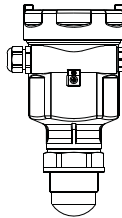
Fast and Simple Setup

CW-59 interface enables push-button sensor setup and configuration. The Conf. is integrated into the sensor housing and is installed and visible under the housing cover for easy viewing. Conf. simplifies setup and provides continuous, at-a-glance, operational status of the sensor. This handy interface aids in on-site system diagnosis. Data can also be sent to a PLC in a control system. System also comes with inbuilt HART interface.

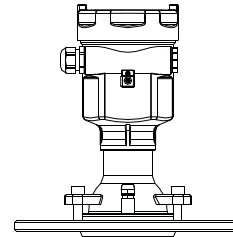


SPECIFICATIONS

CW59L

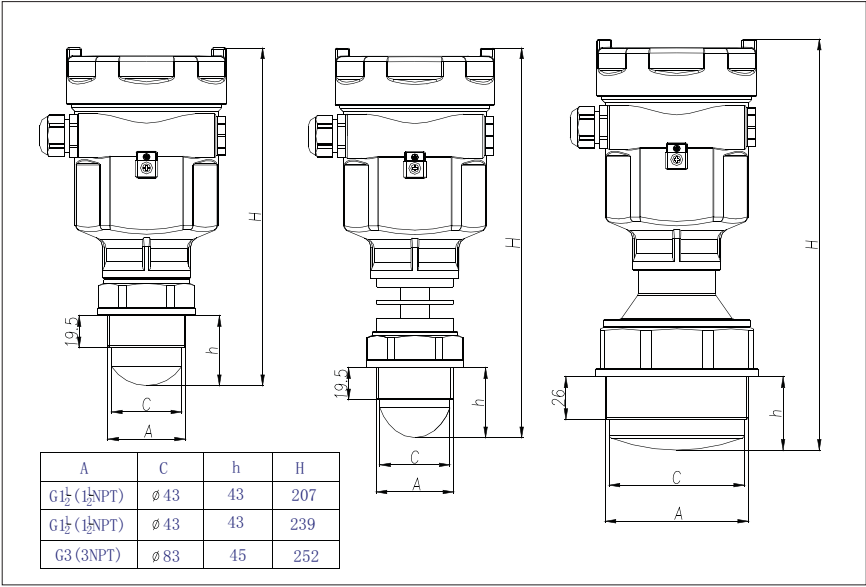


CW59S

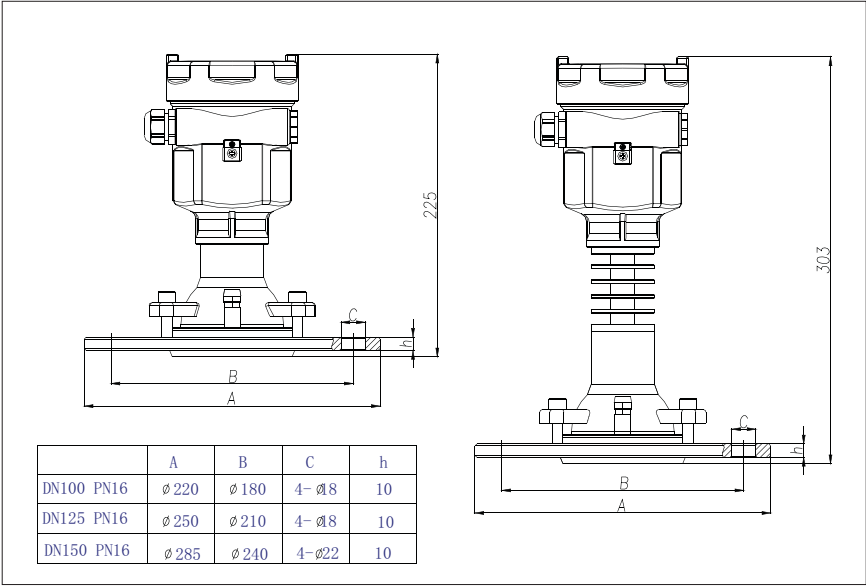


Application:	Liquid Suitable for the strong corrosive liquids	Solid Storage vessel/process vessel or high dust occasion
Measurement range:	0~30m	0~120m
Measurement accuracy:	±2mm	±2mm
Process temperature:	(-40~150) °C (FOR HIGH TEMPERATURE APPLICATION ASK OEM)	(-40~250) °C (FOR HIGH TEMPERATURE APPLICATION ASK OEM)
Process pressure	-1 to 40 Bar	-1 to 40 Bar
Frequency:	80GHz	80GHz
Signal output	(4~20) mA/HART RS485/MODBUS Protocol	(4~20) mA/HART RS485/MODBUS Protocol
Power supply:	2-Wire (DC24V) 4-Wire (DC10. 8~26. 4V)	2-Wire (DC24V) 4-Wire (DC10. 8~26. 4V)
Display/programming:	Optional	Optional
Housing:	A/B/D/G/H	A/B/D/G/H
Antenna material:	PP/FEP/PTFE	Aluminum substrate plastic +PP/316L+PP/316L+PEEK/ 316L+PTFE
Installation form:	Thread GC/GD/GE/GF	Flange FC/FD/FE
Protection Level :	IP67	IP67

DRAWINGS



CW59L



CW59S

Product model naming

CW59L-

1	2	3	4	5	6	7	8
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1 Approvals

P Standard (non-explosion-proof)

I Intrinsically safe (Ex iaII C T6 Ga)

F Intrinsically safe + dust version (Ex ia D 20 T80 °C)

G Intrinsically safe+ flameproof approval (Ex d ia[ia Ga] II CT6 Gb)

※See Note 1

2 Temperature

A (-40~110) °C

B (-40~150) °C

C HIGH TEMP APPLICATION - REFER OEM

3 Antenna Material

A PP

B FEP

C PTFE

4 Thread specification

GC ThreadG1 ½A

GD Thread1 ½NPT

GE ThreadG3 A

GF Thread 3NPT

5 Electronic building brick

B (4-20)mA/HART 2-Wire

C (4-20)mA/(22. 8~26. 4)VDC/HART 4-Wire(2-Chamber)

E (4-20)mA/(22. 8~26. 4)VDC/HART 2-Wire(2-Chamber)

R RS485/MODBUS Protocol

X Special customized (non-explosion-proof)

※See Note 1

- 6 Housing/protection grade
- B Plastic/IP66 AAluminum/IP67
- D Aluminum (2-Chamber)/IP67
- G Stainless steel 316L/IP67
- H Stainless steel (2-Chamber)316L/IP67

✕See Note 1

- 7 Incoming line of cable
- M M20X1.5

N ½ NPT

- 8 Display/programming
- A Programmer
- C Remote display
- X None

Note

1. Intrinsically safe instrument (Ex ia II C T6 Ga) can only use "B, R" electronic components; "A, B, G, " housing; Intrinsically safe + dust version instrument (Ex ia D 20 T80°C) can only use "B, R" electronic components; "A, G" housing;

Intrinsically safe + flameproof approval instrument Ex d ia [ia Ga]II C T6 Gb) can only use "C, E" electronic components; "D, H" housing.

Warning:

1. "Avoid opening cover with power supply" .
2. As the nonmetallic part of the product's housing has potential electrostatic charge, it is prohibited to contact with liquid dielectric during installation and use, in order to avoid the ignition risk caused by friction and impact; please use wet cloth for cleaning.
3. The housing includes the materials of die-casting aluminum/plastic to avoid the ignition risk caused by impact or friction.

CW 59S-

1	2	3	4	5	6	7
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1 Approvals

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- G Intrinsically safe+ flameproof approval (Ex d ia[ia Ga]II CT6 Gb)

※See Note 1

2 Antenna material / Temperature

- A Aluminum substrate plastic PP (-40~110) °C
- B Stainless steel 316L+PP (-40~110)°C
- C Stainless steel 316L+PEEK(-40~130)°C
- D Stainless steel 316L+PEEK with Heat sink (-40~195)°C.
- E Stainless steel 316L+PTFE (-40 ~ 250)°C
- F HIGH TEMP APPLICATION - REFER OEM

3 Flange Specification

- FC Flange DN100 PN16 GB/T9119-2000 Stainless steel 316L (Suitable for 16 Bar Pressure)
- FD Flange DN125 PN16 GB/T9119-2000 Stainless steel 316L (Suitable for 16 Bar Pressure)
- FE Flange DN150 PN16 GB/T9119-2000 Stainless steel 316L (Suitable for 16 Bar Pressure)
- X Nonstandard flange

※The flange thickness is all 10mm.

4 Electronic building brick

- B (4-20)mA/HART 2-Wire
- C (4-20)mA/(22. 8~26. 4)VDC/HART 4-Wire(2-Chamber)
- E (4-20)mA/(22. 8~26. 4)VDC/HART 2-Wire(2-Chamber)
- R RS485/MODBUS Protocol
- X Special customized (non-explosion-proof)

※See Note 1

- 5 Housing/protection grade
- B Plastic/IP66 AAuminum/IP67
- D Aluminum (2-Chamber)/IP67
-
- G Stainless steel 316L/IP67
- H Stainless steel (2-Chamber)316L/IP67
- ※See Note 1
- 6 Incoming line of cable
- M M20X1.5
-
- N ½ NPT
-
- 7 Display/programming
- A With Programmer
- C With Remote display
- X None

Warning:

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About EIP

EIP was established about three decades ago, since then the company has been able to build its reputation in the field of Design / Manufacture Supply of accurate reliable POINT LEVEL AND INVENTORY CONTROL SYSTEMS which have proven to be in satisfactory operation under harsh environmental conditions. Apart from India EIP products have also been proven in other countries.

EIP aims to provide not only stable operating system but also to re-engineer equipments and systems as per the needs of the customers. This has been possible due to our wide experience in this field backed by constant technological development and absorption of new technologies developed world-wide.

EIP's strong endeavor to provide the best solution to its customers has gone a long way in introducing the most advanced level measurement technology from time to time.

Recent value addition to the Solutions provided by EIP is the Non Contact Ultrasonic Flow Meter which solves the problem of accurate flow measurement without any invasion into the pipeline, and the Solid Flow Detector which determines any choking or jamming of the pipelines in which ash or any other Solid material is flowing.

EIP has also diversified its portfolio to provide Zero leakage Non Corrosive Heavy Duty Knife Gate Valves, Butterfly Valves and Water Control Gate.

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