

CW59-C Compact 80GHz Radar



Typical application:

Continuous level measurement of liquids and solids in simple applications

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 and received with a time delay, t . Delay time, $t=2d/c$, where d is the distance to the product surface and 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 and the receive frequency. The difference is directly proportional to the distance.

Advantages and features

- **IsoLens Technology**

Isolated emitting and 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 CW59-C stores echo automatically.

- **Multi Track**

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TECHNICAL DATA

Measuring range	0-10Mtr (30MTR OPTIONAL)
Process fitting and beam angle	Thread G1½ /G3 Emission angle 3°
Power	2 Wire 24 VDC Loop Powered (< 0.5 W)
Response time	< 1S
Frequency	76~81 GHz
Media-contracting materials	Housing: PP/Aluminum Antenna: PP
Process temperature	-40°C ~ +80°C
Process pressure	-1 bar ~ 2 bar
Resolution	1 mm
Accuracy	± 2mm
Repeatability	± 1 mm
Signal output	4 ~ 20 mA (OPTIONAL -HART)
Display and Adjustment	Standard: Bluetooth or HART(Optional)
Protect level	IP67/IP68
Electrical connection	G1

VARIOUS HOUSINGS



DECODING SHEET

CW59-C – 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8-XX

1. Approvals

P	Standard
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2. Temperature

A	-40 ~ 80 Degree C
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3. Antenna Material

C	PP
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4. Thread/ Flange

GC	Thread G 1½A
GD	Thread G 2A
GE	Thread G 2½A

5. Output

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

6. Housing

D	Aluminum – IP68
H	PP – IP68

7. Display/ Programming

A	With Loop Powered Indicator
B	Without Loop Powered Indicator

8. Range

XX	Mention Maximum Range in meters (10/30)
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