LEVEL/PRESSURE/ FLOW TRANSMITTERS

80GHz RADAR LEVEL TRANSMITTER WITH DISPLAY

CW59-L-LC
Compact 80GHz Radar

Typical application:

Continuous level measurement of liquids and solids in simple applications

Measuring principle

The Radar uses 80GHz Frequ ency Modulated Continu-ous 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. Uneffected 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-L-LC storages echo auto-matically.

• Multi Track

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Intrinsic Safe Model Avaialble

TECHNICAL DATA

Measuring range	0-8M (15/30/40M OPTIONAL)
Process fitting and beam angle	Thread G2, Flange from DN 80 Beam angle 3°
Power	2 Wire 24 VDC Loop Powered (< 0.5 W)
Response time	< 1S
Frequency	76~81 GHz
Media-conracting materials	SS 304/Sealed PTFE
Process temperature	-40℃ ~ +80℃(120℃ OPTIONAL)
Process pressure	-1 bar ~ 3 bar
Resolution	1 mm
Accuracy	± 1 mm
Repeatability	± 1 mm
Signal output	4 ~ 20 mA(HART OPTIONAL)
Display and Adjustment	KEYPAD WITH DISPLAY
Protect level	IP67
Electrical connection	M20 / 1/2" NPT(OPTIONAL)

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DECODING SHEET

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

1. **Approvals**

P	Standard
F	Explosion Proof (Exd)

2. **Temperature**

A	-40 ~ 100 Degree C

3. **Antenna Material**

C	PTFE with SS316 Threads
D	PTFE with PP Threads

4. **Thread/ Flange**

GC	Thread G 1½A
FL	As per user requirement

5. **Output**

B	4-20mA & RS-485

6. **Housing**

B	PVC/ Plastic - IP67
D	Aluminum (2 Chamber) – IP67 / Exd

7. **Cable Entry**

M	M20
N	½"NPT

8. **Display/ Programming**

A	With LCD Display

9. **Range**

XX	Mention Maximum Range in meters (08/15/30/40)