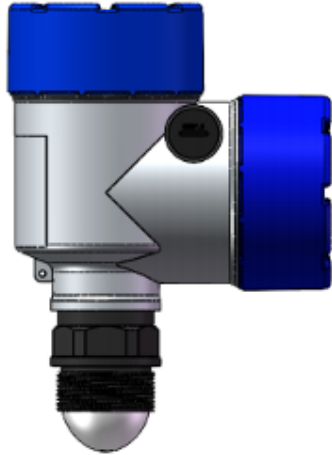


LEVEL/PRESSURE/ FLOW TRANSMITTERS



2 Chambers
Aluminium Housing

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 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-L-LC stores echo automatically.

• Multi Track

Wave management concept. To help understand abnormal output, the CW59-L-LC stores echo automatically.

Intrinsic Safe Model Available

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-contracting materials	SS 304/Sealed PTFE
Process temperature	-40 ~ +100
Process pressure	-1 bar ~ 3 bar
Resolution	1 mm
Accuracy	± 2mm
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)



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
E	PP with PP Threads

4. Thread/ Flange

GC	Thread G 1½A (Liquid Applications)*
GD	Thread G 3A (Solid Applications) - Antenna only Type D

5. Output

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

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 (8/15/30/40)**
----	--

* For PVC Housing Sensor is only G 1½A Version

** For PVC Housing Sensor Range is 10m and 20m only



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**

Wave management concept. To help understand abnormal output, the CW59-C stores echo automatically.

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 ~ +80
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
---	----------

2. Temperature

A	-40 ~ 80 Degree C
---	-------------------

3. Antenna Material

C	PP
---	----

4. Thread/ Flange

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

5. Output

A	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)
----	---

ULTRASONIC LEVEL TRANSMITTER



UC551/552/553 Ultrasonic Level Transmitter

Typical application:

Continuous level measurement of liquids

Measuring principle

The ultrasonic impulses generated from transducers "antenna system", which travel at the speed of sound, come reflected by the surface of medium and newly sent back to the transducer.

The period of time that passes between the emission of impulses and the reception of the same ones from the antenna, is proportional to the existing distance between the same antenna and the higher level of the medium to measure, therefore the principle of the ultrasonic measure can be illustrated with the following equation:

$S=CXT/2$, where S: distance, C: velocity of sound, T: time lapse

Because of the wideband impulses, the overlap between the emission and the reception of the same impulses increases in particular zones, extending itself from the transducer to the bottom, causing a wrong measurement of the level. This error zone is defined "blanking zones" and its dimension vary based on the various models of ultrasonic meters that are used.

• EverCheck

Real time self-monitoring on voltage, current and chip. Output warning when abnormality present.

• WavesMemo

Wave management concept. To help understand abnormal output, UC55X Series stores echo automatically.

• MultiTrack

Wave management concept. To help understand abnormal output, the UC55X Series stores echo automatically.

• Low Cost Model also available

Low Cost Model (LC Version) available with Plastic enclosure and plastic antenna with 4-20mA and without HART.

TECHNICAL DATA

Measuring range	0-5M (10/20M OPTIONAL)
Process fitting	Thread G1½ , Flange from DN 80
Power	2 Wire 24 VDC Loop Powered (< 0.5 W)
Response time	< 1S
Frequency	46KHz
Media-contracting materials	PTFE
Process temperature	-40 ~ +70
Process pressure	-1 bar ~ 1 bar
Resolution	1 mm
Accuracy	± 0.2% FS
Repeatability	± 0.2%
Signal output	4 ~ 20 mA(HART OPTIONAL)
Display and Adjustment	KEYPAD WITH DISPLAY
Protect level	IP67
Electrical connection	M20 / 1/2" NPT(OPTIONAL)



ULTRASONIC LEVEL TRANSMITTER

DECODING SHEET

UC551 (5m)/552 (10m)– 1 – 2 – 3 – 4 – 5 – 6 (Threaded with Flange Standard)

1. Approvals

P	Standard
RU	Remote Display

2. Sensor

A	PBT
C	PTFE

3. Output

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

4. Housing

B	PVC/ Plastic - IP67
D	Aluminum (2 Chamber) – IP67 / Exd
H	Stainless Steel (2 Chamber) – IP 67

5. Cable Entry

M	M20
N	½" NPT

6. Display/ Programming

A	With LCD Display
---	------------------

UC553 (20m) – 1 – 2 – 3 – 4 – 5 – 6 – 7

1. Approvals

P	Standard
RU	Remote Display

2. Sensor

A	PBT
---	-----

3. Thread/ Flange

FL	Threaded with Flange
DJ	Bracket

4. Output

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

5. Housing

B	PVC/ Plastic - IP67
D	Aluminum (2 Chamber) – IP67 / Exd
H	Stainless Steel (2 Chamber) – IP 67

6. Cable Entry

M	M20
N	½" NPT (with Adapter)

7. Display/ Programming

A	With LCD Display
---	------------------

BATTERY OPERATED IIOT LEVEL TRANSMITTER



Battery Operated Wireless Ultrasonic Level Transmitter

Typical application:

Continuous level measurement of liquids

Measuring principle

Ultrasonic (Battery Operated SIM Based) is a flexible and configurable battery operated liquid level sensor with an integrated Cellular modem supporting 2G/ 3G/ 4G

Advantages and features

- Liquid level monitoring
 - Fuel – Oil, Kerosene, Diesel
 - Lubricants
 - Additives
 - DEF / AdBlue
 - Coolants
 - Water
 - Waste Oil
 - Wastewater
- Fixed or portable tanks
- Ensure continued supply
- Optimise delivery or collections
- Spot and continuous inventory measurement
- Programmable alarms
 - Full alert
 - Empty alert
 - Spill alert (bundled tanks)
 - Low and High levels
- 24/7 monitoring
- Accurate, reliable tank level monitoring
- Spot and continuous inventory management
- Programmable data reporting interval
- Remote configurability
- Easy to install
- Minimum 1 year warranty

TECHNICAL DATA

Measuring range	0-10M
Process fitting	Thread G2½ , Flange from DN 80
Power	Battery Powered
Response time	Configurable
Frequency	45 KHz
Media-contracting materials	PP
Process temperature	-40 ~ +70
Process pressure	-1 bar ~ 1 bar
Resolution	1 mm
Accuracy	± 0.2%FS
Repeatability	± 0.2%
Signal output	WIRELESS GPRS/4G
Adjustment	THROUGH SERVER
Protect level	IP68
Electrical connection	NA



HYDROSTATIC LEVEL TRANSMITTER

HSLT-INT Hydrostatic Level Transmitter

Typical application:

Continuous level measurement of liquids



Measuring principle

HSLT-INT Submersible level transmitter is designed for dealing with the most severe and demanding level measurement conditions. The sensor adopts to the

most advanced micro-processor technology with comprehensive linear error compensation and temperature error compensation to assure the highest precision of measuring result. The probe adopts full potting condensation-preventing technology, safe and reliable dual-seal design and fully welding technology with solid stainless steel body to assure long term stability and permanent air tightness. Signal transmitting module adopts transient voltage resistance protective circuits to assure operation regularly even under the harsh surge voltage environment. The seal of the cable adopts intensive cone plug sealing design to assure the long working

- **EverCheck**

Real time self-monitoring on voltage, current and chip. Output warning when abnormality present.

- **Pressure Typee**

Gauge Pressure and Absolute Pressure

TECHNICAL DATA

Measuring range	0-150Mtr
Process fitting	Thread or Flange or Clamp
Power	2 Wire 24 VDC Loop Powered (< 0.5 W)
Response time	< 1S
Supply Voltage	2 Wire Loop Powered 24VDC
Media-contracting materials	SS 316 or SS316L
Process temperature	-40 ~ +80
Process pressure	-1 bar ~ 20 bar
Resolution	1 mm
Accuracy	± 0.2% FS
Repeatability	Inclusive in Accuracy
Signal output	4 ~ 20 mA(HART OPTIONAL)
Display and Adjustment	KEYPAD WITH DISPLAY
Protect level	IP67
Electrical connection	M20 / 1/2" NPT(OPTIONAL)



HYDROSTATIC LEVEL TRANSMITTER

DECODING SHEET

HSLT-INT-1-2-3-4-XX

1. Output

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

2. Enclosure

D	Aluminum – IP67
H	Stainless Steel – IP67

3. Diaphragm

W	SS304
X	SS304L
Y	SS316
Z	SS316L

4. Process Connection

M	M20
N	½" NPT

5. Cable

XXX	Mention Pressure in meters
-----	----------------------------

DIFFERENTIAL LEVEL TRANSMITTER



The ultrasonic pulse beam sent by the sensor through the transmitting surface is reflected by the detecting surface, and is received by the sensor. The required time (t) is with the characteristics of sound speed (s) Through this principle, measurement and calculation of the distance is realised by the 2 sensors

TRANSMITTER - HLG

Voltage : 230 VAC / 24 VDC
Temperature : -25 to 80 Degree C
Pressure : NA (installed outside process)
Accuracy : 0.2% of Full Scale
MOC : Cast Aluminium with Epoxy Coating
Resolution : 1mm
Output : 4-20mA (Differential Level)
Additional Outputs : RS 485 (optional)
Set Points : 2 NO/ 2 NC
Response Time : ~ 1 sec
Load : ~ 500 ohms
Protection : IP 65/ 66
Type of Connection : 4 Wire
Cable Entry : M20/ 1/2"NPT
Configuration : LCD Display with Keypad
Temperature Compensation : In-built
SPD : In Built
Gain Adjustment : Automatic
EEPROM : Flash Memory for Parameters
Mounting : Wall Mounted
Dimension(mm) : 250x165x70 (+/- 10%)

SENSOR

Range : LA5 (0-5m)
LA10 (0-10m)
LA15 (0-15m)
LA20 (0-20m)
Type : Ultrasonic Type, Non Contact
Blanking Zone : 0.3 meters
Temperature : -25 to 80 Degree C
Pressure : upto 2 Bar
Temperature Compensation : In-built
Beam Angle : Less than 10 Degree
Accuracy : 0.2% of Full Scale
Protection : IP 67/ 68
MOC : ABS
Cable : 10 meters (up to 100 meters)
Mounting : Flanged (Polypropylene)
Note : We prefer Non Metallic
Polypropylene Flange with Ultrasonic to
avoid ringing effect and damage to
threads



The ultrasonic pulse beam sent by the sensor through the transmitting surface is reflected by the detecting surface, and is received by the sensor. The required time (t) is with the characteristics of sound speed (s) Through this principle, measurement and calculation of the distance is realised by the 2 sensors

TRANSMITTER - ULFM

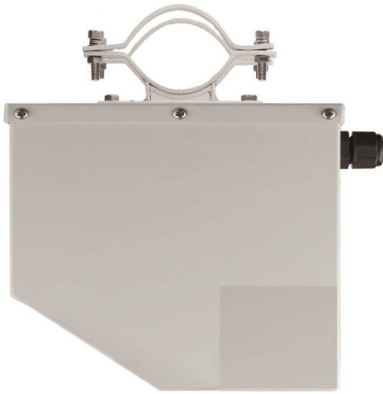
Voltage : 230 VAC / 24 VDC
Temperature : -25 to 80 Degree C
Pressure : NA (installed outside process)
Instantaneous Flow : 0~99999 L/s (m3/h)
Max Cumulative Flow : 9999999.9 m3
Accuracy : 0.2% of Full Scale (Level)
MOC : Cast Aluminium with Epoxy Coating
Resolution : 1mm
Output : 4-20mA (Instantaneous Flow)
Additional Outputs : RS 485 (optional)
Set Points : 2 NO/ 2 NC
Response Time : ~ 1 sec
Load : ~ 500 ohms
Protection : IP 65/ 66
Type of Connection : 4 Wire
Cable Entry : M20/ 1/2"NPT
Configuration : LCD Display with Keypad
Temperature Compensation : In-built
SPD : In Built
Mounting : Wall Mounted
Dimension(mm) : 250x165x70 (+/- 10%)

SENSOR

Range : 5A (0-4m)
15A (0-15m)
Type : Ultrasonic Type, Non Contact
Blanking Zone : 0.3 meters
Temperature : -25 to 80 Degree C
Pressure : upto 2 Bar
Temperature Compensation : In-built
Beam Angle : Less than 10 Degree
Accuracy : 0.2% of Full Scale
Protection : IP 67/ 68
MOC : ABS
Cable : 10 meters (up to 100 meters)
Mounting : Flanged (Polypropylene)

Note : We prefer Non Metallic
Polypropylene Flange with Ultrasonic to
avoid ringing effect and damage to
threads

RADAR BASED VELOCITY AND FLOW TRANSMITTER



EIPFL432

INLET		OUTLET	
	RESET 01		RESET 02
FLOW	28800.0 m ³ /h	FLOW	0.0 m ³ /h
VELOCITY	0.3 m/s	VELOCITY	0.0 m/s
LEVEL	13.3 m	LEVEL	0.0 m
TOTAL	136 m ³	TOTAL	1 m ³

Characteristics

1. Non Contact Measurement, low power consumption, small beam angle
2. Standard RS 485 Modbus Communication
3. Convenient Installation
4. Flow Flow Velocity and Water Level Output in one

Supply voltage: 12V DC

Static current: $\leq 1\text{mA}(@12\text{V})$

Operating current: $\leq 100\text{mA}(@12\text{V})$

Water level range: 15m (range optional 30m/45m)

Water level accuracy: $\pm 3\text{mm}$

Water level resolution: 1mm

Water level radar frequency: 26GHz

Water level radar antenna type: planar microstrip array antenna

Water level radar beam angle: 10°

Flow velocity measurement range: 0.05~21m/s

Flow velocity accuracy: 8.8mm/s

Flow velocity resolution: 1mm/s

Flow velocity radar transmission frequency: 24GHz

Flow velocity radar beam angle: $12^\circ \times 12^\circ$

Water surface distance: 0.5~35m

Operating temperature: $-35\sim 60^\circ\text{C}$

Storage temperature: $-40\sim 60^\circ\text{C}$

Working humidity: $\leq 95\%$

Application occasions: static water or moving water are available

Acquisition interval: 5s~24h can be set

Digital interface: RS485 Modbus communication protocol
Wiring port: M20*1.5×2



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.

EIP ENVIRO LEVEL CONTROLS PVT. LTD.

B-45, SECTOR-8, NOIDA-201301, (INDIA)

Tel. No. : 91-120-2421831,2421832 & 4243333

Fax No.: 91-120-2421833

Email: rgoyal@eipenviroindia.com , rajat@eipenviroindia.com

Website : www.eipenviroindia.com

