



Area of application

The CGR8X00 series are suitable for continuous level measurement of liquids and bulk solids.

In liquids

The CGR8X00 series can measure all kinds of liquid under both simple conditions and extremely hard conditions. The measuring result is reliable and accurate.

In bulk solids

The result can be absolutely reliable, even in the presence of dust and noise, and without being affected by buildup or condensation.

Measuring principle

The CGR8X00 guided wave radar transmitter is designed for continuous level measuring of conductive or nonconductive liquids and solids.

TDR principle

High frequency microwave impulses are guided along a steel cable or rod. When they reach the product surface, the microwave pulses are reflected and received by the processing electronics. Level distance is directly proportional to the flight time of the pulse.

Advantages

- **Twin-chips**

With two chips, CGR8X00 achieves higher processing ability.

- **Multi-Track**

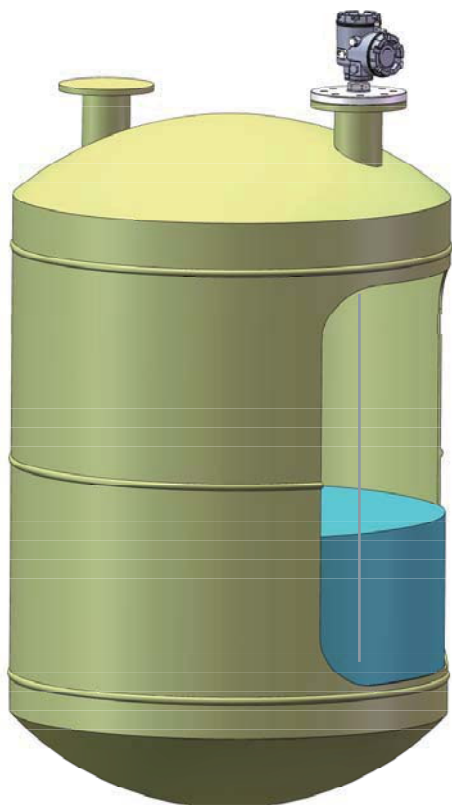
Due to new Multi-Track wave tracking algorithm, CGR8X00 gets highest reliability.

- **Waves Memo**

With wave management function. To help understand abnormal output, CGR8X00 stores wave automatically.

- **EverCheck**

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



CGR8X00 GUIDED WAVE RADAR LEVEL TRANSMITTER

CGR8100



CGR8200



Application	Applicable for continuous level measurement of liquids with slightly aggressiveness under conditions with steam, buildup, foam generation or condensation.	Applicable for continuous level measurement of light-weight and heavy bulk solids and powder.
Measuring range	Cable probe up to 30 m Rod probe up to 6 m Coax probe up to 3 m	Cable probe up to 30 m Rod probe up to 6 m
Version	Single cable (Φ2, Φ4) Single rod (Φ10, Φ16) Double cable (Φ4) Double rod (Φ10) Coax (Φ22, Φ42)	Single cable (Φ8, Φ12) Single rod (Φ16)
Power	< 0.5 W	< 0.5 W
Sample frequency	16 Hz	16 Hz
Response time	< 2 s	< 2 s
Frequency	100MHz ~ 1.8GHz	100MHz ~ 1.8GHz
Process fitting	Thread G1½ Flange	Thread G1½ Flange
Process temperature	-40 °C ~ 200 °C	-40 °C ~ 200 °C
Process pressure	-1 bar ~ 40 bar	-1 bar ~ 40 bar
Resolution	1 mm	1 mm
Accuracy	± 3mm	± 3mm
Repeatability	± 1.5 mm	± 1.5 mm
Signal output	4 ~ 20 mA/HART	4 ~ 20 mA/HART
Display and Adjustment	LCD display, tank side display and tank side hub	LCD display, tank side display and tank side hub
Antenna material	316L Stainless steel	316L Stainless steel
Power supply	24VDC/220VAC (two wire or four wire)	24VDC/220VAC (two wire or four wire)
Protect level	IP67	IP67
Electrical connection	2 × M20*1.5(Cable diameter 9 ~ 13 mm) ½NPT	2 × M20*1.5(Cable diameter 9 ~ 13 mm) ½NPT
Ex information	EX ia IIC T6 Ga, Ex d ia [iaGa]IIC T6/T2 Gb Ex iaD tD A21 IP67T80°C/T290°C	EX ia IIC T6 Ga, Ex d ia [iaGa]IIC T6/T2 Gb Ex iaD tD A21 IP67T80°C/T290°C

CGR8X00 GUIDED WAVE RADAR LEVEL TRANSMITTER

CGR8300



CGR8600



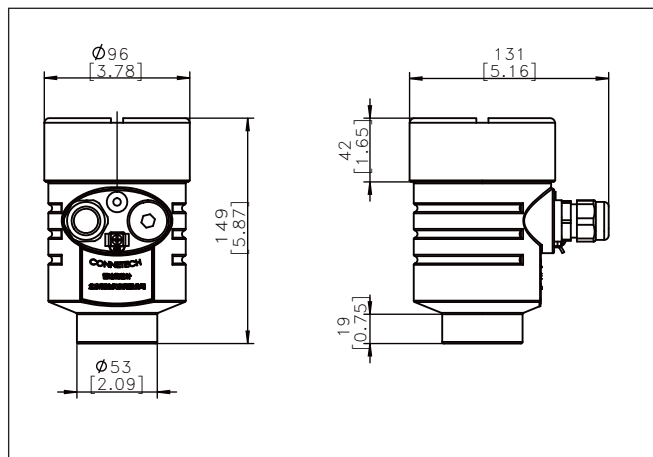
Application	Applicable for continuous level measurement of liquids with strong aggressiveness under conditions with steam, buildup, foam generation or condensation.	Applicable for continuous level measurement of liquids with slightly aggressiveness under conditions of high pressure and high temperature.
Measuring range	Cable probe up to 30 m Rod probe up to 6 m	Cable probe up to 30 m Rod probe up to 6 m Coax probe up to 3 m
Version	Single cable (Φ4) Single rod (Φ10)	Single cable (Φ2, Φ4) Single rod (Φ10, Φ16) Double cable (Φ4) Coax (Φ42)
Power	< 0.5 W	< 0.5 W
Sample frequency	16 Hz	16 Hz
Response time	< 2 s	< 2 s
Frequency	100MHz ~ 1.8GHz	100MHz ~ 1.8GHz
Process fitting	Thread G1½ Flange	Thread G1½ Flange
Process temperature	-40 °C ~ 200 °C	-40 °C ~ 450 °C
Process pressure	-1 bar ~ 16 bar	-1 bar ~ 400 bar
Resolution	1 mm	1 mm
Accuracy	± 3mm	± 3mm
Repeatability	± 1.5 mm	± 1.5 mm
Signal output	4 ~ 20 mA/HART	4 ~ 20 mA/HART
Display and Adjustment	LCD display, tank side display and tank side hub	LCD display, tank side display and tank side hub
Antenna material	316L Stainless steel /PTFE/PFA	316L Stainless steel/Ceramics
Power supply	24VDC/220VAC (two wire or four wire)	24VDC/220VAC (two wire or four wire)
Protect level	IP67	IP67
Electrical connection	2 × M20*1.5(Cable diameter 9 ~ 13 mm) ½NPT	2 × M20*1.5(Cable diameter 9 ~ 13 mm) ½NPT
Ex information	EX ia IIC T6 Ga, Ex d ia [iaGa]IIC T6/T2 Gb Ex iaD tD A21 IP67T80°C/T290°C	EX ia IIC T6 Ga, Ex d ia [iaGa]IIC T6/T2 Gb Ex iaD tD A21 IP67T80°C/T290°C

CGR8X00 GUIDED WAVE RADAR LEVEL TRANSMITTER

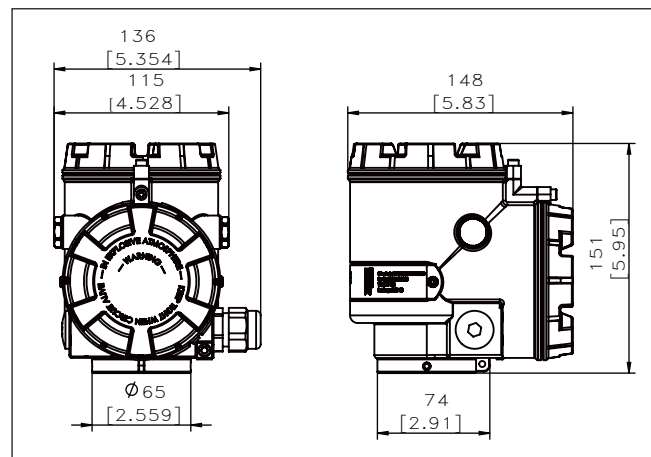
Housing version

The housings are available as double chamber version in plastic, stainless steel or aluminium. They are available with protection ratings up to IP 67 (1 bar).

Single chamber housing

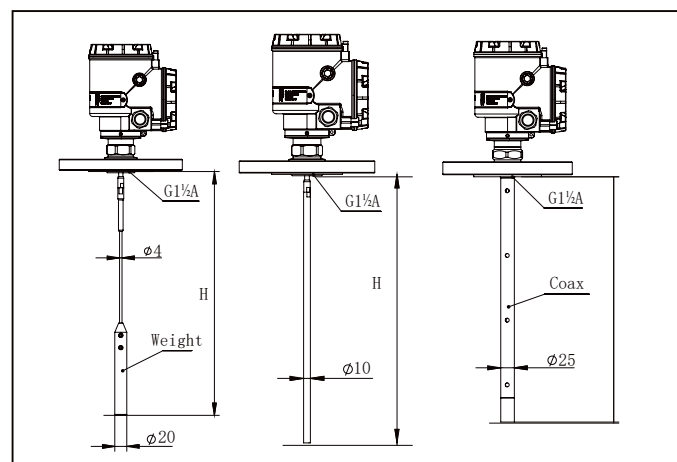


Double chamber housing

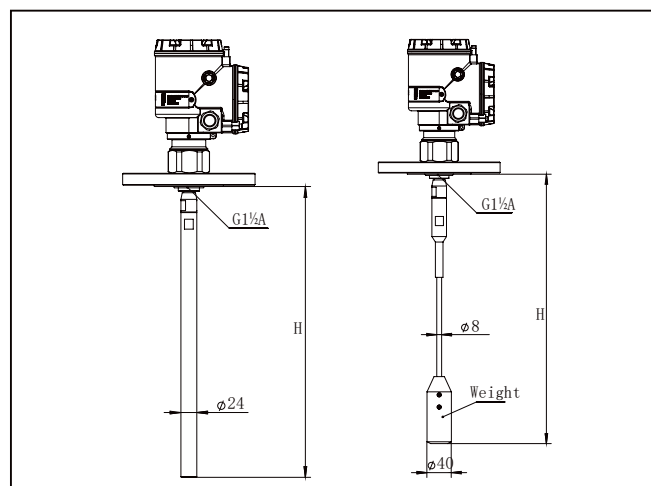


Dimensions

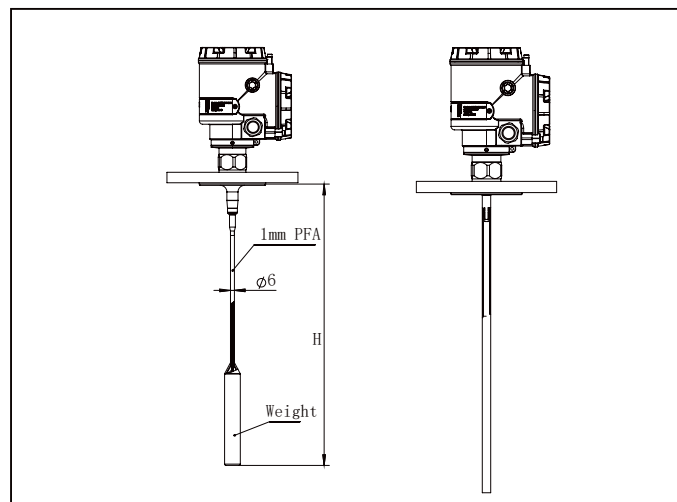
CGR8100



CGR8200



CGR8300



CGR8600

