# CPR6100 Specification Sheet

4 ... 20 mA/HART - 2 wire/4 wire Radar sensor for continuous level measurement of aggressive liquids under simple processing condition

## Area of application

The CPR6100 is a radar sensor for continuous level measurement of aggressive liquids. The small process fittings offer particular advantages in small tanks or tight mounting spaces. The excellent signal focusing ensures the use in vessels with many installations such as stirrers and heating spirals.

## Feature and benefit

### Twin-chips

- With two chips, CPR6100 achieves higher processing ability.

### Multi-Track

- Due to new Multi-Track wave tracking algorithm, CPR6100 gets highest reliability.

### Waves Memo

- With wave management function. To help understand abnormal output, CPR6100 storages wave automatically.

## Function

Measuring system operates based on the time-of-flight method (ToF). It measures the distance from the reference point (process connection) to the product surface. Radar impulses are emitted by an antenna, reflected off the product surface and received again by the radar system. The time from emission to reception of the signals is proportional to the level in the vessels. A special time stretching procedure allows reliable and precise measurement of the extremely short signal running times.

## Technical data

| | |
|---|---|
| Measuring range | 0 ~ 30m |
| Sample frequency | 54Hz |
| Response time | <2s |
| Resolution | 1mm |
| Deviation | ±3mm |
| Repeatability | ±1.5mm |
| Frequency | 26GHz |
| Ambient temperature | -40℃ ~ 70℃ |
| Process temperature | -40℃ ~ 150℃ |
| Process pressure | -1 ~ 3 bar |
| Protect level | IP67 |

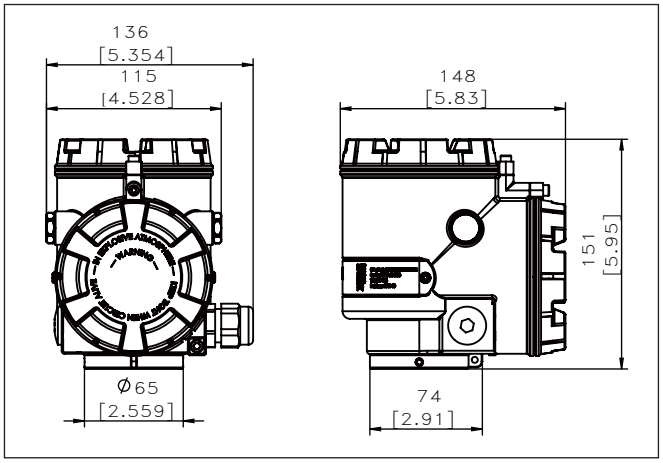
## Material

Two antenna versions are available for CPR6100. One version is encapsulated rod antenna made of PTFE. One version is horn antenna made of plastic.

## Housing version

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

**Double chamber housing**

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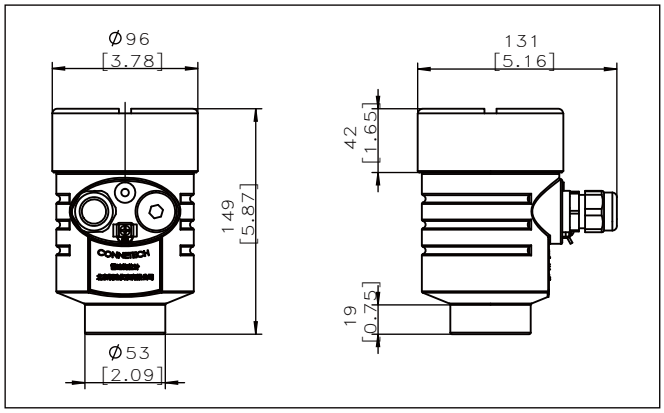
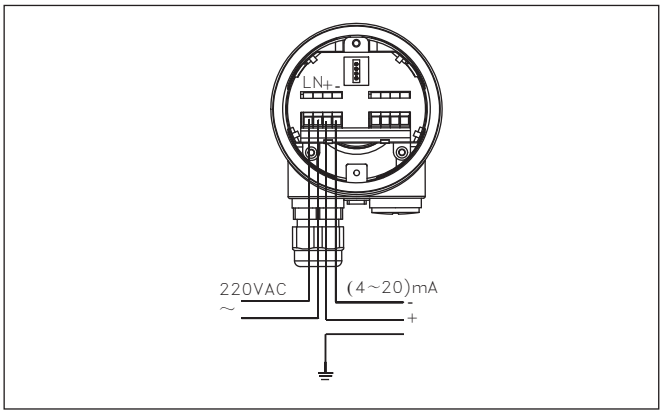
**Single chamber housing**



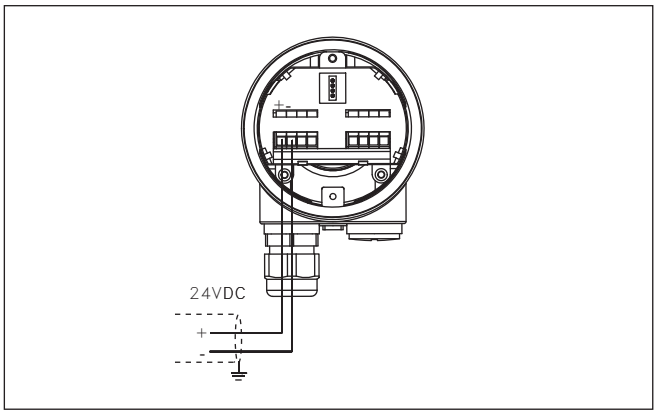

**220V AC.Four-wire**



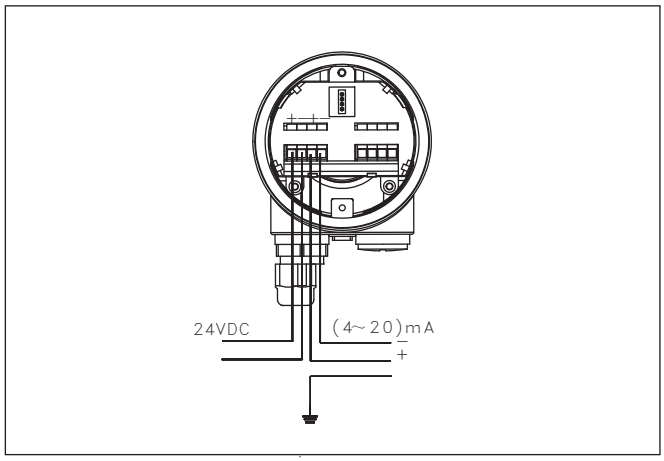

## Electric connection

The instruments are available in different electronics versions. 4 … 20 mA/HART in two and four-wire version with 24 VDC and four-wire with 220VAC.

**24V DC.Two-wire**



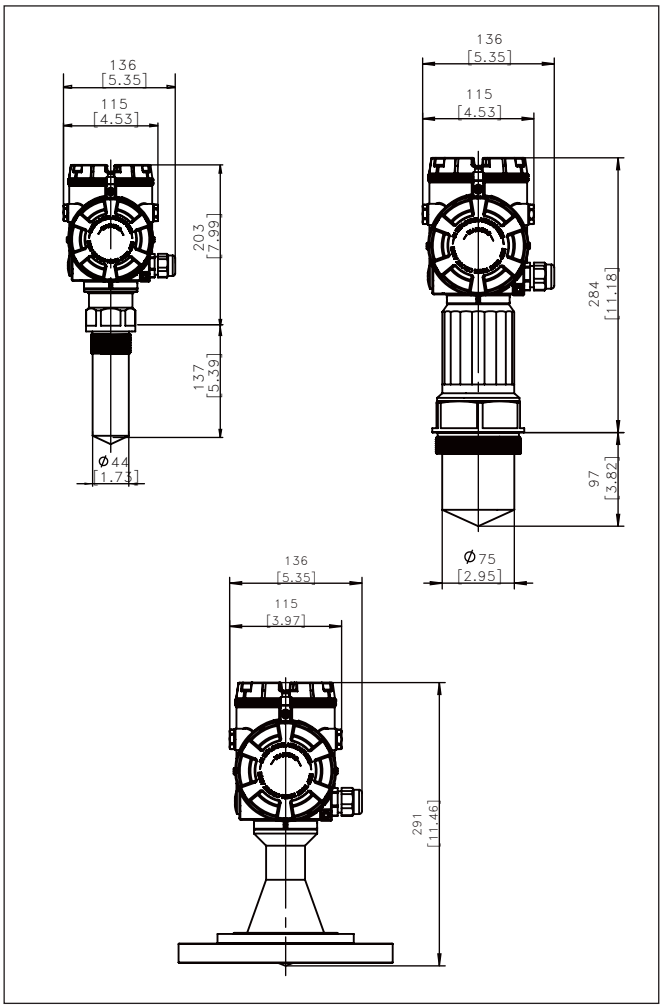

**24V DC.Four-wire**




## Operation

The adjustment of the instrument is carried out via the - LCD display, tank side display, tank side hub and HART communicator.

## Dimensions

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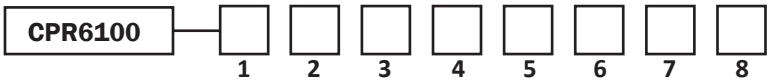
# Ordering code

## CPR6100 Pulse Radar Level Transmitter




### 1 | LANGUAGE

| | |
|---|---|
| A | English |
| I | Chinese |

### 2 | APPROVAL

| | |
|---|---|
| XX | Standard |
| CX | Ex ia IIC T6 Ga |
| DX | Ex d ia [iaGa]IIC T6/ T2 Gb |
| EX | Ex iaD tD A21 IP67T80°C/ T290°C |

### 3 | ANTENNA VERSION / MATERIAL/PROCESS/TEMPERATURE/PRESSURE

| | |
|---|---|
| A | With encapsulated horn antenna ø45 mm/ PTFE / -40℃...150℃ / -1...3bar |
| B | With encapsulated horn antenna ø75mm/ PTFE/ -40℃..150℃ / -1...3bar |
| C | With plastic horn antenna ø80mm / -40℃...80℃ / -1...0.2bar |
| T | Customized |

### 4 | PROCESS FITTING

| | |
|---|---|
| XX | Without fastening flange |
| GP | Thread G1½A |
| NP | Thread 1½NPT |
| HP | Thread G3A |
| CA | Tri-Clamp 2" |
| CB | Tri-Clamp3" |
| AC | Adapter flangeDN50 |
| AD | Adapter flange DN80 |
| AE | Adapter flangeDN100 |
| AH | Adapter flangeDN150 |
| TT | Customized |

### 5 | ELECTRONICS

| | |
|---|---|
| H | Two-wire 4...20mA/ HART; 24 VDC |
| B | Four wire 4...20mA/ HART; 220 VAC |
| I | Four wire 4...20mA/ HART; 24 VDC |
| W | Wireless; GPRS; Wireless C Mesh |
| T | Customized |

### 6 | HOUSING/PROTECTION

| | |
|---|---|
| A | Single chamber/ Aluminum / IP67 |
| B | Double chamber/ Aluminum / IP67 |
| W | Double chamber/ 316L SS/ IP67 |

### 7 | CABLE ENTRY / CABLE GLAND/ CONNECT CABLE

| | |
|---|---|
| M | M20x1.5 / with/ without |
| N | ½NPT/ without/ without |

### 8 | LCD DISPLAY

| | |
|---|---|
| X | Without display |
| A | With display |

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