

## Specification sheet

# ROHEVEL-GRT2201

4 ... 20 mA/HART - 2wire, rod and cable probe

Radar sensor for continuous level and interface measurement of liquids



## Application area

With ROHEVEL-GRT2201 you can measure all kinds of liquids essentially maintenance free. The sensor delivers precise and reliable measured values even in applications with steam, buildup, foam generation or condensation. It is a truly cost-effective level and interface sensor for your measuring task.

## Feature and benefit

### ■ Twin chips

With two MCU, ROHEVEL-GRT achieves higher processing ability.

### ■ Multi-Track

Due to new Multi-Track wave tracking algorithm, ROHEVEL-GRT get highest reliability.

### ■ Waves Memo

Wave management concept. To help understand abnormal output, ROHEVEL-GRT stores wave automatically.

## Function

The ROHEVEL-GRT guided radar transmitter is designed for continuous level measuring of conductive or nonconductive liquids and solids. The ROHEVEL-GRT is a "downward-looking" measuring system that functions according to the TDR principle (Time Domain Reflectometry). 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.

## Technical data

### Measuring range

- Cable probe	0 ~ 30 m
- Rod probe	0 ~ 6 m
- Coax probe	0 ~ 3 m

### Sample frequency

16Hz

### Response time

<2s

### Resolution

1mm

### Deviation

±2mm

### Repeatability

±1.5mm

### Frequency

100MHz ~ 1.8GHz

### Ambient temperature

-40 °C ~ 70 °C

### Process temperature

-40 °C ~ 200 °C

### Process pressure

-1.0 kgf/cm<sup>2</sup> ~ 40 kgf/cm<sup>2</sup>

### Protect level

IP67

## Material

The wetted parts of the instrument are made of 316L and PTFE. The process seal is made of FKM.

## Housing versions

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).

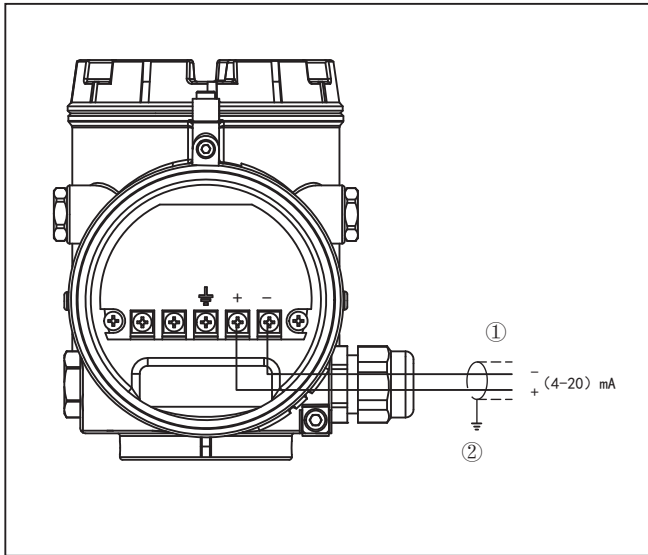
## Electronic versions

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

## Operation

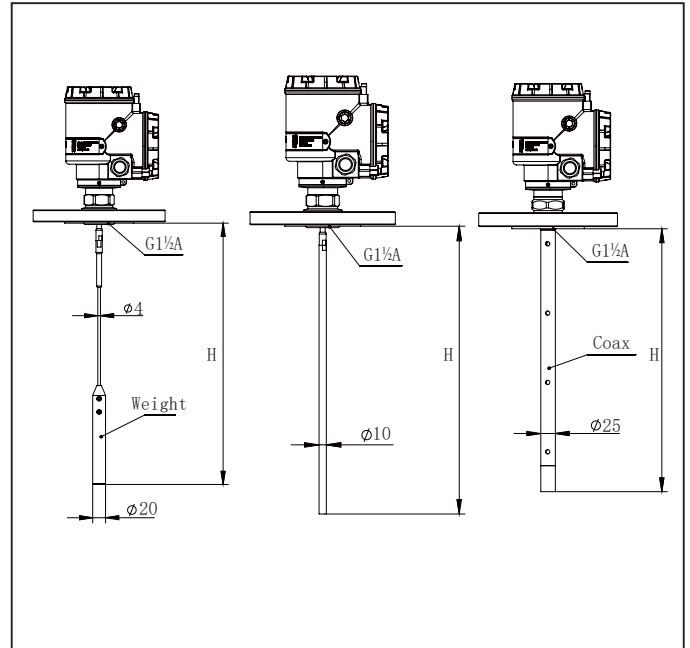
The adjustment of the instrument is carried out via the Lcd display, Tank side display and Tank side hub.

## Electrical connection



Electronics and terminal compartment, double chamber housing  
 1 Voltage supply/Signal output  
 2 Ground terminal for connection of the cable screen

## Dimensions

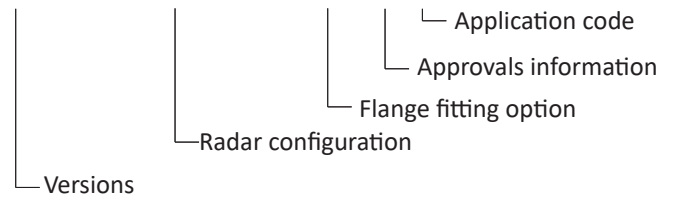


Dimensions ROHEVEL-GRT2201

- 1 Single cable probe version
- 2 Single rod probe version
- 3 Coax probe version

## How to order

**ROHEVEL-**  
**GRT2201-A2AA2XXXX1XAMF-3FB3AX-A-01B**



## Approval

- A None
- B Ex ia IIC T6 Ga
- C Ex d ia [ia Ga] IIC T6 Gb
- D ATEX II 1/2G Ex ia IIC T6
- E ATEX II 1/2G Ex d (ia) IIC T6

## Radar configuration

A	2	A	A	2	XXXX	1	X	A	M	F
<b>Process fitting</b>										
A Thread G1½"										
C Special thread order										
F Flange										
<b>Process pressure(kgf/cm²)</b>										
L M A B C D E Z										
-1 1 2.5 6 16 25 40 Special order										
<b>Process temperature</b>										
A -40 ~ 80°C (process pressure ≤ 40 kgf/cm²)										
B -40 ~ 150°C (process pressure ≤ 20 kgf/cm²)										
C -20 ~ 200°C (process pressure ≤ 10 kgf/cm²)										
Z Special order										
<b>Limit ring and Extension</b>										
X None										
A With extension (still pipe length > 150mm)										
B Limit ring and extension (cable electrodes near wall)										
C Bottom location ring										
Z Special order										
<b>Spacers</b>										
1 2 3 4 5 6 7 8 z										
None Φ45 Φ50 Φ75 Φ95 Φ120 Φ145 Φ195 Special order										
<b>Electrodes length</b>										
XXXX in millimeter										
<b>Sensor type</b>										
2 Single cable Φ2										
3 Single cable Φ4										
4 Single rob Φ10										
5 Single rob Φ16										
6 Double cable Φ4										
7 Double rob Φ10										
8 Coax Φ25										
z Special order Special order										
<b>Interface measurement function</b>										
A None										
B Interface measurement										
<b>Tank side display</b>										
A None										
B Tank side display (I²C/50m)										
C Tank side hub (HART/1500m)										
Z Sepcial order										
<b>Supply/Communication</b>										
2 24VDC-2wires/4-20mA HART										
3 24VDC-4wires/4-20mA HART										
4 220VAC-4wires/4-20mA HART										
0 Special order										
<b>Housing material</b>										
A Cast alminium										
B Stainless steel										
Z Special order										

## Flange fitting option

3	F	B	3	A	X
<b>Counter flange</b>					
X None					
A 304					
B 316L					
C Q235					
Z Special order					
<b>Flange material</b>					
A 304					
B 316L					
C Q235					
D PP					
E PTFE					
Z Speical order					
<b>Flange surface type</b>					
2 Solid flange					
3 RF raised face flange					
4 FM male and female face flanges					
5 M male face flanges					
6 TG tongue and groove face flanges					
7 FF flat face flange					
8 RJ ring joint face flanges					
0 Special order					
<b>Flange pressure level</b>					
X Solid flange					
A PN2.5					
B PN10					
C PN16					
D PN25					
E PN40					
F Class150					
G Class300					
H Class600					
I Class900					
Z Special order					
<b>Flange sizes</b>					
A 2"(DN50)					
B 3"(DN80)					
C 4"(DN100)					
D 5"(DN125)					
E 6"(DN150)					
F 8"(DN200)					
G 10"(DN250)					
Z Special order					
<b>Flange standard</b>					
2 ANSI B16.5					
3 EN1092-1					
4 Solid special flange(8mm)					
0 Special order					