

VEGAPULS C 21

Two-wire 4 ... 20 mA/HART

Radar sensor for continuous level measurement



Application area

The VEGAPULS C 21 is the ideal radar sensor for non-contact level measurement with high accuracy requirements in all standard applications where a high degree of protection is required.

It is particularly suitable for level measurement in water treatment, in pumping stations and rain overflow basins, for flow measurement in open channels, for level monitoring and for many other industrial areas.

The sensor is suitable both for measuring liquids and for use on small bulk solids silos or bulk solids containers.

Your benefit

- Maintenance-free operation due to non-contact 80 GHz radar technology
- Exact measuring results independent of product, process and ambient conditions
- High plant availability because wear and maintenance-free. Exact measurement results independent of medium, process and ambient conditions

Function

The sensor emits a continuous radar signal through the antenna. The emitted signal is reflected by the medium and received as an echo by the antenna.

The frequency difference between the emitted and received signal is proportional to the distance and depends on the filling height. The determined filling height is converted into a respective output signal and output as measured value.

Technical data

Measuring range	up to 15 m (49.21 ft)
Deviation	≤ 2 mm
Beam angle	8°
Output signal	4 ... 20 mA/HART
Process fitting	Thread G1½, 1½ NPT, R1½
Mounting connection	Thread G1, 1 NPT, R1
Process pressure	-1 ... +3 bar (-100 ... +200 kPa/-14.5 ... +43.51 psig)
Process temperature	-40 ... +80 °C (-40 ... +176 °F)
Ambient temperature	-40 ... +80 °C (-40 ... +176 °F)
Operating voltage	12 ... 35 V DC

Materials

The wetted parts of the instrument are made of PVDF. The process seal is made of FKM. The connection cable is PUR insulated.

You will find a complete overview of the available materials and seals in the "Configurator" at www.vega.com and "Products".

Housing versions

The housing is optimized for applications in the water/waste water industry and manufactured of PVDF. Due to the encapsulated cable gland, protection rating IP66/IP68 (3 bar) is achieved.

Electronics versions

The instruments are available in different electronics versions. Apart from the two-wire electronics with 4 ... 20 mA/HART, two digital versions with SDI-12 and Modbus/Levelmaster protocol are possible.

Adjustment

Adjustment via the signal cable

The adjustment of the instrument is carried out via the external display and adjustment unit VEGADIS 82, the interface adapter VEGACONNECT and a PC with the adjustment software PACTware and corresponding DTM.

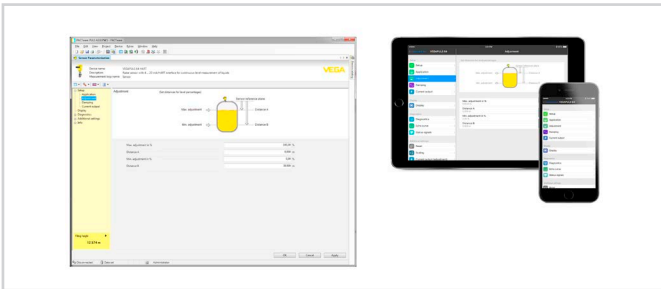
Wireless adjustment via Bluetooth

The Bluetooth version of the instrument enables a wireless connection to standard adjustment units. This can be smartphones/tablets with iOS or Android operating system or PCs with PACTware and Bluetooth USB adapter.



Wireless connection to standard operating devices

Adjustment is hence carried out via a free-of-charge app from the Apple App Store or the Google Play Store or the adjustment software PACTware and respective DTM.

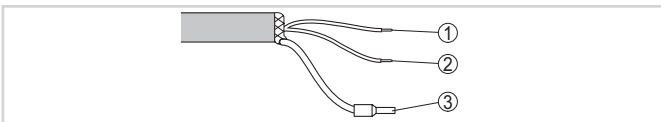


Adjustment via PACTware or app

Adjustment via remote systems

Further adjustment options are possible via a HART Communicator as well as manufacturer-specific programs such as AMS† or PDM.

Electrical connection

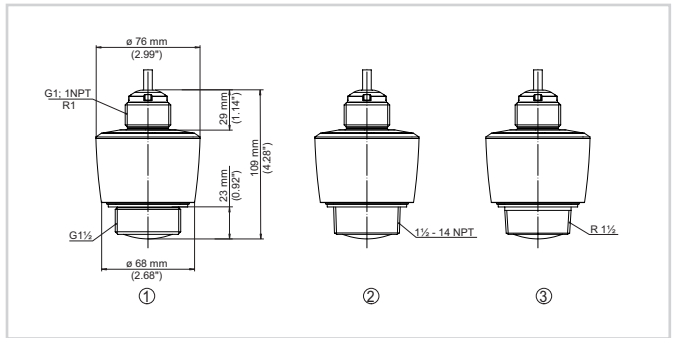


Wire assignment in permanently connected connection cable

- 1 Brown (+) to voltage supply or to the processing system
- 2 Blue (-) to voltage supply or to the processing system
- 3 Shielding

You can find details on electrical connection in the instrument operating instructions at www.vega.com/downloads.

Dimensions



Dimensions VEGAPULS C 21

- 1 Thread G1½
- 2 Thread 1½ NPT
- 3 Thread R1½

Information

You can find further information on the VEGA product line on our homepage.

In the download section on our homepage you'll find operating instructions, product information, brochures, approval documents, instrument drawings and much, much more.

There, you will also find GSD and EDD files for Profibus PA systems as well as DD and CFF files for Foundation Fieldbus systems.

Instrument selection

On our homepage under "Products" you can select the suitable measuring principle and instrument for your application.

You can find detailed information on the instrument versions at www.vega.com and "Products".

Contact

You can find your personal contact person at VEGA on our homepage www.vega.com and "Contact".