VEGAPULS C 22

SDI-12

Radar sensor for continuous level measurement

Technical data

Measuring range up to	15 m (49.21 ft)
Deviation	≤ 2 mm
Beam angle	8°
Measuring frequency	W-band (80 GHz technology)
Process fitting	Thread G1½, 1½ NPT, R1½
Mounting connection	Ceiling adapter
Process pressure	-1 … +3 bar (-100 … +300 kPa/-14.5 … +43.51 psig)
Process temperature	-40 … +80 °C (-40 … +176 °F)
Ambient temperature	-40 … +80 °C (-40 … +176 °F)
Bluetooth standard	Bluetooth 5.0
Bluetooth range	typically 25 m (82 ft)
Operating voltage	8 … 30 V DC
Protection rating	IP66/IP68 (3 bar, 24 h) acc. to IEC 60529, Type 4X/6P acc. to UL 50

Application area

The VEGAPULS C 22 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.

The device is designed for connection to data loggers with SDI-12 interface, making it particularly suitable for battery-powered applications requiring low power consumption.

Your benefit

- Maintenance-free operation due to non-contact 80 GHz radar technology
- Exact measuring results independent of product, process and ambient conditions
- Low overall height and safe measurement even in case of flooding

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.

Materials

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

A complete overview of the available materials and seals can be found on our homepage under " *Products*" and " *Configure & Order*".

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.

Approvals

Worldwide approvals are available for VEGA instruments, e.g. for use in hazardous areas, on ships or in hygienic applications.

For approved devices (e.g. with Ex approval) the technical data in the respective safety instructions are applicable.

You can find detailed information in the available approvals on our homepage under " *Downloads*".

Adjustment

Adjustment via the signal cable
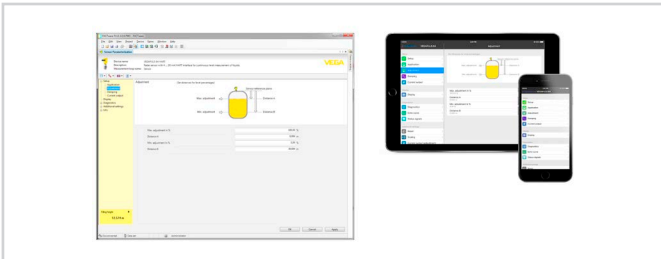The device is operated via the SDI-12 data logger.

Wireless adjustment via Bluetooth
The Bluetooth version of the device enables wireless connection to smartphones/tablets (iOS/Android) or Windows PCs.
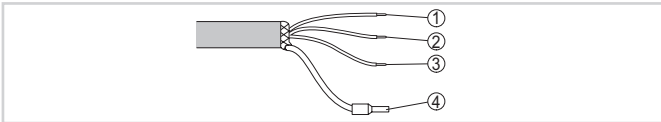

Wireless connection to standard operating devices

Operation is via a free app from the " *Apple App Store*", the " *Google Play Store*" or the " *Baidu Store*". Alternatively, adjustment can also be carried out via PACTware/DTM and a Windows PC.

Adjustment via PACTware or app
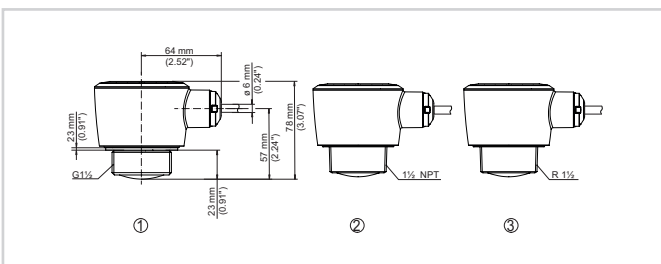
Electrical connection

Wire assignment in permanently connected connection cable

1   *brown (+) for voltage supply*
2   *blue (-) for voltage supply*
3   *White (+) SDI data*
4   *Shielding*

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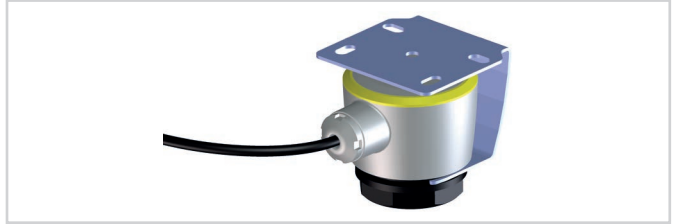
Dimensions

Dimensions VEGAPULS C 22

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

Mounting accessories

For the VEGAPULS C 22 the suitable mounting accessories for ceiling or wall mounting is available.

Mounting strap with adjustable sensor holder for sensors with lateral cable outlet - Ceiling mounting

You can find further information on the mounting accessory on our homepage.

Information

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

In the download section of our homepage you'll find operating instructions, product information, industry brochures and approval documents as well as device and adjustment software.

Instrument selection

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

There you will also find detailed information on the available device versions.

Contact

You can find your personal contact person at VEGA on our homepage under " *Contact*".