

VEGAPULS 6X

Radar sensor for continuous level measurement of liquids and bulk solids

- Standard applications



Application area

VEGAPULS 6X is a radar sensor for continuous level measurement of liquids and bulk solids.

The small process fittings offer particular advantages for liquids in small tanks or tight mounting spaces. The very good signal focusing ensures the use in vessels with many installations such as stirrers and heating spirals.

For bulk solids under most different process conditions, the device is ideal for level measurement in very high silos, large bunkers and segmented vessels. The VEGAPULS 6X is equipped with an encapsulated plastic antenna or a lens antenna integrated into the metal flange for this.

Applications - Standard

The VEGAPULS 6X - Standard is an allround radar measuring device in almost industrial areas, for e. g.

- Large tank stores
- Reaction vessel
- Storage vessels for chemicals
- Filling vessels
- Plastic tank (measurement through vessel ceiling)
- Gauge measurement in waters
- Pumping station/Pump shaft
- Crusher
- Heap (point measurement/profile detection)

Your benefit

- Maintenance-free operation thanks to non-contact measuring principle
- High plant availability, because wear and maintenance free
- Exact measuring results independent of process conditions

Function

The device emits a continuous radar signal through its antenna which is modulated in its frequency. The emitted signal is reflected by the medium and received by the antenna as an echo.

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 120 m (393.7 ft)
Deviation	≤ 1 mm
Beam angle depending on antenna	3°
Measuring frequency	W-band (80 GHz technology)
Process fitting	Mounting straps, compression flanges from DN 80, 3", thread from G $\frac{3}{4}$, $\frac{3}{4}$ NPT, encapsulated antenna system, flanges from DN 20, 2", flange with swivelling holder from DN 100, 4"
Process pressure	-1 ... 160 bar (-100 ... 16000 kPa/-14.5 ... 2320 psig)
Process temperature	-196 ... +450 °C (-321 ... +842 °F)
Ambient, storage and transport temperature	-40 ... +80 °C (-40 ... +176 °F)
Bluetooth standard	Bluetooth 5.0
Bluetooth range	typically 25 m (82 ft)
Operating voltage	12 ... 35 V DC
Output signal	4 ... 20 mA/HART, Profibus PA, Ethernet-APL, Modbus
Protection rating	IP66/IP67, IP66/IP68 (0.2 bar)/IP69, IP66/68 (1 bar) – acc. to IEC 60529; Type 4X, Type 6P – acc. to NEMA

Materials

The wetted parts of the instrument are made of 316L, PP, PTFE or PEEK. The process seal is made of FKM, FFKM, EPDM or PTFE.

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

Housing versions

The housings are available as single or double chamber version in plastic, stainless steel or Aluminium. They are available in protection class IP68 (1 bar).

Electronics versions

The device is available in different electronic versions.

- 4 ... 20 mA/HART in two or four-wire version
- Profibus PA, Ethernet APL, Modbus protocol
- Integrated overvoltage arrester, additional current output

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 directly at the measuring point

The adjustment of the instrument is carried out via the optional display and adjustment module PLICSCOM or via a PC with the adjustment software PACTware and corresponding DTM.

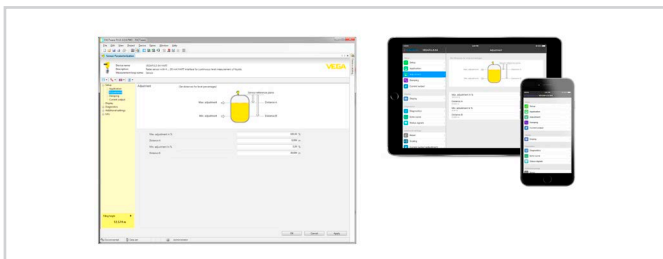
Wireless adjustment via Bluetooth

The Bluetooth version of display and adjustment module 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.

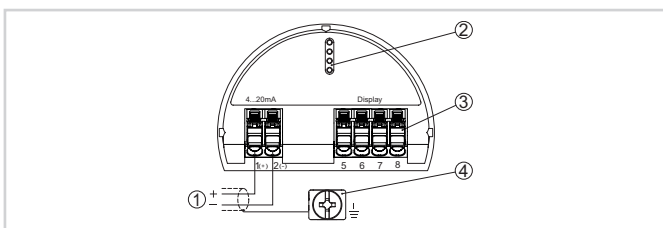


Adjustment via PACTware or app

Adjustment via remote systems

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

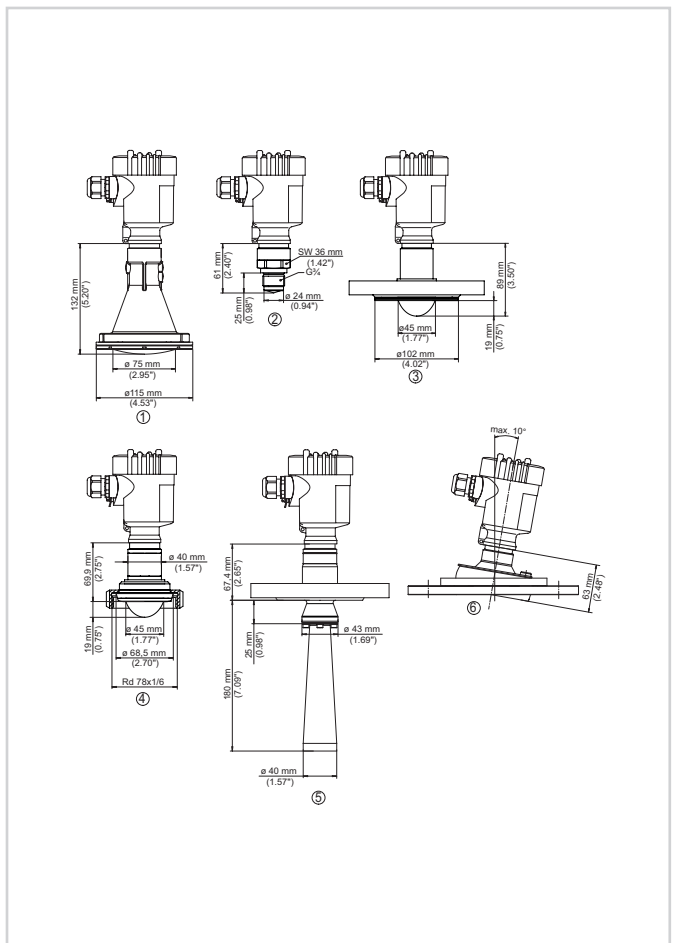
Electrical connection



Electronics and connection compartment, single chamber housing (example)

- 1 Voltage supply/Signal output
- 2 For display and adjustment module or interface adapter
- 3 For external display and adjustment unit
- 4 Ground terminal for connection of the cable screening

Dimensions



Dimensions and antenna versions VEGAPULS 6X

- 1 Plastic horn antenna
- 2 Thread with integrated antenna system
- 3 Flange with encapsulated antenna system
- 4 Hygienic fitting
- 5 Horn antenna
- 6 Flange with lens antenna

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".