



# Radar Level Measurement with VEGAPULS

# Radar level measurement raised to new heights

**The optimised VEGAPULS instrument series is making radar level measurement technology even more versatile and reliable! The completely redeveloped electronics enables faster, more accurate and intelligent signal evaluation, with improved antenna systems and additional housing versions to round out the series. Now demanding application areas such as the chemical, petrochemical, bulk solids and power generation industries can benefit even more from the advantages of using non-contact VEGA radar for level measurement.**

## Higher definition

- Increased measuring accuracy of +/-2 mm through higher sampling rates
- Sensitivity raised 5-fold through the higher dynamics of the microwave module
- Improved signal analysis through improved echo resolution

## Powerful hardware

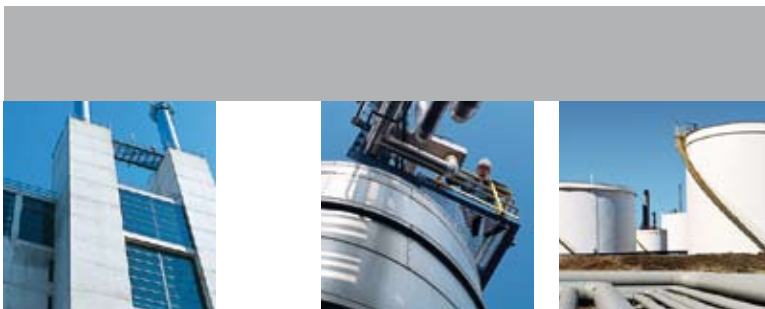
- Fast signal processor for detailed echo analysis and quicker response times
- Measurement memory for service and diagnosis
- State-of-the-art electronic components with low energy consumption
- Only 9.6 V operating voltage

## Intelligent echo analysis

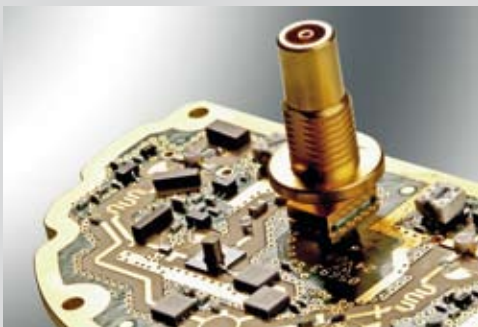
- Reliable detection of interfering signals
- Dynamic false signal suppression through detection of level signal movement

## Increased measuring security

- Considerably higher measuring security and reliability, even with poorly reflective media
- Buildup and condensate in the antenna system are reliably recognized
- Asset management functions with status messages according to NE 107 or VDI/VDE 2650



New high temperature version of VEGAPULS 62/68 with antenna coupling of  $\text{Al}_2\text{O}_3$  ceramic and graphite process seal for a temperature range of  $-200 \dots +450 \text{ }^\circ\text{C}$  and a process pressure of up to 160 bar



### **New intelligence: the high-performance electronics**

Through faster hardware and “intelligent” signal evaluation, VEGAPULS reaches a new level of quality in radar signal analysis. Detection of the level echo movement improves the differentiation of wanted and unwanted signals. For the user, this means higher measuring certainty and increased reliability, even in the most critical applications.

# New ease of operation and integration



## Setup and commissioning: simpler than ever

When setting up and commissioning the instrument, the user only has to select a few application parameters. The software takes care of the rest and configures itself optimally. Through this, initial operation is simplified and measurement reliability increased considerably. These settings can even be carried out on request at the factory – the user then only has to mount and connect the sensor.

## Re-engineered PLICSCOM

The indicating and adjustment module PLICSCOM, standard for all VEGA sensors, has been completely reworked and optimised. With the redesigned membrane keyboard, operation is even more convenient for the user. The new tree structure of the menu makes setup and commissioning clear and simple. As with all VEGA products, compatibility is the top priority here: whether old or new PLICSCOM, old or new sensor, everything always fits together.

## Fully compatible with existing systems

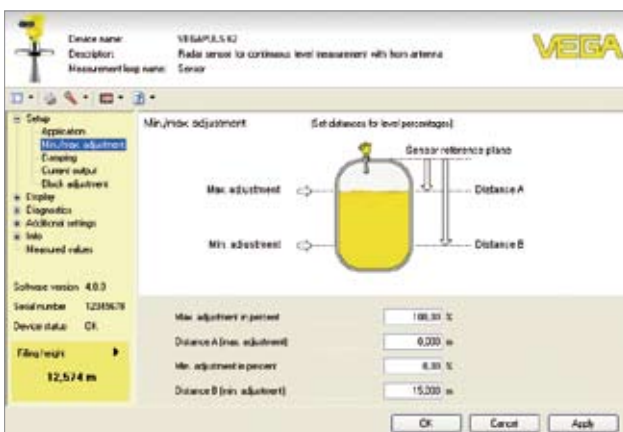
Due to its low operating voltage of only 9.6 V, VEGAPULS can now be used completely independently of the control system or power supply unit. Retrofitting installed instruments with the new electronics is not only possible, but as simple as ABC. An existing system can thus be quickly and simply brought up to date.





## New downwardly compatible DTMs according to the DTM Style Guide

All the new VEGA DTMs were developed according to the DTM Style Guide. Thus, they meet customer demands for a consistent adjustment interface. As you would expect from VEGA, the new DTMs are also downwardly compatible, so that older-generation instruments can also be adjusted with them. In addition, there are EDDs available with a comparable visual appearance and quality for adjustment and commissioning. VEGA instruments can therefore be uniformly and universally operated – regardless of the adjustment tool or process control system is being used.



## User-friendly Ex concept

For hazardous areas, a number of different housings can be selected: whether intrinsically safe supply or integrated barrier in pressure resistant, encapsulated Ex-d version, VEGAPULS can always be simply integrated into existing systems. To guarantee the highest level of safety, the most up-to-date Ex guidelines were complied with, now, the VEGAPULS may be used in dust-Ex areas without the requirement of an intrinsically safe supply.



# Everything under control in servicing and asset management

## **Simple retrofit to the newest intelligence**

The electronics module of the new VEGAPULS generation is fully backwards compatible with instruments already installed. With it, existing sensors can be quickly and simply raised to the new technology and safety levels.

## **Well thought out: connection and exchange of electronics**

New, removable spring-loaded terminals in the electronics allow connection of the instrument without tools. Moreover, it is possible to exchange the electronics without disconnecting the cables. The removable spring-loaded terminal blocks prevent wrong connections and short circuits. The dismantling tab simplifies the electronics exchange even more. To minimise downtime, the sensor needs to be back online as quickly as possible. To enable this, the set up data can be downloaded into the new electronics directly from the indicating and adjustment module PLICSCOM.





### Integrated functions for asset management









For preventive maintenance, the new electronics of VEGAPULS delivers automatically standardised status messages according to NE 107 or VDI/VDE 2650. Detailed information on maintenance requirements, unsafe signal status or malfunctions are shown in clear text by PLICSCOM and transferred digitally to the control system via HART, Profibus PA or Foundation Fieldbus.

### Functions for preventive maintenance

- Clear text indication of instrument status
- Extensive data logger for measured values, events and diagnoses with details on date and time
- Echo curve memory for fault diagnosis (example: a stored adjustment curve of initial operation allows diagnosis of the antenna system without dismounting)
- Integrated temperature sensor

Status messages according to NE 107 or VDI/VDE 2650



		Malfunction
		Maintenance required
		Check function
		Outside of specification

# plics<sup>®</sup> – the future is modular

**Indicating and adjustment module**

- NEW PLICSCOM
- NEW VEGACONNECT

**Electronics**

- NEW 4 ... 20 mA/ HART
- NEW Profibus PA
- NEW Foundation Fieldbus

**Housings**

- NEW Plastic
- NEW Stainless steel
- NEW Aluminium
- NEW Plastic double chamber
- NEW Stainless steel double chamber
- NEW Aluminium double chamber

**Process fittings**

- Thread
- Flange
- Hygienic fitting
- Custom-designed

**Sensor types**

- NEW Radar horn antenna
- NEW Radar antenna with PTFE cover
- NEW Radar parabolic antenna
- NEW Encapsulated antenna 200 °C
- NEW Radar horn antenna 250 °C
- NEW Radar horn antenna 450 °C

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Looking Forward **VEGA**