VEGAPULS 68: Application examples

Coal, coke, ceramic powder

Sensor version
Horn or parabolic antennas with swivelling holder

Advantages
- Non-contact measurement
- Unaffected by dust generation
- No mechanical wear of the sensor
- Not influenced by filling noise
- High dynamic range of the sensor
- Meas. range up to 70 m
- Antenna cleaning by cooling air possible
- Dust Ex approval

Cereals, rice in a mill

Sensor version
Horn or parabolic antennas with swivelling holder

Advantages
- Non-contact measurement
- Unaffected by dust generation
- No signal loss during pneumatic filling
- Not influenced by filling noise
- High dynamic range of the sensor
- Meas. range up to 70 m
- Dust Ex approval

Blast furnace in steel production

Sensor version
Horn antenna with cooling air connection for nitrogen

Advantages
- Non-contact measurement
- Unaffected by dust generation
- Not influenced by filling noise
- High dynamic range of the sensor
- Meas. range up to 70 m
- Not influenced by temperature changes

Cement, clinker

Sensor version
Horn or parabolic antennas with swivelling holder

Advantages
- Non-contact measurement
- Unaffected by dust generation
- No signal loss during pneumatic filling
- No mechanical wear of the sensor
- Not influenced by filling noise
- High dynamic range of the sensor
- Meas. range up to 70 m
- Antenna cleaning by cooling air possible

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2.29415-EN-04-04-01

VEGAPULS 68

Level measurement for solids

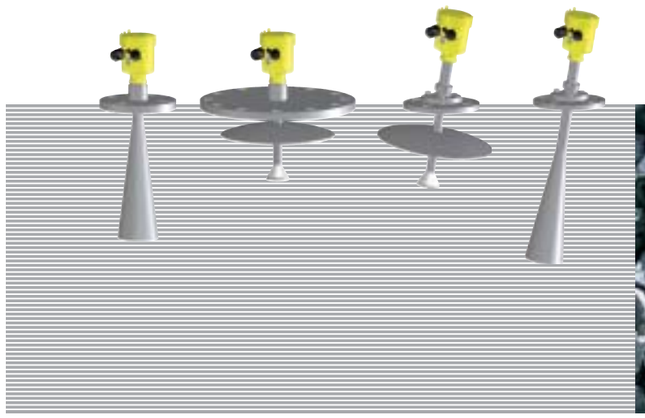
PRODUCT INNOVATION 2004

VEGA

VEGAPULS 68: Level measurement for solids

New application areas through improved technology

For the measuring range of up to 70 m, VEGA has a further optimised radar technology in its line of products. The new sensor is able to process signals much weaker (by a factor of 1000) than those processed by conventional radar sensors. Due to this high sensitivity, VEGAPULS 68 is predestined for level measurement of solids.



Signal processing – optimised for solids

The signal processing of VEGAPULS 68 was optimised for the different reflection properties of solids. Due to the irregular shape of the material surface in silos, the echo signals are quite different from those generated by a liquid surface. The processing algorithms of VEGAPULS 68 are adapted to these applications. Whether with the adjustment module PLICSCOM directly on the sensor or with the adjustment program PACTware via the HART communication on the 4 ... 20 mA signal. Only a few steps are necessary to optimise the sensor to the respective application.

Antenna technology for more performance

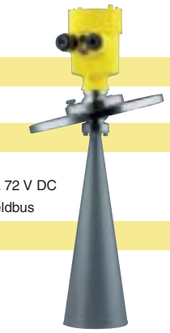
- Swivelling antennas
- Horn antenna: Ø 100 mm at approx. 400 mm length, optimized for solids
- Parabolic antenna (from the end of 2004), Ø 250 mm
- Cooling air connection for high temperature applications and for cleaning of the antenna system

Overview of the advantages

- Non-contact measurement
- Unaffected by dust generation
- No signal loss with pneumatic filling
- Not influenced by filling noise
- High dynamic range of the sensor
- For products with very small DK values (from 1.5)
- Measuring range up to 70 m
- Antenna cleaning with cooling air
- Dust Ex approval
- Gas Ex approval

The electronics facts

Measuring range	max. 70 m
High dynamic range	approx. 110 dB
Accuracy	approx. 10 mm
Power supply	2-wire, 4 ... 20 mA 4-wire, 20 ... 250 V AC/20 ... 72 V DC Profibus PA, Foundation Fieldbus
Frequency range	K-band



For use under extreme conditions

Non-contacting VEGA radar technology delivers reliable level data, particularly in dusty atmospheres such as in coaling plants of power stations and storage facilities for building materials. Also in the food processing industry, steel production and level measurement of powders and granules in the chemical industry, the high dynamic range of the sensor plays an important role. Adjustable flanges allow the reduction of false echoes and the optimisation of the useful echo. Even fittings for cooling air can be integrated in the process fitting.

plics – Easy is better

plics® systemises the technology for level, switching and pressure measurement. Because VEGA's building block system plics® creates synergistic effects and reduces expenditures of time and money: from selection to set-up to service.

plics® indicating and adjustment module

PLICSCOM

plics® housing

Plastic

Stainless steel

Aluminium

Aluminium (2 chamber)

Electronics

4 ... 20 mA/ HART

Profibus PA

Foundation Fieldbus

Picture in original size