

Ingeniously simple and reliable  
level measurement



Measurement Technology & Know-how

# Product Portfolio



# “With heart and soul – and smooth co-operation”



The UWT Management Trio

When we started 1977 with the development of our ingenious products, no one could have foreseen the unparalleled success story that followed. UWT has become one of the leading suppliers of measurement technology on the world market today for the level detection in silos and material manufacturing processes. The names Rotonivo®, Vibranivo® and NivoBob® represent quality, flexibility and reliability in over 70 countries across the world. Having successfully solved over a million applications within the bulk solids sector, UWT has expanded still further by introducing a new and innovative product range for the liquids market which is delivering reliable solutions for applications in this area.

The development, production and sales departments are located at our headquarters in Germany, with a further production site in Malta. UWT has also established successful sales offices in the USA, UK, China, India, Russia and most recently Brazil and Mexico. With this global orientation, we are able to serve and support our customers with complete competence and flexibility. From development through production to final assembly and comprehensive technical advice, we can offer a complete service from a single source. Focus is placed on delivering the highest quality products, technical expertise and a good working relationship with customers, suppliers and partners. The strongly held belief by CEO Uwe Niekrawietz is for the welfare of over 165 employees world-wide: “Healthy and happy employees can make the unbelievable happen”.

Every year, our product portfolio evolves, develops and brings about solutions for a variety of industries. As well as providing level measurement we also offer monitoring and visualisation systems, together with complete project planning. Renowned plant manufacturers and end users around the world appreciate our ability to deliver customised solutions for their applications, as well as the ease of use and durability of the UWT sensors. Our strategy in the consistent monitoring of our own steady and sustainable growth allows us to provide the best value solutions for our customers.



Headquarters in Betzigau, Germany



Awarded for innovative  
industrial solutions

# Our mission

We are guided by our company characteristics: responsibility, enterprising as well as challenging and stimulating. Our company values: **quality**, **reliability**, **flexibility** form our strategic direction and guide us when dealing with colleagues, customers or business partners alike.

■	UWT Mission
■	<b>Quality:</b> Product performance 99.8 %
■	<b>Reliability:</b> Competent employees and long-lasting products
■	<b>Flexibility:</b> Customer orientation and satisfaction



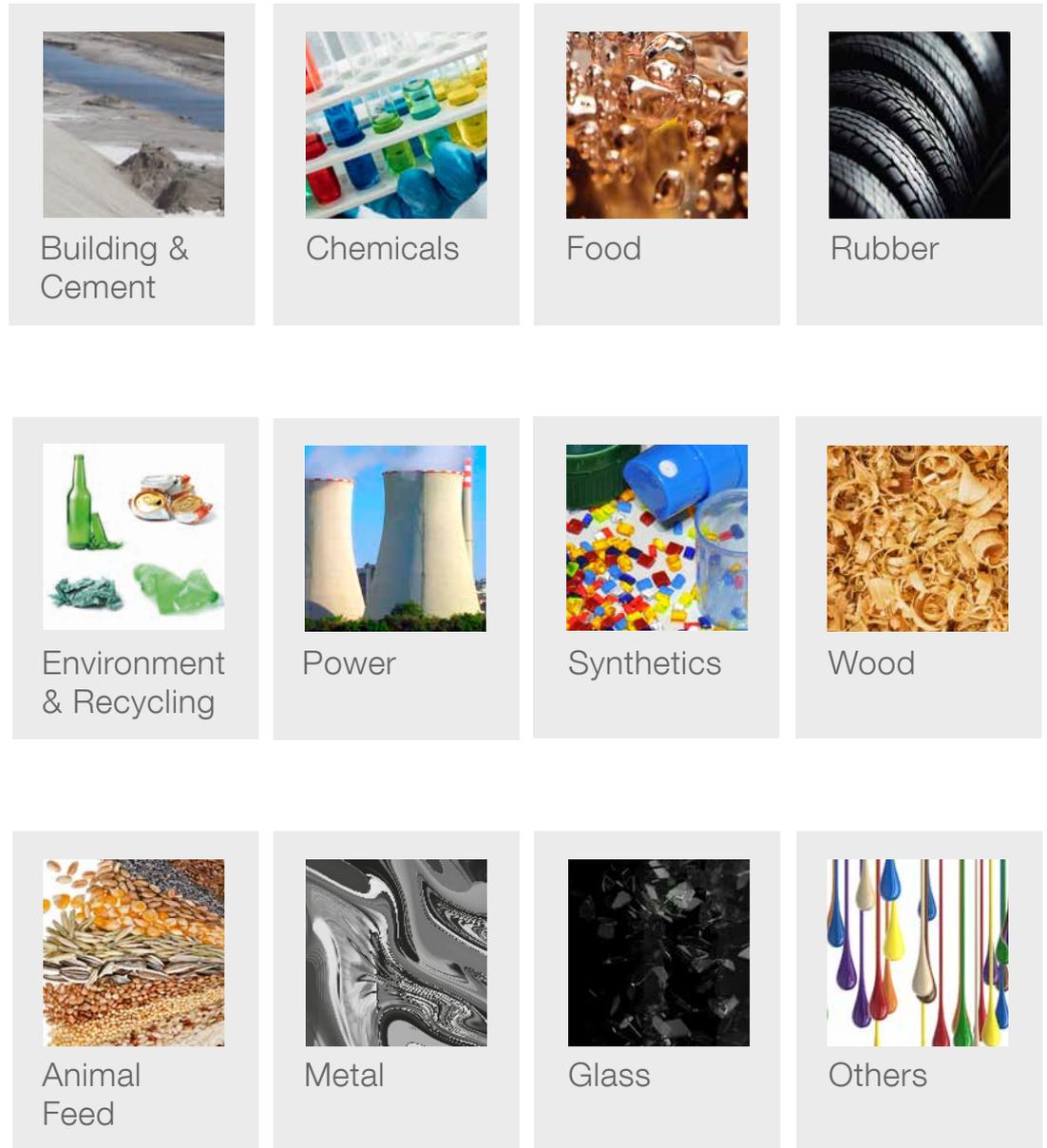
## Your team for innovative measurement technology

Over the years, as a German medium-sized enterprise we have become the world's competent partner for level measurement technology. A company reaches such a position only if the following key elements interact: Sound management, good understanding of the needs of the markets, innovative product solutions, skillful investment and above all, committed and dedicated employees.



ADM  
 Anheuser-Busch  
 AZO  
 Baosteel Group  
 BASF  
 BAYER  
 Baxter  
 Beck's  
 BMW  
 Bridgestone  
 Camfil APC  
 Cargill  
 Colabeton  
 Colgate-Palmolive  
 Coperion  
 ES-Plastic GmbH  
 Evonik  
 Derichs GmbH  
 Dr. Oetker  
 Dynamic Air  
 Lafarge  
 Heidelberger Zement  
 Heinz  
 Italcementi  
 Liebherr  
 Manes  
 Protec  
 maxit-Group  
 MOTAN  
 m-tec  
 MW Umwelt O&M  
 Nestlé  
 Owens Corning  
 Pirelli  
 Reimelt  
 Schenck Process  
 Siemens  
 Starbucks  
 Unilever  
 Veka  
 VW  
 Zeppelin

## Our core industries



## Approvals world-wide



## Quality Certificates



Our products

# Rotonivo®

## Rotary Paddle Level Switch for SOLIDS

A motor driven shaft causes a vane to rotate. Once the material level reaches the vane, thereby preventing further rotation, switches are activated which result in an output signal and the motor stops. When the vane is free again from material, the output signal is reset and the motor driven shaft rotates again.



RN 3000



RN 4000



RN 6000



RN 3002 Tube



RN 3002 Rope



## Our Solutions for:

- Strong caking
- Dusty environments
- Abrasive materials
- Extreme process temperature
- Over pressure and low pressure environments
- Heavy mechanical loading
- Electrostatic charging
- Variable parameters
- Explosive environments
- Hygienic applications

## Special Features:

- ✓ Universal voltage electronics
- ✓ Adjustable sensitivity ( $\geq 15$  g/l)
- ✓ Rotation principle unaffected by caking
- ✓ Robust aluminum die cast housing
- ✓ Protected motor (friction clutch & double bearing)
- ✓ Modular design
- ✓ Tube and metal rope extension
- ✓ Temperature range from  $-40^{\circ}\text{C}$  to  $+1,100^{\circ}\text{C}$
- ✓ High quality grade stainless steel (process)
- ✓ Long lifespan (brushless synchronised motor)
- ✓ RN 6000 is world's first rotating level limit switch compliant to **SIL 2**

# Vibranivo®

## Vibrating Level Switch for SOLIDS & SEDIMENTS IN LIQUIDS

Electronically stimulated piezos cause the fork to vibrate. As soon as the sensor is covered with material, the vibration is dampened and the resulting electrical current change causes the output signal to switch. Once the material level falls below the sensor it is free to vibrate again and the output signal is reset.

VN 1000



VN 2000



VN 4000



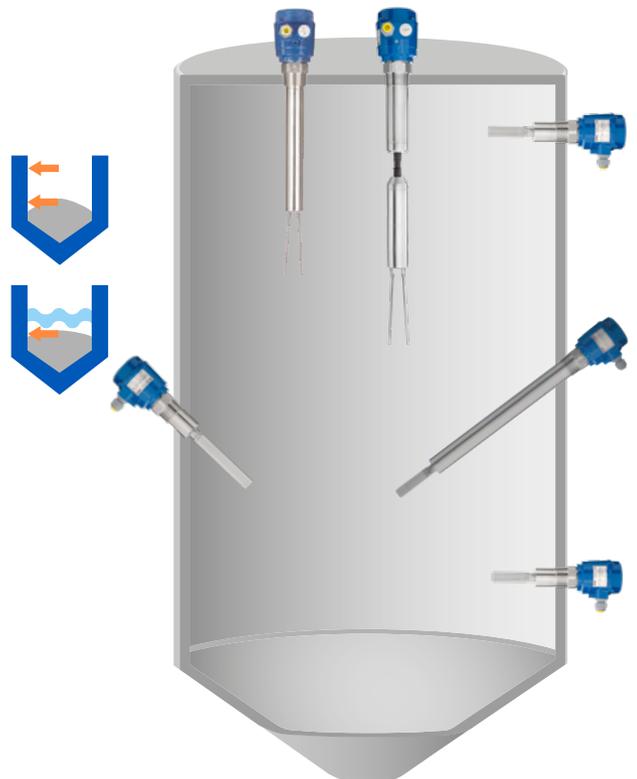
VN 5000



VN 6000



Remote Version



### Our Solutions for:

- Extremely light product density
- Pneumatic filling
- Process overpressure
- Limited space
- Vibration within the vessel
- High reliability requirements
- High hygienic requirements
- Explosive environments
- Sediment levels in liquids

### Special Features:

- ✓ 2-wire technology
- ✓ Very high sensitivity (< 5g/l - Vibrasil®)
- ✓ Surface roughness of 0.75µm
- ✓ High quality material in the process (SS 316L)
- ✓ Cable and tube (screwed) extension
- ✓ Suitable for overpressure up to 16bar
- ✓ Temperature range from -40°C to +150°C
- ✓ Extremely robust short version
- ✓ PFA and Teflon coating
- ✓ NAMUR Standard
- ✓ Level control of sediments in liquids

# Mononivo®

## Vibrating Level Switch for SOLIDS

Electronically stimulated piezos cause the single rod probe to vibrate. When the material covers the sensor, this causes the vibration to stop and a voltage change is caused within the piezo elements. This is electronically registered and causes the output signal to switch.

MN 4020



MN 4030  
Tube



MN 4040 Tube  
screwed



### Our Solutions for:

- Light products from 20 g/l
- Powdery material with strong caking properties
- Coarse-grained granulate
- Pneumatic filling
- Process overpressure
- Limited space
- Overfill detection within tubes and shafts
- Vibration within the vessel
- High safety standard
- High hygienic requirements
- Explosive environments

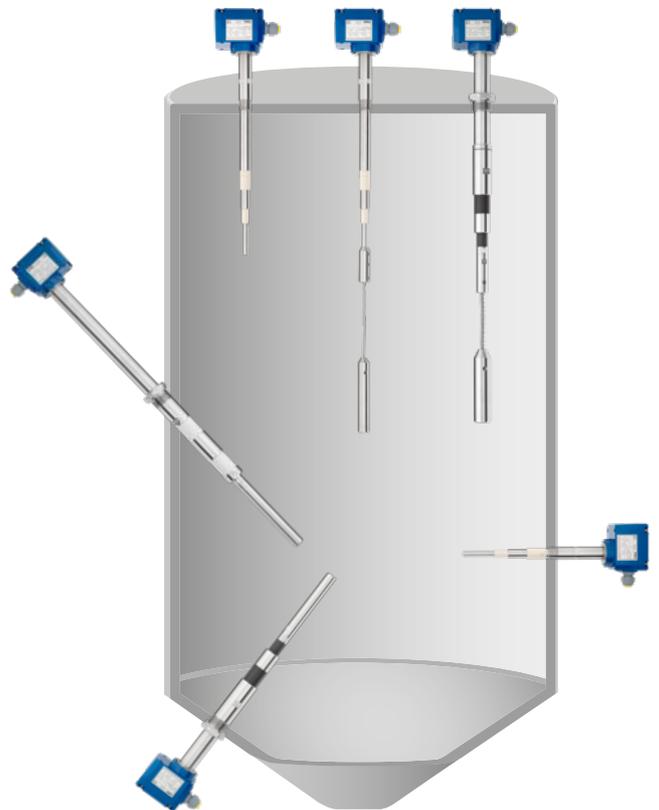
### Special Features:

- ✓ Compact limit switch with threads from 1"
- ✓ Sensitivity adjustable in 4 settings
- ✓ High surface quality
- ✓ High quality material in the process (SS 316L)
- ✓ Heavy mechanical loading
- ✓ Robust version for overpressure up to 16 bar
- ✓ Temperature range from -40 °C to +150 °C
- ✓ Tube extension (screwed)

# RFnivo®

## Capacitance Level Switch for SOLIDS

The capacitive level limit switch is automatically calibrated to a reference capacitance of an empty vessel. If the probe is covered by the product, the measured capacitance changes through the dielectric and a switching signal is activated. The integrated "Active Shield" technology ensures high reliability even for products that cause caking.



RF 3100



RF 3200



RF 3300 Temp.



Remote Version



### Our Solutions for:

- Heavy materials
- Dusty environments
- Abrasive and aggressive media
- Extreme process temperatures
- Positive and negative pressure
- Caking material
- Vibration in the vessel
- Hazardous areas
- EHEDG applications

### Special Features:

- ✓ Very high sensitivity ( $DK \geq 1.5$ )
- ✓ High mechanical load
- ✓ Simple to install and set up
- ✓ High quality process materials (SS 316L, ceramics, PPS)
- ✓ Rod and metal rope extension
- ✓ Robust version for overpressure up to 25 bar
- ✓ Temperature range from  $-40^{\circ}\text{C}$  up to  $+500^{\circ}\text{C}$
- ✓ RF 3100 PROTECTION PLUS version with anti-corrosive coating (PFA Teflon®)

# RFnivo®

Inverse Frequency  
Shift Technology

## Capacitance Level Switch for LIQUIDS & INTERFACE

The capacitive measuring limit switch responds to the change in capacitance at the probe, which is detected by the change in the oscillating frequency. The integrated "Active Shield" technology ensures high reliability even for products that cause caking.



RF 8100 Rod



RF 8100 Rope



RF 8200 Temp.



### Our Solutions for:

- All types of liquids
- Applications with condensation
- Very strong caking
- High process temperatures
- Corrosion resistance in aggressive materials
- Vibrations within the process
- High safety standard
- Explosive environments
- Interface measurement

### Special Features:

- ✓ Functionality independent of silo wall
- ✓ Temperature range from -40 °C up to +400 °C
- ✓ Robust version for overpressure up to 35 bar
- ✓ Digital electronics with Profibus PA, integrated display and operating menu
- ✓ Potted electronics
- ✓ Very high sensitivity ( $DK \geq 1.5$ )
- ✓ Rod and metal rope extension (up to 25m)
- ✓ WHG certification
- ✓ Certification accord. Lloyd's Register

# Capanivo®

## Capacitance Level Switch for SOLIDS

The electrodes in the sensor form a capacitor. If the product comes into contact with the sensor, the capacitance changes and the electronics converts it into a switching signal. The integrated "Active Shield" technology allows this system to be used in particularly adhesive materials.

CN 4020



CN 4020 Temp.



CN 4030 Tube



CN 4050 Cable



### Our Solutions for:

- Light materials
- Dusty environments
- Pneumatic filling
- Overpressure
- Very strong caking
- Corrosion resistance for aggressive material
- High process temperature
- High standard of safety requirement
- Explosive environments

### Special Features:

- ✓ Very high sensitivity ( $DK \geq 1.6$ )
- ✓ Functionality independent of silo wall
- ✓ Range of process connections
- ✓ Adjustable switching delay
- ✓ Variety of mechanical versions
- ✓ Tube and cable extension
- ✓ Overpressure up to 25 bar
- ✓ Temperature range from  $-40^{\circ}\text{C}$  to  $+180^{\circ}\text{C}$
- ✓ Food compliant version

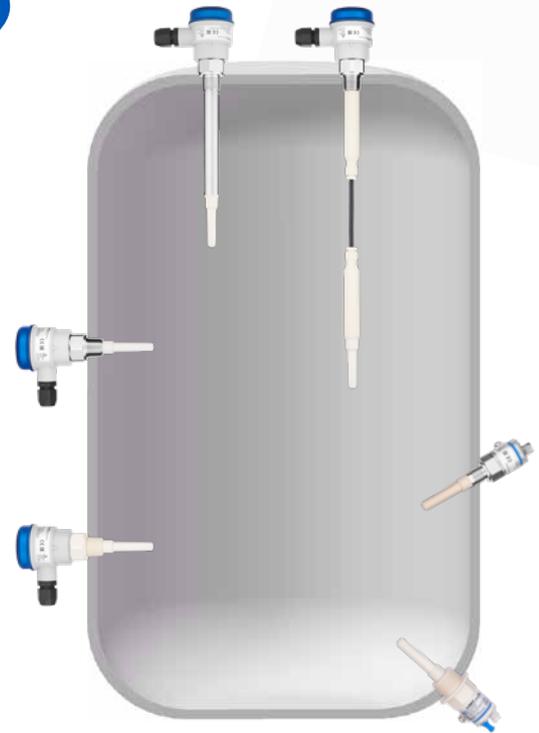
# Capanivo®

IO-Link

## Capacitance Level Switch for LIQUIDS & INTERFACE

The electrodes in the sensor form a capacitor. If the product comes into contact with the sensor, the capacitance changes and the electronics converts it into a switching signal. Available as version with stainless steel or synthetic housing.

The integrated “Tip Sensitivity” and “Active Shield” technology guarantee a high level of functional reliability even for products that cause caking.



CN 7120



CN 7121



CN 7130 Tube



CN 7150 Cable



## Our Solutions for:

- All types of liquids
- Strong caking
- Limited space
- Corrosion resistance in aggressive materials
- High safety standard
- High hygiene requirements
- Explosive environments
- Leakage detection
- Interface measurement

## Special Features:

- ✓ Available with two different housing sizes
- ✓ Compact limit switch from 1/2" connection thread
- ✓ For universal use
- ✓ Installation in all kinds of tanks
- ✓ For use in metallic and non-metallic containers
- ✓ Very high sensitivity (DK ≥ 1.5)
- ✓ Inverse Frequency Shift Technology
- ✓ Stainless steel and synthetic version available
- ✓ Temperature range from -40 °C up to +125 °C (CIP suitable up to 150 °C)
- ✓ IO-Link with PNP, NPN, push pull signal output
- ✓ 8/16mA or 4...20mA continuous current output
- ✓ WHG and VLAREM certification

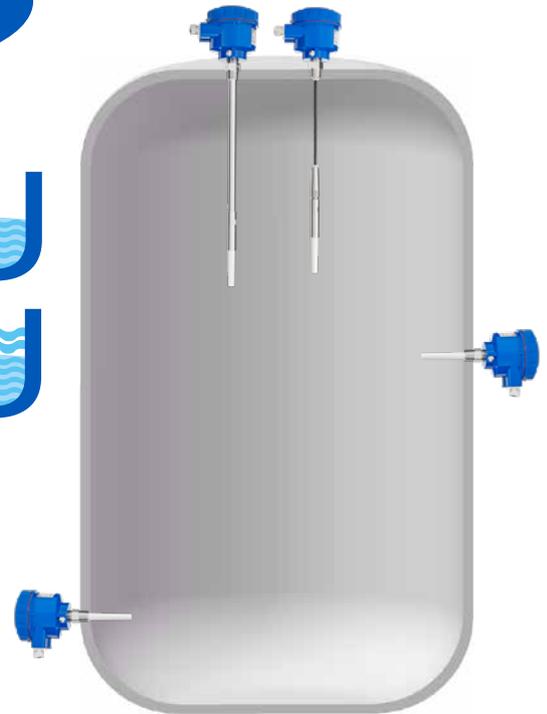
# Capanivo®

Inverse Frequency Shift Technology

## Capacitance Level Switch for LIQUIDS & INTERFACE

The electrodes in the sensor form a capacitor. If the product comes into contact with the sensor, the capacitance changes and the electronics converts it into a switching signal.

The integrated "Tip Sensitivity" technology guarantees a high level of functional reliability even for products that cause caking.



CN 8100



CN 8100 Tube



CN 8100 Cable



### Our Solutions for:

- All types of liquids
- Strong caking
- Vibrations within the process
- Corrosion resistance in aggressive materials
- High safety standard
- Explosive environments
- Leakage detection
- Interface measurement

### Remote Version



Variety of mechanical designs

### Special Features:

- ✓ For universal use in containers up to 30m
- ✓ Installation in all kinds of tanks
- ✓ For use in metallic and non-metallic containers
- ✓ Very high sensitivity ( $DK \geq 1.5$ )
- ✓ Potted electronics
- ✓ Digital electronics with Profibus PA, integrated display and operating menu (optional)
- ✓ Robust version for overpressure up to 25 bar
- ✓ Temperature range from  $-40^{\circ}\text{C}$  up to  $+125^{\circ}\text{C}$
- ✓ WHG certification
- ✓ Certification accord. Lloyd's Register
- ✓ SensGuard cover (optional)

# NivoCapa®

Inverse Frequency Shift Technology

## Capacitance Level Transmitter for LIQUIDS & INTERFACE

The sensor measures the electrical capacity of the level in the tank. The integrated "Active Shield" technology allows this system to be used in particularly adhesive materials.



NC 8100 Rod



NC 8100 Coax



NC 8100 Rope



### Our Solutions for:

- All types of liquids
- Applications with condensation
- Very strong caking
- Corrosion resistance in aggressive materials
- High safety standard
- Explosive environments

### Special Features:

- ✓ High measurement accuracy
- ✓ Installation in all kinds of tanks
- ✓ For use in metallic and non-metallic containers
- ✓ 2-wire technology (output signal 4...20 mA according to NAMUR NE 43)
- ✓ Very high sensitivity ( $DK \geq 1.5$ )
- ✓ Rod and metal rope extension (up to 25m)
- ✓ Robust version for overpressure up to 35 bar
- ✓ Temperature range from  $-40^{\circ}\text{C}$  up to  $+200^{\circ}\text{C}$
- ✓ Quick response time
- ✓ PFA Teflon® coating
- ✓ Programmable electronics with buttons and LC display for level, damping, diagnosis etc.
- ✓ Certification accord. Lloyd's Register

# NivoBob®

## Electromechanical Plumb Bob for SOLIDS & LIQUIDS & SEDIMENTS IN LIQUIDS

A sensor weight attached to either a metal tape or rope is electromechanically lowered into the vessel. Once the sensor weight rests on the material, the winding direction of the motor changes and the sensor weight is rewound to the upper stop position. As the weight is lowered, the distance is electronically measured.

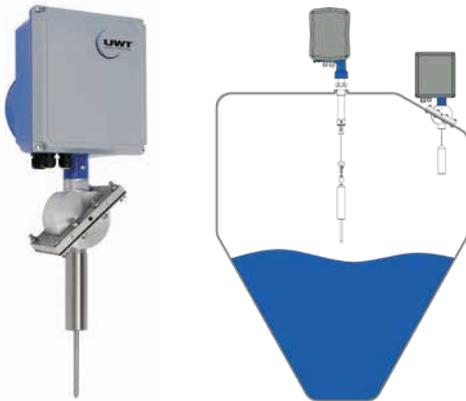
Microprocessors convert the measured distance together with the programmed silo geometry into a volumetric output signal. This signal is updated each time the sensor weight is lowered.



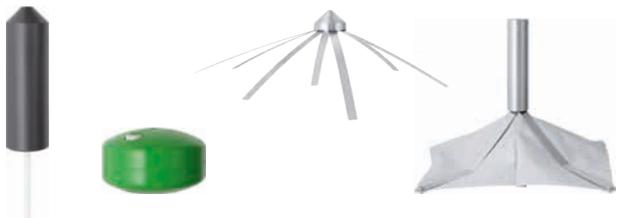
### NB 3000



### NB 4000 Aiming flange



### Sensor weights



### Our Solutions for:

- Strong caking
- Material with changing temperature and humidity
- Electrostatic charging
- Heavy material as well as light solids
- Limited space
- Low dielectric constant
- High process temperatures
- Large measurement distances
- Explosive environments

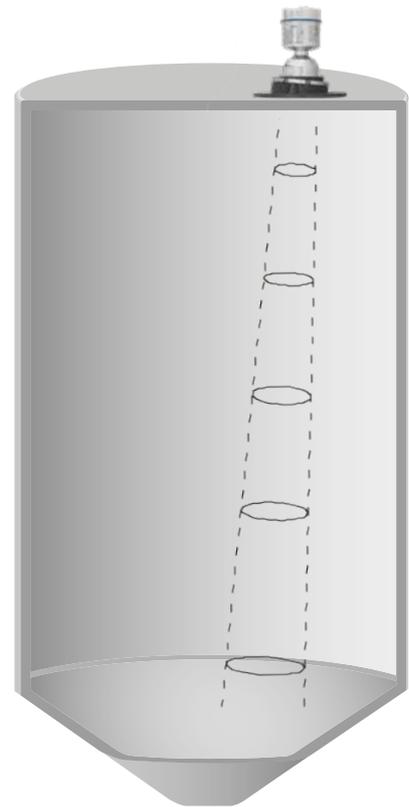
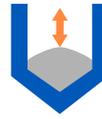
### Special Features:

- ✓ High sensitivity ( $\geq 20$  g/l) dep. on sensor weight
- ✓ Rope and tape version
- ✓ Measurement range of up to 50m
- ✓ Overpressure version up to 1.7 bar
- ✓ Temperature range from  $-40^{\circ}\text{C}$  to  $+250^{\circ}\text{C}$
- ✓ Service life up to 500,000 cycles of tape version
- ✓ Integrated tape cleaner
- ✓ Diagnostics function
- ✓ Simple installation and set up
- ✓ Comm. via Modbus RTU or Profibus DP

# NivoRadar®

## Radar Sensor for SOLIDS

A high frequency signal is transmitted with a very small beam angle with two-wire technology. The signal is reflected by the bulk material and received back to the sensor. The frequency difference, which is directly proportional to the distance, is then further processed and output as the level signal. The small beam angle makes the use in tall narrow silos possible and facilitates the installation and alignment of the sensor.



### NR 3000 Flange versions

#### Flat flange



#### Aiming flange



### Functions

Electronics with  
78GHz frequency

Integrated  
lens cleaner

Aiming flange  
up to max. 10°



Signal processing with  
Process-Intelligence-  
Software

Lens antenna with  
4° beam angle

### Programming module



#### Plug on Display:

Programming  
Input starting parameters  
Display level and diagnostic data

### Our Solutions for:

- Very light material
- Various application industries
- Dusty environment
- Measurement range of up to 100m
- Use within tall, narrow silos
- Optimum reflection of the bulk solids material
- Corrosion resistance for aggressive material
- High process temperature
- Perfect positioning
- Explosive environments

### Special Features:

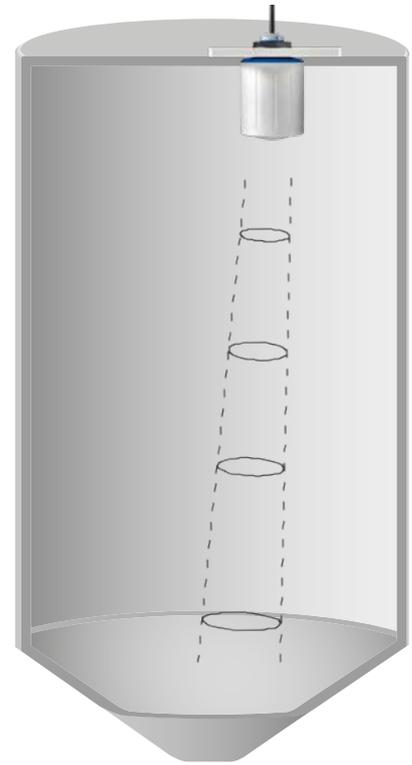
- ✓ Signal processing with Process-Intelligence-Software
- ✓ 2-wire technology
- ✓ High sensitivity (DK ≥ 1.6)
- ✓ 78 GHz technology
- ✓ 4° narrow beam angle
- ✓ Lens antenna and mounting flange are flush
- ✓ Integrated lens cleaner
- ✓ Robust stainless steel housing IP68
- ✓ Aiming flange model
- ✓ Temperature solution up to +200 °C
- ✓ Quick Start Wizard
- ✓ Simple, six-step commissioning

# NivoRadar®

Configuration via  
UWT LevelApp

## Radar Sensor for SOLIDS

A high frequency signal is transmitted with a very small beam angle with two-wire technology. The signal is reflected by the bulk material and received back to the sensor. The frequency difference, which is directly proportional to the distance, is then further processed and output as the level signal. Thanks to the high degree of protection for bulk solids applications, the sensor is ideal across all industries. Installation is also possible outdoors on free-standing stockpiles.



### NR 4100

#### Mounting thread

Measuring range up to 30m



#### Mounting flange

Measuring range up to 30m



### Our Solutions for:

- Lightest and heavy bulk goods
- Dusty environments
- Condensation and strong caking
- Use in narrow, medium-sized silos up to 30m
- Optimum reflections of bulk material with material cone
- Corrosion resistance in aggressive materials
- Potentially explosive areas
- Individual positioning of the sensor

### Special Features:

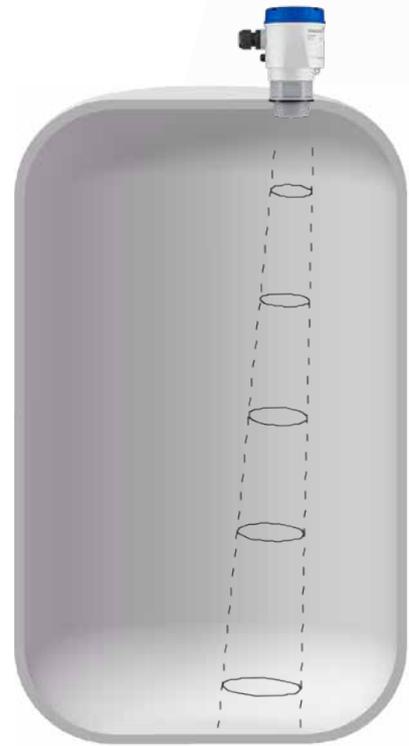
- ✓ 2-wire technology
- ✓ Compact with 1" connection thread (PVDF)
- ✓ Various mounting accessories
- ✓ Measurement up to antenna tip (no blocking distance)
- ✓ High sensitivity (DK value  $\geq 1.1$ )
- ✓ 80 GHz technology
- ✓ 4° narrow beam angle
- ✓ Potted PVDF housing
- ✓ Ingress protection IP66/ IP68
- ✓ Temperature solution -40°C to +80°C
- ✓ High measurement accuracy ( $\pm 2\text{mm}$ )
- ✓ Quick-Start Wizard
- ✓ WHG certification

# NivoRadar®

Configuration via  
UWT LevelApp

## Radars Sensor for LIQUIDS

A high frequency signal is transmitted with a very small beam angle with two-wire technology. The signal is reflected by the bulk material and received back to the sensor. The frequency difference, which is directly proportional to the distance, is then further processed and output as the level signal. The sensor is ideal for use in water treatment tanks and, due to its design, is also suitable for acids and alkalis. It is also possible for measurement to be made through the tank top of plastic containers.



### NR 7100

#### Without Display

Measuring range up to 8m



### NR 7200

#### With Display

Measuring range up to 15m



#### Plug on Display:

Optional display for setting and reading the sensor values directly on the device



## Our Solutions for:

- Highly viscous liquids
- Very strong caking
- Steam, outgassing and condensation
- Use in process and storage tanks up to 15m
- Precise measurement readings in conveying materials
- Corrosion resistance in aggressive materials
- Potentially explosive areas
- Individual positioning of the sensor

## Special Features:

- ✓ 2-wire technology
- ✓ Lens antenna is flush
- ✓ Compact with 1 1/2" connection thread (PVDF)
- ✓ Various mounting accessories
- ✓ Measurement up to the antenna tip (no blocking distance)
- ✓ High sensitivity (DK value  $\geq 1.1$ )
- ✓ 80 GHz technology
- ✓ 8° narrow beam angle
- ✓ Potted electronics
- ✓ Ingress protection IP66/ IP67
- ✓ Temperature solution -40 °C to +80 °C
- ✓ High measurement accuracy ( $\pm 2\text{mm}$ )
- ✓ Quick-Start Wizard
- ✓ WHG certification

# NivoGuide®

Customizable extensions

## Guided Wave Radar Sensor for SOLIDS

High-frequency microwave pulses are coupled to a cable or rod and guided along the probe. The emitted pulse is reflected by the product surface. The time difference between the transmitted and reflected pulse is converted to a level.



NG 3100 Rod



NG 3100 Rope



### Integrated display and adjustment module



Lid with viewing window



Pluggable display and adjustment module

- Comprehensive diagnostic functions
- Display of latest measured values, operating parameters and diagnostic data
- Parameters entered can be transferred to other devices
- Fast commissioning

### Our Solutions for:

- Bulk materials with strong withdrawal forces
- Strong caking
- Abrasive materials
- Dusty environment
- Condensation and foam generation, steam
- Large measurement distances
- Explosive environments

### Special Features:

- ✓ Modular design
- ✓ Very high sensitivity ( $DK \geq 1.5$ )
- ✓ Rod and rope extension (up to 75 m)
- ✓ PA-coated rope probe
- ✓ Temperature range from  $-40^{\circ}\text{C}$  up to  $+200^{\circ}\text{C}$
- ✓ Robust version for overpressure up to 40 bar
- ✓ Intelligent Software
- ✓ Integrated display and adjustment module
- ✓ Comprehensive diagnostic functions
- ✓ Display unit can be removed after programming
- ✓ Robust coupling
- ✓ Automatic length determination of the probe

# NivoGuide®

Customizable extensions

## Guided Wave Radar Sensor for LIQUIDS & INTERFACE

High-frequency microwave pulses are coupled to a cable or rod and guided along the probe. The emitted pulse is reflected by the product surface. The time difference between the transmitted and reflected pulse is converted to a level.



NG 8100

NG 8200



Integrated display and adjustment module



Lid with viewing window



Pluggable display and adjustment module

- Comprehensive diagnostic functions
- Display of latest measured values, operating parameters and diagnostic data
- Parameters entered can be transferred to other devices
- Fast commissioning

### Our Solutions for:

- Liquids with moving surface
- Strong caking
- Process overpressure
- Small containers with fixtures
- High process temperatures
- Condensation and foam generation, steam
- Hygiene versions
- Explosive environments
- Measurements within bypass
- Interface measurement

### Special Features:

- ✓ Modular design
- ✓ Very high sensitivity ( $DK \geq 1.4$ )
- ✓ Rod and rope extension (up to 75 m)
- ✓ Temperature range from  $-196^\circ\text{C}$  up to  $+450^\circ\text{C}$
- ✓ Coaxial version
- ✓ For extremely high pressure up to 400 bar
- ✓ Condensate cone
- ✓ False echo suppression
- ✓ Second line of defense (optional)
- ✓ High measuring accuracy ( $\pm 2\text{mm}$ )
- ✓ Large measuring range (low blocking distance)
- ✓ Boiler approval

# NivoTec®

## Level monitoring and visualisation

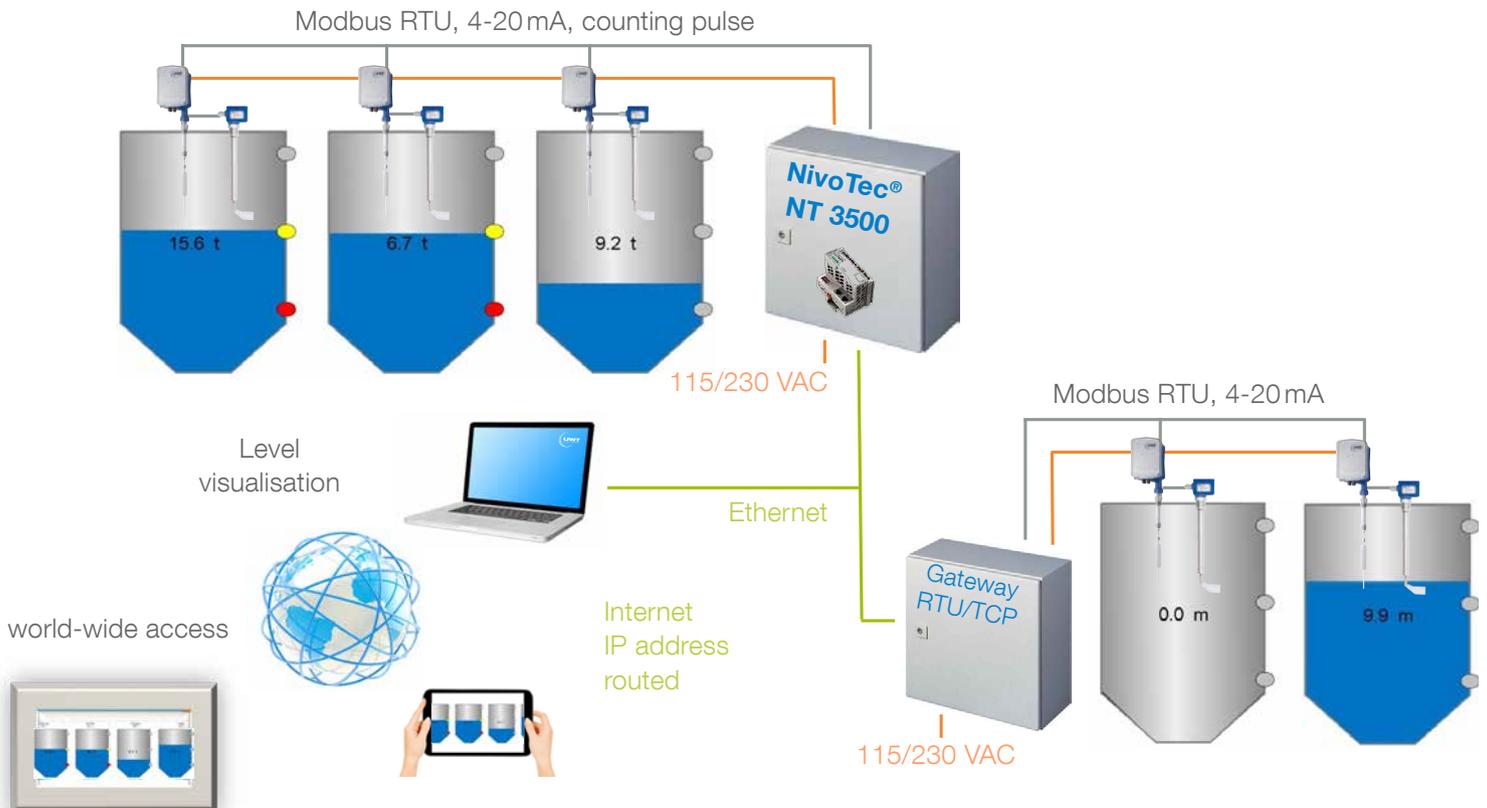
### NT 2000 Level indication integrated within a control cabinet

- Indication of level in weight, height, percentage or volume via LED display
- For evaluating the output signal from any level sensors with analog signal 4-20 mA
- Fill control by silo full detectors
- Truck module for tanker trucks to prevent overfilling of silos
- Clear and easy management of the different indicators
- Complete system with project specific electrical plans



### NT 3500 Level visualisation from a PC via webserver

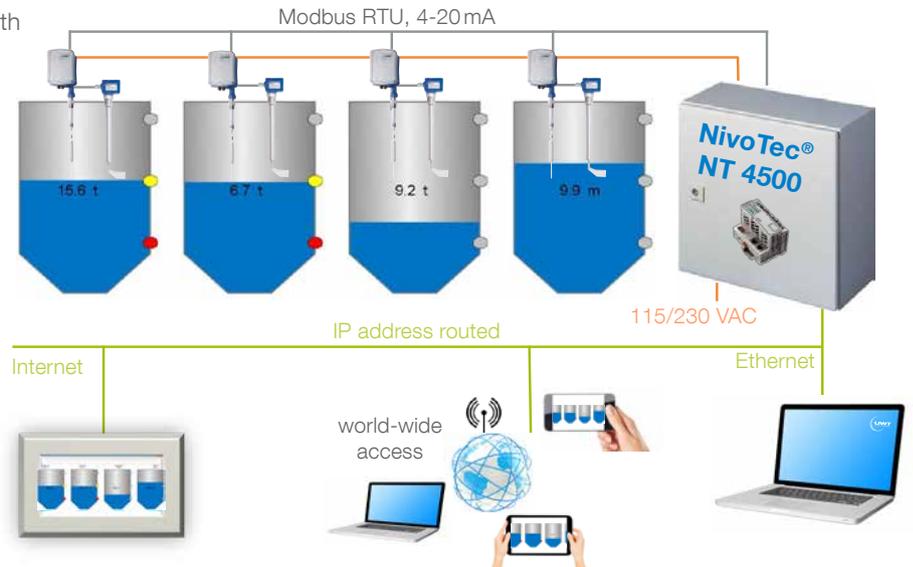
- Level visualisation via webserver
- Password-protected for various use levels with standard browser software on the Ethernet
- For data storage and downloads, trend data and evaluation
- World-wide remote access to the visualisation software
- Fill control by alarm full detection, pinch valve control within filling tubes and recognition of tanker coupling
- For integration of truck operating modules at filling station stage
- Level- and alarm-message via e-mail
- Interfaces for level sensors, 4-20mA, Modbus RTU, Ethernet TCP, counter signal, relay
- Complete system with project specific electrical plans
- Individual project planning



Example of a complete visualisation system for NT 3500

## NT 4500 Level visualisation from a PC via webserver

- Standardised, cost effective level visualisation via webserver
- Password-protected for various use levels with standard browser software on the Ethernet
- For data storage and downloads, trend data and evaluation
- Fill control by alarm full detection
- Level- and alarm-message via e-mail
- Interfaces for level sensors, 4-20mA, Modbus RTU
- Complete system with electrical plans



Example of a complete visualisation system for NT 4500

## NT 4600 Level visualisation via 7" touch panel

- Visualisation and operation via 7" touch panel
- Data in percentage, height, volume or weight
- Trend display, data storage
- Evaluation of the analogue 4-20mA signals of any sensors, as well as Modbus RTU of the UWT-systems
- Fully wired whether mounted or within control cabinet



## NT 4700 Level indicator with digital display

- Digital display hardwired into the terminal box
- Evaluation of level signal 4-20mA of any sensors
- Level indication via 4-digit LED display in weight, height, percentage or volume
- Version for suitable for NivoBob® with "Start measurement" button and LED for "sensing weight in the upper end position"



## NT 4900 Level indicator with digital display

- Built-in digital display module
- Level indication in weight, height, percentage or volume
- Yellow LED-Display, 4-digit, 7 segment
- Easy to use button operation on face of unit
- Interface 4-20mA



# Interface Solutions

## Interface measurement of solids in liquids

The detection of bulk solids in liquids as well as sludge levels usually takes place in sediment containers, filters or inclined clarifiers. Typical areas of application are in the metal industry, in chemical plants, lime or gravel works and the sewage industry.



### Our Solutions for:

- Continuous level measurement:  
Lot system NivoBob® series NB 3300/3400
- Point level detection:  
Vibration fork Vibranivo® series VN 1000/5000

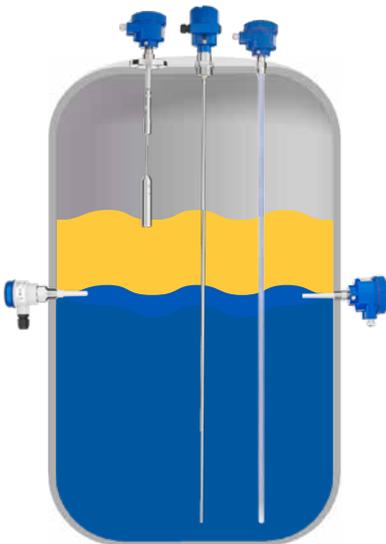


### Special Features:

- ✓ Adjustable sensitivity
- ✓ Robust design
- ✓ Unaffected by dirt and moisture
- ✓ Reliable and precise detection of solids

## Interface measurement of liquid layers

In industry applications where a separating layer between two different liquids or a liquid and foam layer is measured, both the capacitance measuring principle and the guided wave radar technology are used.



### Our Solutions for:

- Continuous level measurement:  
Capacitance level transmitter NivoCapa® series NC 8000  
TDR sensor NivoGuide® series NG 8000
- Point level detection:  
Capacitance level switch Capanivo® series CN 7000/8000  
Capacitance level switch RFnivo® series RF 8000



### Special Features:

- ✓ Adjustable sensitivity
- ✓ High measurement accuracy
- ✓ Chemical resistant materials
- ✓ Detection of total level, separation layer and thickness of upper layer

# Webshop

## Quick & easy

Simply find, compare and configure the right sensor for the relevant application yourself. The competent UWT sales and service team provides support.

- ✓ Fast track to the product with the [product finder](#)
- ✓ Easy selection with the [product comparison tool](#)
- ✓ Quick and simple [product configuration](#)



- ▶ Save, edit and share configurations
- ▶ View pricing according to user account role
- ▶ Send configuration directly to UWT sales team

# UWT sensors provide solutions for the most challenging conditions

Benefit from our experience and you will find a suitable product for all types of application

Product Matrix Solids		Level Limit Measurement				Continuous Measurement					
Product	Measuring principle	Rotonivo® RN 3/4/6	Vibranivo® VN 1/2/4/5/6	Mononivo® MN 4	RFnivo® RF3	Capanivo® CN 4	NivoBob® NB 3	NivoBob® NB 4	NivoRadar® NR 3	NivoRadar® NR 4	NivoGuide® NG 3
Material properties	Granulate / powder	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Solids in liquid	-	✓	-	-	-	✓	-	-	-	-
Material properties	Material prone to caking	✓	-	-	✓	●	✓	✓	●	●	●
	Abrasive Material	✓	✓	✓	●	-	✓	✓	✓	✓	●
Process conditions	Sensitivity (bulk density/DK)	≥ 15 g/l	< 5 g/l**	≥ 20 g/l	DK ≥ 1.5	DK ≥ 1.6	≥ 20 g/l	≥ 20 g/l	DK ≥ 1.6	DK ≥ 1.1	DK ≥ 1.5
	Process temperature	-40..1100 °C	-40..150 °C	-40..150 °C	-40..500 °C	-40..180 °C	-40..250 °C	-40..80 °C	-40..200 °C	-40..80 °C	-40..200 °C
	Process pressure	10 bar	16 bar	16 bar	25 bar	25 bar	1.7 bar	0.2 bar	3 bar	3 bar	40 bar
Certification *	High mechanical load	✓	●	●	✓	-	●	●	●	✓	●
	High humidity	✓	-	-	✓	✓	✓	✓	●	✓	●
Certification *	Vibration in process	●	✓	●	✓	●	●	●	✓	✓	●
	EHEDG	-	-	-	✓	-	-	-	-	-	-
Certification *	SIL	✓	-	-	-	-	-	-	-	-	✓
	EX certification	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sensor Material	316L	316L	316L	316L	316L/PPS/ Ceramic	PPS	304/303/316	Al/303/316	316L/PEEK	PVDF	316L/PEEK
	316L/PEEK										

\*further certificates available on request

\*\*further certificates available on request\* capable of measuring the lightest of material lower than 5g/l

## Product matrix

### Liquids

Product	Level Limit Measurement			Continuous Measurement			
	Capanivo® CN 7	Capanivo® CN 8	RFnivo® RF 8	NivoBob® NB 3	NivoCapa® NC 8	NivoRadar® NR 7	NivoGuide® NG 8
<b>Measuring principle</b>	Capacitive	Capacitive	Capacitive	Lot System	Capacitive	Radar	Guided Radar (TDR)
Waterbased	✓	✓	✓	✓	✓	✓	✓
Oil / viscose Media	✓	✓	✓	✓	✓	✓	✓
Foam	✓	✓	✓	-	✓	✓	✓
Material prone to caking	✓	✓	✓	✓	✓	●	●
Interface	✓	✓	✓	✓	✓	-	✓
Sensitivity (DK)	DK ≥ 1.5	DK ≥ 1.5	DK ≥ 1.5	N/A	DK ≥ 1.5	DK ≥ 1.1	DK ≥ 1.4
Process temperature	-40..125°C (SIP/CIP ..150°C)	-40..125°C	-40..400°C	-40..80°C	-40..200°C	-40..80°C	-196..450°C
Process pressure	25 bar	25 bar	35 bar	1.7 bar	35 bar	3 bar	400 bar
High mechanical load	●	●	●	●	●	✓	●
Immersion length (max.)	20 m	30 m	25 m	50 m	25 m	-	75 m
Vibration in process	✓	●	●	✓	●	●	●
Moving surface (e.g. wave)	●	✓	✓	✓	✓	✓	✓
EHEDG	✓	-	-	-	-	-	-
SIL	-	✓	-	-	-	-	✓
Lloyd's Register	✓	✓	✓	-	✓	-	-
EX certification	✓	✓	✓	✓	✓	✓	✓
Wetted parts	316L/PPS/PVDF/PEEK	316L/PPS/PVDF	316L/PFA/PEEK/Ceramic	301/303/PA/PP	316L/PFA/PEEK	PVDF	316L/PEEK/Ceramic

\*further certificates available on request

✓ perfect choice  
 ● can be used (details to be clarified)  
 - not recommended

The information in the catalogue is subject to modifications or amendments. Please note that our general terms and conditions apply ([www.uwtgroup.com](http://www.uwtgroup.com)).



# Application data sheet

Date:

Contact:

Company:

Address:

Phone:

Zip/Town:

E-Mail:

## Measurement

Point level

Content

Interface

## Electronic

Power supply:

230VAC \_\_\_\_\_ Hz

24VAC \_\_\_\_\_ Hz

115VAC \_\_\_\_\_ Hz

24VDC \_\_\_\_\_

48VAC \_\_\_\_\_ Hz

other \_\_\_\_\_

*For AC, please specify additionally mains frequency!*

Signal output/Communication:

DPDT Relay

HART

SPDT Relay

Profibus DP

PNP

Modbus RTU

NPN

IO-Link

4-20 mA

other \_\_\_\_\_

20-4 mA

## Material conditions

Material being measured: \_\_\_\_\_

Material max temperature: \_\_\_\_\_ °C / \_\_\_\_\_ °F

Density: \_\_\_\_\_ g/l / \_\_\_\_\_ lb/ft<sup>3</sup>

Particle size: \_\_\_\_\_ mm / \_\_\_\_\_ in

Viscosity: \_\_\_\_\_ Pa.s

Conductivity: \_\_\_\_\_ S/m

Dielectric constant: \_\_\_\_\_

- |                    |                              |                                |   |
|--------------------|------------------------------|--------------------------------|---|
| Conditions:        | <input type="radio"/> powder | <input type="radio"/> granular | <input type="radio"/> slurry/liquid       |
| Flowability:       | <input type="radio"/> normal | <input type="radio"/> viscous  | <input type="radio"/> subject to bridging |
| Humidity (solids): | <input type="radio"/> none   | <input type="radio"/> light    | <input type="radio"/> strong              |
| Build-up:          | <input type="radio"/> none   | <input type="radio"/> light    | <input type="radio"/> strong              |
| Dust:              | <input type="radio"/> none   | <input type="radio"/> light    | <input type="radio"/> strong              |
| Steam:             | <input type="radio"/> none   | <input type="radio"/> light    | <input type="radio"/> strong              |
| Abrasive:          | <input type="radio"/> yes    | <input type="radio"/> none     |   |
| Corrosive:         | <input type="radio"/> yes    | <input type="radio"/> none     |   |

Other characteristics of the material: \_\_\_\_\_

### Application details tank/container

- Material: \_\_\_\_\_
- |                               |  |  |                                       |
|-------------------------------|--|--|---------------------------------------|
| Use/Installation:             | <input type="radio"/> process              | <input type="radio"/> storage                | <input type="radio"/> conveying       |
| Installation position sensor: | <input type="radio"/> from the top         | <input type="radio"/> from the bottom        | <input type="radio"/> from the side   |
| Profile:                      | <input type="radio"/> rectangular          | <input type="radio"/> conical                | <input type="radio"/> round           |
|                               | <input type="radio"/> cylindrical standing | <input type="radio"/> cylindrical horizontal | <input type="radio"/> other (drawing) |
| Bottom:                       | <input type="radio"/> flat                 | <input type="radio"/> conical                | <input type="radio"/> domed           |
| Top:                          | <input type="radio"/> flat                 | <input type="radio"/> conical                | <input type="radio"/> domed           |
- Dimensions:
- |            |         |                     |                        |
|------------|---------|---------------------|------------------------|
| Container: | height: | _____ mm / _____ in | (without bottom & top) |
|            | width:  | _____ mm / _____ in |                        |
|            | length: | _____ mm / _____ in |                        |
| Bottom:    | height: | _____ mm / _____ in |                        |
| Top:       | height: | _____ mm / _____ in |                        |
- Process connection:
- |                |       |
|----------------|-------|
| flange:        | _____ |
| thread:        | _____ |
| height nozzle: | _____ |
| height socket: | _____ |
| other:         | _____ |
- Agitator:  yes  none *If yes, please provide drawing*
- Equipment:  yes  none *If yes, please provide drawing*
- Filling (solids):
- |  |  |
|--|--|
| <input type="radio"/> pressure conveying | <input type="radio"/> vacuum conveying |
| <input type="radio"/> conveyor belt      | <input type="radio"/> chain conveyor   |
| <input type="radio"/> conveyor screw     |  |
- Filling: maximum height \_\_\_\_\_ m / \_\_\_\_\_ in

### The process in detail

- |                                      |                            |  |
|--------------------------------------|----------------------------|--|
| Process pressure:                    | min. _____ bar / _____ psi | max. _____ bar / _____ psi                               |
| Process temperature:                 | min. _____ °C / _____ °F   | max. _____ °C / _____ °F                                 |
| Ambient process temperature outside: | _____ °C / _____ °F        |  |
| Vibrations:                          | <input type="radio"/> none | <input type="radio"/> light <input type="radio"/> strong |

### Certificates

- |                                      |  |
|--------------------------------------|--|
| Required approval:                   | <input type="radio"/> DustEx <input type="radio"/> GasEx <input type="radio"/> other |
| Preferred measuring principle:       | _____  |
| Special features of the application: | _____  |

# Global Partner for ingeniously simple and reliable level measurement

 made  
 in  
 Germany



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