



# Vibranivo® 1000 / 5000

## Vibration level limit switch

The universal unit for reliable level monitoring of granulated and powdered bulk goods – versatile, suitable especially for applications with high mechanical loading and measurement of bulk goods in liquids; certified for hazardous locations (gas and dust)



# Vibranivo® 1000 / 5000



- Modular and simple design
- For applications with high mechanical loading
- Particularly suitable for interface measurement
- Absolutely maintenance free

**Application:** Vibranivo® probes can be used as full, demand or empty detectors in bulk good silos. They are especially suited for use in all solids which are conveyed or stored under extreme conditions as well as for interface measurement. The short fork design allows mounting in containers with very limited space. Vibranivo vibration forks are available with international certificates for applications in hazardous locations (gas and dust).

## Types of Vibranivo demand, full and empty detectors:

### Vibranivo ..020

Short extension length, vertical, horizontal and oblique installation



### Vibranivo ..030

Design with pipe extension, vertical and oblique installation



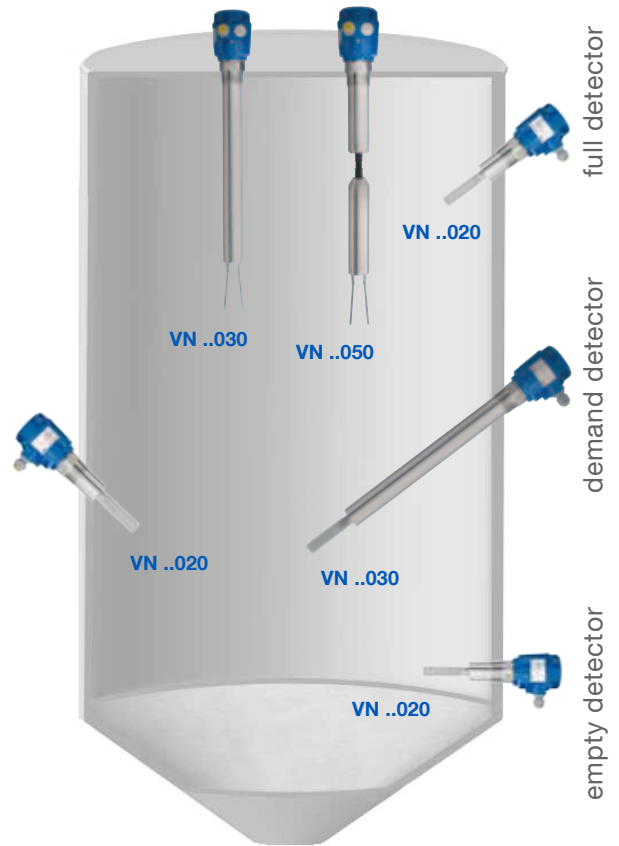
### Vibranivo ..040

Delivery without pipe extension (reduced shipping costs, flexible length), vertical and oblique installation



### Vibranivo ..050

Model with cable extension, vertical installation up to 7m measuring range



## Technical Data

<b>Housing</b>	Aluminium IP66 / NEMA Type 4X	
<b>Pressure range</b>	-1 up to +16 bar (-14.5 up to +145 psi)	
<b>Supply voltage/ Signal output</b>	Relay SPDT	19..230V AC, 19..55V DC
	Relay DPDT	19..230V AC, 19..36V/55V DC
	PNP	18..50V DC 3-wire
	2-wire without contact	19..230V AC/DC
	8/16mA; 4-20mA	12,5-30/36V DC 2-wire
<b>Certificates</b>	ATEX II 1D and 1/2D ATEX II 1G and 1/2G EEx ia IIC ATEX II 2G EEx de [ia] IIC, EEx d [ia] IIC FM Cl. I, II, III, Div.1 Gr. A-G; Zone 0 CSA Cl. I, II, III Div.1 Gr. A-G; Zone 0 TR-CU, IEC Ex, EHEDG	
<b>Process temperature</b>	-40°C up to +150°C (-40°F up to +302°F)	
<b>Sensitivity</b>	From 50g/l (3lb/ft³) adjustable in 2 steps	
<b>Process connection</b>	R1½" conical; NPT 1½"; various flanges available	
<b>Vibration fork/ extension</b>	Stainless steel 1.4301 (SS304) or 1.4404 (SS316L) various lengths available	

## Housing types

**VN 1000**  
Standard



**VN 5000**  
Standard



**VN 5000**  
Flameproof

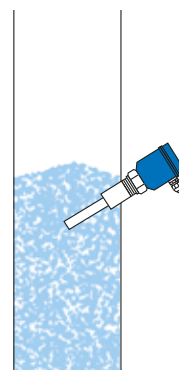


**VN 5000**  
Flameproof,  
intrinsically  
safe

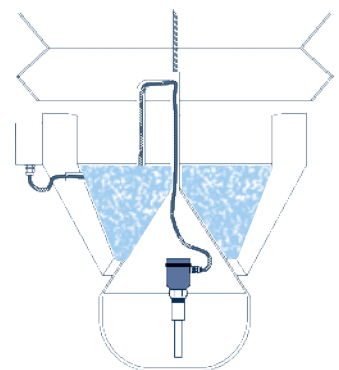


## Installation

Mounting in downpipe  
as back up switch



Mounting in loading bellow  
as full detector





# Vibranivo® 2000 / 6000

## Vibration level limit switch

The universal unit for reliable level monitoring of granulated and powdered bulk goods – versatile, especially suitable for light media; certified for hazardous locations (gas and dust); complies with NAMUR standard



# Vibranivo® 2000 / 6000



- Modular and simple design
- Suitable for virtually all bulk goods
- Absolutely maintenance-free

**Application:** Vibranivo® probes can be used as full, demand or empty detectors in bulk good silos. They are especially suited for use in all fine grain and powdered solids, including very light materials with a density below 5g/l. Vibranivo® vibration forks are available with international certificates for applications in hazardous locations (gas and dust).

## Types of Vibranivo demand, full and empty detectors:

**Vibranivo ..020**  
Short extension length, vertical, horizontal and oblique installation



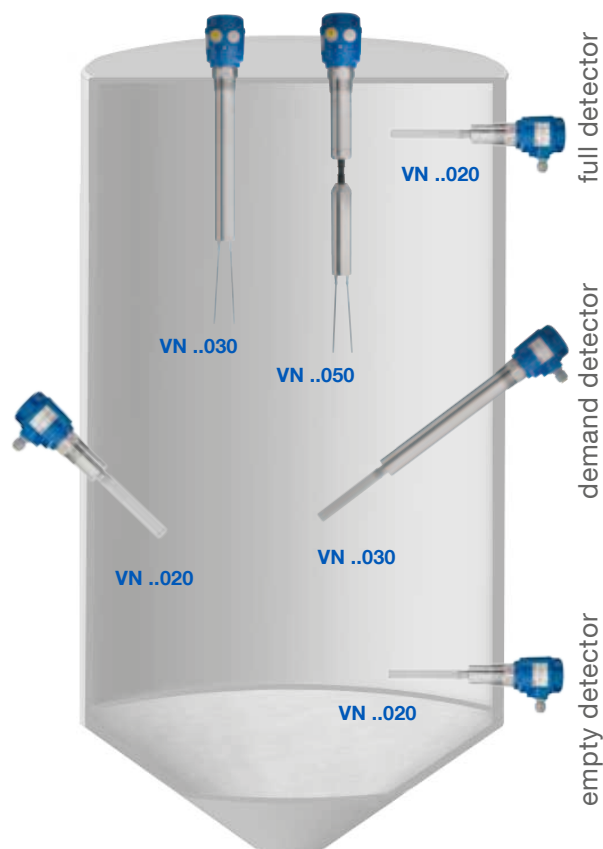
**Vibranivo ..030**  
Design with pipe extension, vertical and oblique installation



**Vibranivo ..040**  
Delivery without pipe extension (reduced shipping costs, flexible length), vertical and oblique installation



**Vibranivo ..050**  
Model with cable extension, vertical installation up to 20m measuring range



## Technical Data

<b>Housing</b>	Aluminium IP 66 / NEMA Type 4X
<b>Pressure range</b>	-1 up to +16 bar (-14.5 up to +145 psi)
<b>Supply voltage/</b>	Relay SPDT 19..230V AC, 19..55V DC,
<b>Signal output</b>	Relay DPDT 19..230V AC, 19..36V/55V DC
	PNP 18..50V DC 3-wire,
	2-wire without contact 19..230V AC/DC
	NAMUR IEC 60947-5-6 2-wire
	8/16mA; 4-20mA 12,5-30/36V DC 2-wire
<b>Certificates</b>	ATEX II 1D and 1/2D ATEX II 1G and 1/2G EEx ia IIC ATEX II 2G EEx de [ia] IIC, EEx d [ia] IIC FM Cl. I, II, III, Div.1 Gr. A-G; Zone 0 CSA Cl. I, II, III Div.1 Gr. A-G; Zone 0 TR-CU, IEC Ex, EHEDG
<b>Process temperature</b>	-40°C up to +150°C (-40°F up to +302°F)
<b>Sensitivity</b>	from 5g/l (0.3lb/ft³) adjustable in 2 steps
<b>Process connection</b>	R1½" conical; NPT 1½"; various flanges available
<b>Vibration fork/extension</b>	Stainless steel 1.4301 (SS304) or 1.4404 (SS316L), various lengths available

## Housing types

VN 2000 Standard	VN 6000 Standard	VN 6000 Flameproof	VN 6000 Flameproof, intrinsically safe

## Vibrasil®-probe for Silicic acid

For very light and pneumatically conveyed solids. This specially designed Vibranivo vibration fork with enhanced sensitivity and an immediate switching reaction provides perfect measuring results e.g. in fluidized silica with a **bulk density less than 5g/l.**

**Vibranivo Vibrasil 70**  
Specially for flow control in material with a high percentage of air (extremely low bulk density)



**Vibranivo Vibrasil 90**  
Level limit switch for all kinds of silicic acid containers (low bulk density)







# Vibranivo® 4000

## Vibration level limit switch

The economic solution for reliable level monitoring of bulk goods.  
Versatile and maintenance-free. Certified for hazardous locations (dust).



# Vibranivo® 4000



- Sensational price-performance ratio
- Wide range of applications
- Maintenance-free

**Application:** Depending on the requirements, the Vibranivo® 4000 can be used as a full, demand or empty detector in bulk good silos. It is suitable for use in all fine grained and powdered materials that do not tend to form heavy deposits.

## VN 4020

### Full, demand, empty detector

Installation vertical, horizontal and oblique, also in limited spaces (e.g. downpipes)

## VN 4030

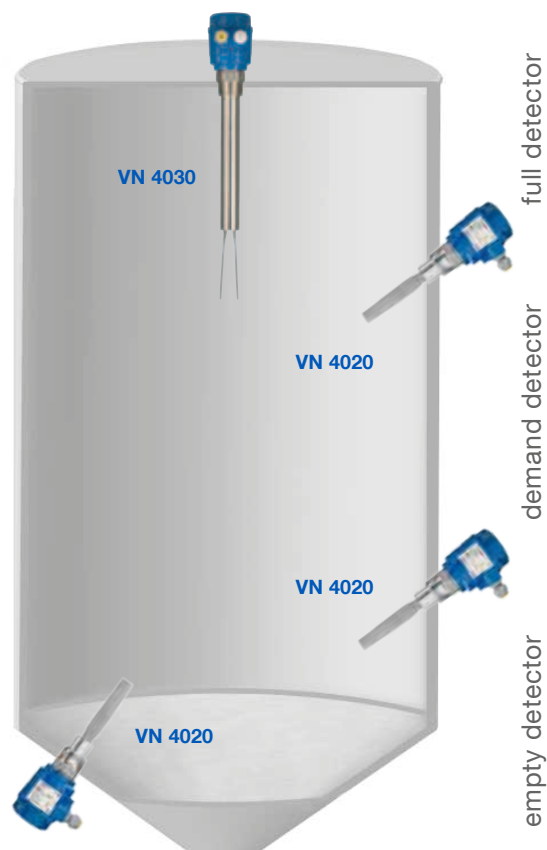
### Full, demand, empty detector

Design with extension tube, vertical installation, sliding sleeve option

## VN 4040

### Full, demand, empty detector

Delivery without pipe extension (reduced shipping costs, flexible length), vertical and oblique installation



## Technical Data

<b>Housing</b>	Aluminium IP 67 / NEMA Type 4X
<b>Certificates</b>	ATEX II 1/2D; FM/ CSA Cl. II, III Div. 1 IEC Ex, TR-CU
<b>Process temperature</b>	-40°C up to +150°C (-40°F bis +302°F)
<b>Pressure</b>	-1 up to +16 bar (-14.5 up to +145 psi)
<b>Sensitivity</b>	Adjustable in 2 settings: 30g/l (3.8lb/ft³) or 150g/l (9.5lb/ft³)
<b>Supply voltage</b>	19-230V AC, 19-40V DC relay, 18-50V DC PNP 3-wire
<b>Process connection</b>	R1½" conical, NPT 1½" or NPT 1¼"
<b>Vibration fork/ Extension</b>	Stainless steel 1.4581 (SS316) / 1.4301 (SS304) or 1.4404 (SS316L)



# Vibranivo®

## Vibrasil 70 / 90

### **Vibration level limit switch**

The universal unit for reliable level monitoring of silicic acids

# Vibranivo® Vibrasil® 70 / 90



- Reliable operation in pneumatically conveyed silicic acids
- Developed for full detection in balance tanks
- Level control in vertical shafts and pipes

## VIBRASIL 70

## VIBRASIL 90



**Applications:** The Vibrasil® 90 can be used as a full, demand or empty detector in silos and also balance tanks. The high sensitivity and the fast reaction of the probe ensure reliability. The sensitivity can be set to two different levels. The electronics function without time delay.

The Vibrasil® 70 has an even higher sensitivity than the Vibrasil® 90 and can be used for applications where there is a high air concentration in the conveyor pipe. For example, it can be used for flow detection in conveyor pipes or as a full detector in very small balance tanks within a conveyor system.

## Standard

## Tube extension

## Rope extension



## Technical Data

Typ	VIBRASIL 70	VIBRASIL 90
<b>Available models</b>	Standard (VN 2020) Tube extension (VN 2030) Rope extension (VN 2050)	
<b>Housing</b>	Aluminium IP 66	
<b>Certificates</b>	ATEX II 1/2D, IECEx	
<b>Process temperature</b>	-40°C up to +150°C	
<b>Pressure</b>	-1 up to +16 bar	
<b>Sensitivity</b>	DC value < 5g/l	
<b>Applications</b>	Balance tanks pneumatic conveyor systems with a high air concentration	In Storage Silos, balance tanks and mixers with a lower air concentration
<b>Supply voltage</b>	19-230V AC/ 19-55V DC	
<b>Signal output</b>	Relay SPDT	
<b>Process connection</b>	Flange DN100 PN6 Flange DN100 PN16 Other flanges on request	R1½ " conical NPT1½ " Large variety of flanges available
<b>Vibrating rods</b>	195mm Alupaddel	195mm
<b>Vibration fork/ extension</b>	Stainless steel 1.4404 or 1.4301	





Simply working



# The NAMUR-solution for the chemical industry

**Worldwide the first vibration level limit switch  
for bulk goods to meet NAMUR-standard**

# The NAMUR-solution for the chemical industry



- worldwide the first vibration level limit switch for bulk goods to meet NAMUR-standard
- 2-wire intrinsic safe electronic module for Hazardous Locations (gas and dust)
- free choice of manufacturer for additional components

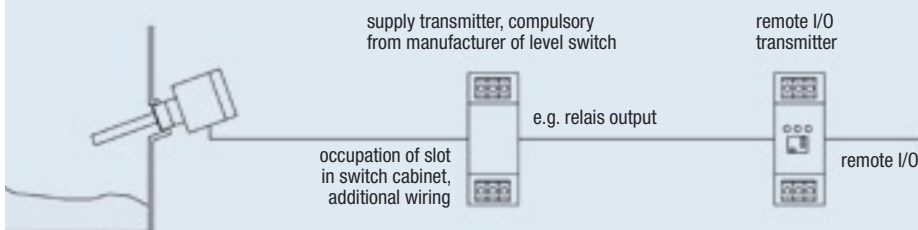
IEC 60947-5-6 (NAMUR)

DIN EN 60947-5-6 (NAMUR)

previous standard: DIN EN 50227 (DIN 19234; NAMUR)

EMV according to NAMUR-recommendation NE21

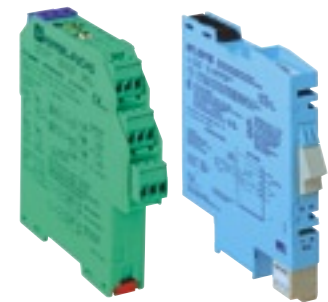
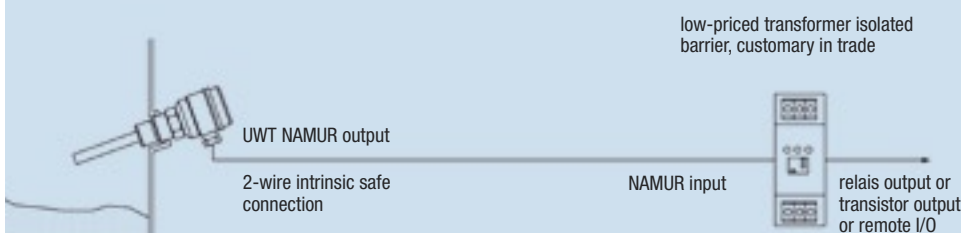
## Usual setup to realise a remote I/O connection:



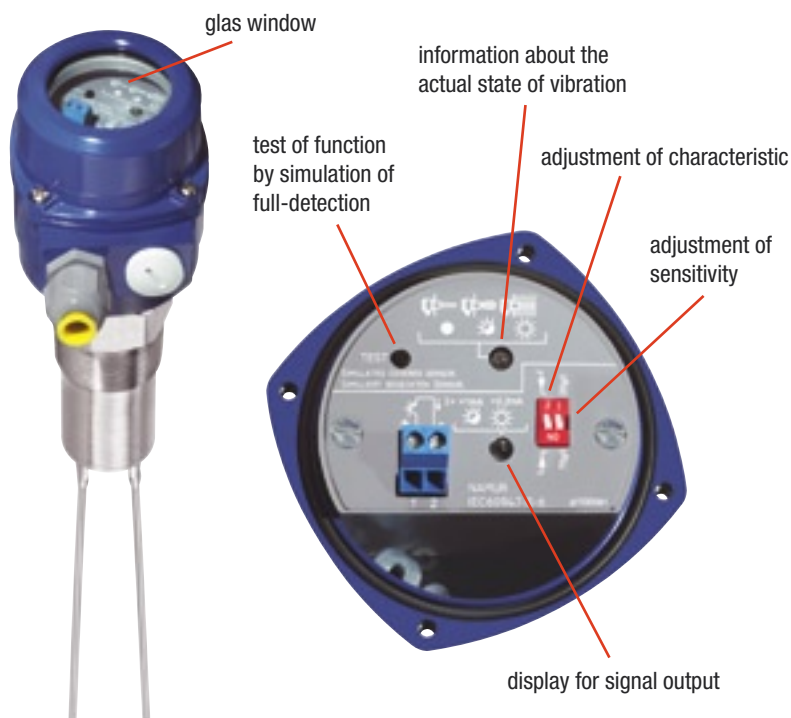
## Certificates

ATEX II 1G and 1/2G EEx ia IIC;  
ATEX II 1D and 1/2D  
FM / CSA IS Cl. I, II, III Div. 1 Gr. A-G  
FM Cl. I Zone 0 ia IIC and  
FM Cl. I Zone 0/1 ia IIC  
CSA Ex ia IIC

## The simple UWT-solution:



examples for transformer isolated barriers, customary in trade



## beneficial cost/performance ratio

- direct connection to isolated switch amplifiers according to NAMUR independent of manufacturer
- reduction of occupied slots in the switch cabinet
- less wiring

## unique advantages

- information about the actual state of vibration
- check up on function button on the electronic module by simulation of full-detection

Simply working

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