Vibration

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VEGASWING
For manifold applications in liquids

Measuring principle and applications
The piezo drive is the heart of the sensor, activating the tuning fork to vibrate on its resonance frequency. The frequency of the fork reduces with the immersion. The frequency change is evaluated by the integrated electronics and converted into a switching signal. With the tuning fork of only 40 mm length, VEGASWINGs work reliably in all liquids independent of the installation position. Pressure, temperature, foam, viscosity and composition of the liquid do not influence the switching accuracy. The price-favourable setup is hence restricted to a simple electrical connection. The high degree of an integrated self-monitoring ensures always a safe and reliable function. Typical applications are overfill and dry run protection systems in liquids, but also in safety-relevant applications up to SIL2.

VEGAVIB
Reliable switching in granulated bulk solids

Measuring principle and applications
The vibrating rod of VEGAVIB is activated to vibrate via the piezo drive. If the vibrating rod is immersed, the amplitude will be damped. The electronics detects this damping and converts it into a switching command. The installation position and granulation size do not influence the reliability. Mounting and setup are very easy, an adjustment with medium is not necessary. The VEGAVIB is used as overfill protection and empty alarm in silos and bunkers, also in safety-relevant applications up to SIL2. Typical applications are bulk solids such as plastic granules, pellets and non-adhesive powder products. The ideal rod design ensures a reliable function in granulated bulk solids. The vibrating element of VEGASWING is always free and operates reliably. Due to the simple cleanliness, it fulfils all requirements for use in the food processing and pharmaceutical industry.

VEGAWAVE
Robust and reliable for powdery bulk solids

Measuring principle and applications
A tuning fork is used as sensor element for the VEGAWAVE series. The principle of amplitude processing corresponds to that of VEGAVIB series. The advantages of this series are ruggedness as well as insensitivity to buildup. Therefore, it is the ideal sensor for powders and fine-grained products. Mounting and setup are very easy, an adjustment with medium is not necessary. The VEGAWAVE is used as overfill protection and empty alarm in silos and bunkers, also in safety-relevant applications up to SIL2. Typical applications are products such as flour, cement and sand as well as fine-grained bulk solids such as plastic granules, grit and styrofoam.
Overview – Vibrating level switches for liquids

<table>
<thead>
<tr>
<th>Application</th>
<th>VEGASWING 51</th>
<th>VEGASWING 61</th>
<th>VEGASWING 63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>Liquids</td>
<td>Liquids</td>
<td>Liquids</td>
</tr>
<tr>
<td>Material</td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>316L</td>
<td>316L, Hastelloy, ECTFE, PFA, enamel</td>
<td>316L, Hastelloy, ECTFE, PFA, enamel</td>
</tr>
<tr>
<td>Process fitting</td>
<td>Thread from G¾, ¾ NPT Hygienic fittings</td>
<td>Thread from G¾, ¾ NPT Flanges from DN 25, 1” Hygienic fittings</td>
<td>Thread from G¾, ¾ NPT Flanges from DN 25, 1” Hygienic fittings</td>
</tr>
<tr>
<td>Process temperature</td>
<td>-40 ... +150 °C</td>
<td>-50 ... +250 °C</td>
<td>-50 ... +250 °C</td>
</tr>
<tr>
<td>Process pressure</td>
<td>-1 ... +64 bar (-100 ... +6400 kPa)</td>
<td>-1 ... +64 bar (-100 ... +6400 kPa)</td>
<td>-1 ... +64 bar (-100 ... +6400 kPa)</td>
</tr>
</tbody>
</table>
Overview – Vibrating level switches for bulk solids

<table>
<thead>
<tr>
<th></th>
<th>VEGAVIB 61</th>
<th>VEGAVIB 62</th>
<th>VEGAVIB 63</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measuring range</strong></td>
<td>Bulk solids from 20 g/l</td>
<td>Bulk solids from 20 g/l</td>
<td>Bulk solids from 20 g/l</td>
</tr>
<tr>
<td><strong>Version</strong></td>
<td>Standard</td>
<td>Suspension cable up to 80 m</td>
<td>Tube extension up to 6 m</td>
</tr>
<tr>
<td><strong>Process fitting</strong></td>
<td>Thread from G1, 1 NPT</td>
<td>Thread from G1, 1 NPT</td>
<td>Thread from G1, 1 NPT</td>
</tr>
<tr>
<td></td>
<td>Flanges from DN 50, 2&quot; Hygienic fittings</td>
<td>Flanges from DN 50, 2&quot; Hygienic fittings</td>
<td>Flanges from DN 50, 2&quot; Hygienic fittings</td>
</tr>
<tr>
<td><strong>Process temperature</strong></td>
<td>-50 ... +250 °C</td>
<td>-50 ... +150 °C</td>
<td>-50 ... +250 °C</td>
</tr>
<tr>
<td><strong>Process pressure</strong></td>
<td>-1 ... +16 bar (-100 ... +1600 kPa)</td>
<td>-1 ... +6 bar (-100 ... +600 kPa)</td>
<td>-1 ... +16 bar (-100 ... +1600 kPa)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>VEGAWAVE 61</th>
<th>VEGAWAVE 62</th>
<th>VEGAWAVE 63</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measuring range</strong></td>
<td>Bulk solids from 8 g/l</td>
<td>Bulk solids from 8 g/l</td>
<td>Bulk solids from 8 g/l</td>
</tr>
<tr>
<td><strong>Version</strong></td>
<td>Standard</td>
<td>Suspension cable up to 80 m</td>
<td>Tube extension up to 6 m</td>
</tr>
<tr>
<td><strong>Process fitting</strong></td>
<td>Thread G1½, 1½ NPT</td>
<td>Thread G1½, 1½ NPT</td>
<td>Thread G1½, 1 NPT</td>
</tr>
<tr>
<td></td>
<td>Flanges from DN 50, 2&quot; Hygienic fittings</td>
<td>Flanges from DN 50, 2&quot; Hygienic fittings</td>
<td>Flanges from DN 50, 2&quot; Hygienic fittings</td>
</tr>
<tr>
<td><strong>Process temperature</strong></td>
<td>-50 ... +250 °C</td>
<td>-50 ... +150 °C</td>
<td>-50 ... +250 °C</td>
</tr>
<tr>
<td><strong>Process pressure</strong></td>
<td>-1 ... +25 bar (-100 ... +2500 kPa)</td>
<td>-1 ... +6 bar (-100 ... +600 kPa)</td>
<td>-1 ... +25 bar (-100 ... +2500 kPa)</td>
</tr>
</tbody>
</table>
Overview – Signal conditioning instruments for vibrating level switches

<table>
<thead>
<tr>
<th>VEGATOR 636 Ex</th>
<th>NAMUR-amplifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring principle</td>
<td>Vibration</td>
</tr>
<tr>
<td>Input</td>
<td>Single channel</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>Fix</td>
</tr>
<tr>
<td>Output</td>
<td>1 x relay output</td>
</tr>
<tr>
<td></td>
<td>1 x transistor output</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>20 ... 250 V AC, 50/60 Hz,</td>
</tr>
<tr>
<td></td>
<td>20 ... 72 V DC</td>
</tr>
<tr>
<td></td>
<td>207 ... 253 V AC, 45/65 Hz,</td>
</tr>
<tr>
<td></td>
<td>20 ... 30 V DC</td>
</tr>
</tbody>
</table>
VEGASWING 51

Vibrating level switch for liquids

Application area
VEGASWING 51 is used as a universal level switch in liquids with small dimensions independent of the mounting position, it detects reliably with millimetre accuracy the limit level. The instrument can be used as empty or full detector, as approved overfill protection, dry run protection or pump protection in vessels and pipelines. The VEGASWING 51 is an economical solution with maximum reliability and safety.

Advantages
- Minimum time and cost expenditure thanks to simple setup without medium
- Precise and reliable function due to product-independent switching point
- Low maintenance costs

Technical data
Material: 316L
Process fitting: thread from G¾, ¾ NPT
hygienic fittings
Process temperature: -40 … +150 °C
Process pressure: -1 … +64 bar (-100 … +6400 kPa)

1 Threaded version G¾ up to 100 °C
2 Threaded version G1 up to 100 °C
3 Threaded version G1 up to 150 °C
and switching point as SWING 71A
VEGASWING 61

Vibrating level switch for liquids

Application area
The VEGASWING 61 is a universal level switch for use in all liquids. Independent of the mounting position, it detects reliably with millimetre accuracy the limit level. The instrument can be used as empty or full detector, as approved overfill protection, dry run protection or pump protection in vessels and pipelines. The VEGASWING 61 offers maximum reliability in a wide application range.

Advantages
- Minimum time and cost expenditure thanks to simple setup without medium
- Precise and reliable function through product-independent switching point
- Low maintenance costs

Technical data
Materials: 316L, Hastelloy, ECTFE, PFA, enamel
Process fitting: thread from G¾, ¾ NPT, flanges from DN 25, 1"
hygienic fittings
Process temperature: -50 … +250 °C
Process pressure: -1 … +64 bar (-100 … +6400 kPa)
SIL qualification: up to SIL2

1 Threaded version G1
2 Clamp version
3 Flange version
Approval

CU FM(IS)CL I,II,III, DIV 1,GP ABCDEFG
DU FM(XP) CLI, DIV1, GP ABCD (DIP) CLI,II,III, DIV1,GP EFG
XU FM(NI)CL I,DIV2.GP ABCD
CC CSA (IS)CL I,II,III, DIV 1,GP ABCDEFG
DC CSA(XP)CL I,II,III, DIV 1,GP ABCDEFG
XC CSA(NI)CL I,II,III, DIV 2,GP ABCDEFG

Process fitting / Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Adapters / Process Temperature</th>
<th>Housing / Cable Gland</th>
<th>Electronics</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMV</td>
<td>Thread ½NPT (ASME B1.20.1) PN64 / 316L</td>
<td>Plastic PBT IP66/67 / ½NPT</td>
<td>Contactless electronic switch 20...250VAC/DC</td>
</tr>
<tr>
<td>NBY</td>
<td>Thread ½NPT (ASME B1.20.1) PN64 / Hastelloy C22 (2.4602)</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>Relay (DPDT) 20...72VDC/20...250VAC (3A)</td>
</tr>
<tr>
<td>NAV</td>
<td>Thread 1NPT (ASME B1.20.1) PN64 / 316L</td>
<td>Aluminium IP66/IP67 / ½NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>NAY</td>
<td>Thread 1NPT (ASME B1.20.1) PN64/Hastelloy C22 (2.4602)</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>NCV</td>
<td>Thread 1½NPT (ASME B1.20.1) PN64 / 316L</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Relay (DPDT) 20...72VDC/20...250VAC (3A)</td>
</tr>
<tr>
<td>CCP</td>
<td>Clamp 1” PN16(ø50.5mm) DIN32676,ISO2852 /316L Ra&lt;0.8µm</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>CBP</td>
<td>Clamp 1¼” PN16(ø64mm) DIN32676,ISO2852 /316L Ra&lt;0.8µm</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>CDP</td>
<td>Clamp 2” PN16(ø77.5mm) DIN32676,ISO2852 /316L Ra&lt;0.8µm</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>CEP</td>
<td>Clamp 3” PN16(ø91mm) DIN32676,ISO2852 /316L Ra&lt;0.8µm</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>APV</td>
<td>Flange 1” 150lb RF, ANSI B16.5 / 316L</td>
<td>Aluminium IP66/IP67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>APH</td>
<td>Flange 1” 150lb RF, ANSI B16.5 / ECTFE</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>Contactless electronic switch 20...250VAC/DC</td>
</tr>
<tr>
<td>APF</td>
<td>Flange 1½” 150lb RF, ANSI B16.5/PFA</td>
<td>Aluminium IP66/IP67 / ¾NPT</td>
<td>Relay (DPDT) 20...72VDC/20...250VAC (3A)</td>
</tr>
<tr>
<td>APE</td>
<td>Flange 1½” 150lb RF, ANSI B16.5 / enamel</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>APY</td>
<td>Flange 1½” 150lb RF, ANSI B16.5/Hastelloy C22 massive</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>AAH</td>
<td>Flange 1½” 150lb RF, ANSI B16.5/ECTFE</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>AAF</td>
<td>Flange 1½” 150lb RF, ANSI B16.5/PFA</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>AAE</td>
<td>Flange 1½” 150lb RF, ANSI B16.5 / enamel</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>AAY</td>
<td>Flange 1½” 150lb RF, ANSI B16.5/Hastelloy C22 massive</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>ACC</td>
<td>Flange 2” 150lb RF, ANSI B16.5 / 316L</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>ACM</td>
<td>Flange 2” 150lb RF, ANSI B16.5/Monell ZB2977</td>
<td>Aluminium IP66/IP67 / ¾NPT</td>
<td>Contactless electronic switch 20...250VAC/DC</td>
</tr>
<tr>
<td>ACH</td>
<td>Flange 2” 150lb RF, ANSI B16.5 / ECTFE</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>Relay (DPDT) 20...72VDC/20...250VAC (3A)</td>
</tr>
<tr>
<td>ACF</td>
<td>Flange 2” 150lb RF, ANSI B16.5/PFA</td>
<td>Aluminium IP66/IP67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>ACE</td>
<td>Flange 2” 150lb RF, ANSI B16.5 / 316L</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>Contactless electronic switch 20...250VAC/DC</td>
</tr>
<tr>
<td>ACY</td>
<td>Flange 2” 150lb RF, ANSI B16.5/Hastelloy C22 massive</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Relay (DPDT) 20...72VDC/20...250VAC (3A)</td>
</tr>
<tr>
<td>AGV</td>
<td>Flange 3” 150lb RF, ANSI B16.5/ECTFE</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>AGF</td>
<td>Flange 3” 150lb RF, ANSI B16.5/PFA</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>AGE</td>
<td>Flange 3” 150lb RF, ANSI B16.5/enamel</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>AGY</td>
<td>Flange 3” 150lb RF, ANSI B16.5/Hastelloy C22 massive</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>AIV</td>
<td>Flange 4” 150lb RF, ANSI B16.5/316L</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>AIH</td>
<td>Flange 4” 150lb RF, ANSI B16.5/ECTFE</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>AIF</td>
<td>Flange 4” 150lb RF, ANSI B16.5/PFA</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
<tr>
<td>AIE</td>
<td>Flange 4” 150lb RF, ANSI B16.5/enamel</td>
<td>Stainless steel (precision casting) 316L IP66/67 / ¾NPT</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>AIY</td>
<td>Flange 4” 150lb RF, ANSI B16.5/Hastelloy C22 massive</td>
<td>Plastic PBT IP66/67 / ¾NPT</td>
<td>NAMUR signal</td>
</tr>
</tbody>
</table>

Switching point

X Standard
L as SWING81 or 81A
VEGASWING 63

Vibrating level switch with tube extension for liquids

Application area
VEGASWING 63 is used as a universal level switch in all liquids. Independent of the mounting position it detects reliably with millimetre accuracy the level. The instrument can be used in vessels as empty or full detector, as approved overfill protection, dry run protection or pump protection. The position of the switching point is determined through the tube extension. The VEGASWING 63 offers high reliability and security in a wide application range.

Advantages
– Minimum time and cost expenditure thanks to simple setup without medium
– Precise and reliable function through product-independent switching point
– Low maintenance costs

Technical data
Version: tube extension up to 6 m
Materials: 316L, Hastelloy, ECTFE, PFA, enamel
Process fitting: thread from G¾, ¾ NPT flanges from DN 25, 1*
hygienic fittings
Process temperature: -50 ... +250 °C
Process pressure: -1 ... +64 bar (-100 ... +6400 kPa)
SIL qualification: up to SIL2

1 Threaded version G1
2 Flange version
3 Bolting DN 50 PN 25
Approval
CU FM(IS)CL I,II,III, DIV 1,GP ABCDEFG ...
DU FM(XP) CL1, DIV1, GP ABCD (DIP) CL1,II,III, DIV1,GP EFG ...
XU FM(NI)CL I, DIV2, GP ABCD ...
CC CSA (IS)CL I,II,III, DIV 1, GP ABCDEFG ...
DC CSA(XP)CL I,II,III DIV 1,GP ABCDEFG ...
XC CSA(NI)CL I,II,III, DIV 2, GP ABCDEFG ...

Process fitting / Material
NBV Thread ¾NPT (ASME B1.20.1) PN64 / 316L ...
NBY Thread ¾NPT (ASME B1.20.1) PN64 / Hastelloy C22 (2.4602) ...
NAV Thread 1NPT (ASME B1.20.1) PN64 / 316L ...
NAY Thread 1NPT (ASME B1.20.1) PN64/Hastelloy C22(2.4602) ...
NCV Thread 1½NPT (ASME B1.20.1) PN64 / 316L ...
NEV Thread 2NPT (ASME B1.20.1) PN64 / 316L ...
CCP Clamp 1” PN16(e50.5mm) DIN32676,ISO2852 /316L Ra<0.8µm ...
CBP Clamp 1½” PN16(e50.5mm) DIN32676,ISO2852 /316L Ra<0.8µm ...
CAP Clamp 2” PN16(e64mm) DIN32676,ISO2852 /316L Ra<0.8µm ...
CDP Clamp 2½”PN10(e77.5mm) DIN32676,ISO2852 /316L Ra<0.8µm ...
CEP Clamp 3” PN10(e91mm) DIN32676,ISO2852 /316L Ra<0.8µm ...
APV Flange 1” 150lb RF, ANSI B16.5 / 316L ...
APH Flange 1” 150lb RF, ANSI B16.5 / ECTFE ...
APF Flange 1”150lb RF, ANSI B16.5/PFA ...
APE Flange 1” 150lb RF, ANSI B16.5 / enamel ...
APY Flange 1”150lb RF, ANSI B16.5/Hastelloy C22 massive ...
ACV Flange 2” 150lb RF, ANSI B16.5 / 316L ...
ACH Flange 2” 150lb RF, ANSI B16.5 / ECTFE ...
ACF Flange 2”150lb RF, ANSI B16.5/PFA ...
ACE Flange 2” 150lb RF, ANSI B16.5 / enamel ...
ACY Flange 2”150lb RF, ANSI B16.5/Hastelloy C22 massive ...
AGV Flange 3”150lb RF, ANSI B16.5/316L ...
AGH Flange 3”150lb RF, ANSI B16.5/ECTFE ...
AGF Flange 3”150lb RF, ANSI B16.5/PFA ...
AGE Flange 3”150lb RF, ANSI B16.5/enamele ...
AGY Flange 3”150lb RF, ANSI B16.5/Hastelloy C22 massive ...
AIV Flange 4”150lb RF, ANSI B16.5/316L ...
AIH Flange 4”150lb RF, ANSI B16.5/ECTFE ...
AIF Flange 4”150lb RF, ANSI B16.5/PFA ...
AIE Flange 4”150lb RF, ANSI B16.5/enamele ...
AIY Flange 4”150lb RF, ANSI B16.5/Hastelloy C22 massive ...

Adapter / Process temperature
X without / -50…150°C ...
T with / -50…250°C ...

Housing / Cable gland
N Plastic PBT IP66/67 / ¾NPT ...
U Aluminium IP66/IP67 / ¾NPT ...
A Stainless steel (precision casting) 316L IP66/67 / ¾NPT ...
8 SS(S Electropolished) 316L / IP66/IP67 / M20x1.5 ...

Electronics
C Contactless electronic switch 20…250VAC/DC ...
R Relay (DPDT) 20…72VDC/20…250VAC (3A) ...
T Transistor (NPN/PNP) 10…55VDC ...
Z Two-wire 8/16 mA 12…36VDC ...
N NAMUR signal ...

Total length (from seal surface)
316L (80-6000 mm) per 100 mm
ECTFE coated (80-3000 mm) per 100 mm
PFA coated (80-3000 mm) per 100 mm
316L Ra <=0.8µm (80-6000 mm) per 100 mm
enameled version (300, 400, 500, 600 mm) once
VEGAVIB 61

Vibrating level switch for granular bulk solids

Application area
The VEGAVIB 61 is a level switch for granular and coarse-grained bulk solids. The VEGAVIB 61 detects reliably and accurately the min. or max. level. The smooth surface of the vibrating rod, without corners and edges, avoids jamming of the bulk solid and is easy to clean.

Advantages
– Minimum time and cost expenditure thanks to simple setup without medium
– Reliable function through product-independent switching point
– Low maintenance costs

Technical data
Measuring range: bulk solids from 20 g/l
Process fitting: thread from G1, 1 NPT, flanges from DN 50, 2"
Process temperature: -50 … +250 °C
Process pressure: -1 … +16 bar (-100 … +1600 kPa)
SIL qualification: up to SIL2

1 Threaded version G1
2 Clamp version 1", 1½"
3 Version with temperature adapter
Approval
UX  FM(NI)CL I,II,DIV1,GP ABCD (DIP)CL II,III,DIV1,GP EFG ................................................................
UF  FM(IS)CL I,II,III, DIV 1,GP ABCDEFG ................................................................
UD  FM(XP)CL I,II,III, DIV1,GP ABCDEFG ................................................................
KX  CSA (NI) CL I, II, III, DIV 2, GP ABCDEFG ................................................................
KD  CSA (XP) CL I, II, III, DIV 1, GP ABCDEFG ................................................................

Version / Process temperature
A  Standard / -50...150°C ..............................................................................................................
B  With adapter / -50...+250°C ......................................................................................................
C  Detection of bulk solids in water / -50...+150°C ........................................................................

Process fitting / Material
NC  Thread 1NPT (ASME B1.20.1) PN16 / 316L ..................................................................
NH  Thread 1¼NPT (ASME B1.20.1) PN16 / 316L ................................................................
NG  Thread 1½NPT (ASME B1.20.1) PN16 / 316L ..............................................................
CT  Clamp 1½" PN16(ø50.5mm) DIN32676,ISO2852/316L Ra<0.8µm ................................
CV  Clamp 2" PN16(ø64mm) DIN32676,ISO2852/316L Ra <0.8µm.................................
CQ  Clamp 2½" PN10(ø77.5mm) DIN32676,ISO2852/316L Ra<0.8µm ................................
DA  Flange 1½"150lb RF,ANSI B16.5, 316L ...........................................................................
EA  Flange 1½"300lb RF,ANSI B16.5/316L ..........................................................................
HA  Flange 2"150lb RF,ANSI B16.5, 316L ...........................................................................
IA  Flange 2"300lb RF,ANSI B16.5/316L ...........................................................................
OA  Flange 3"150lb RF,ANSI B16.5/316L ...........................................................................
PA  Flange 3½"300lb RF,ANSI B16.5, 316L ........................................................................
JA  Flange 3½"150lb RF, ANSI B16.5, 316L ........................................................................
SA  Flange 4"150lb RF,ANSI B16.5, 316L ...........................................................................
UA  Flange 4"300lb RF, ANSI B16.5, 316L ............................................................................

Electronics
C Contactless electronic switch 20...253VAC/DC ..........................................................
R Relay (DPDT) 20...72VDC/20...253VAC(3A) ..............................................................
T Transistor (NPN/PNP) 10...55VDC ............................................................................
Z Two-wire 8/16 mA 10...36VDC ...................................................................................
N NAMUR signal ............................................................................................................

Housing / Protection
K Plastic / IP66/IP67 ................................................................................................
A Aluminium / IP66/IP68 (0.2 bar) .............................................................................
V StSt (precision casting) 316L / IP66/IP68 (0.2bar) ....................................................
8 StSt (electropolished) 316L / IP66/IP68 (0.2bar) ......................................................

Cable entry / Cable gland / Plug connection
N ½NPT / without / without ..............................................................................................

Additional equipment
X Without .........................................................................................................................
VEGAVIB 62

Vibrating level switch with suspension cable for granular bulk solids

Application area
The VEGAVIB 62 is a level switch for granular and coarse-grained bulk solids. The optimized rod design without corners and edges avoids jamming of the bulk solids and is easy to clean. The VEGAVIB 62 detects reliably and accurately the min. or max. level in bulk solids. The position of the switching point can be specified flexibly through the length of the suspension cable.

Advantages
– Minimum time and cost expenditure thanks to simple setup without medium
– Reliable function through product-independent switching point
– Low maintenance costs

Technical data
Version: suspension cable up to 80 m
Measuring range: bulk solids from 20 g/l
Process fitting: thread from G1, 1 NPT
                        flanges from DN 50, 2"
                        hygienic fittings
Process temperature: -50 … +150 °C
Process pressure: -1 … +6 bar (-100 … +600 kPa)
SIL qualification: up to SIL2

1 Version with PUR suspension cable
2 Version with FEP suspension cable
Approval
UX FM(N)CL I,DIV2,GP ABCD (DIP)CL II,III,DIV1,GP EFG .................................................................
UF FM(IS)CL I,II,III, DIV 1,GP ABCDEF .........................................................................................
KX CSA (NI) CL I, II, III, DIV 2, GP ABCDEFG ............................................................................... 
KF CSA(IS)CL I,II,III, DIV1, GP ABCDEFG .................................................................................. 

Version / Process temperature
T Cable PUR / -20...80°C .....................................................................................................................
H Cable FEP / -40...150°C ..................................................................................................................
C Detection of solids in water / -20...80°C ..........................................................................................

Process fitting / Material
NC Thread 1NPT (ASME B1.20.1) PN6 / 316L .................................................................................
NH Thread 1¾NPT (ASME B1.20.1) PN6 / 316L ...............................................................................
ND Thread 1½NPT (ASME B1.20.1) PN6 / 316L .............................................................................
DA Flange 1½*150lb RF,ANSI B16.5, 316L .....................................................................................
EA Flange 1½*300lb RF,ANSI B16.5/316L .......................................................................................
HA Flange 2*150lb RF,ANSI B16.5; 316L ....................................................................................... 
IA Flange 2*300lb RF,ANSI B16.5/316L ...........................................................................................
OA Flange 3*150lb RF,ANSI B16.5/316L .........................................................................................
PA Flange 3*300lb RF,ANSI B16.5; 316L ...........................................................................................
JA Flange 3½*150lb RF, ANSI B16.5, 316L ......................................................................................
SA Flange 4*150lb RF,ANSI B16.5; 316L ..........................................................................................
UA Flange 4*300lb RF, ANSI B16.5, 316L ......................................................................................

Electronics
C Contactless electronic switch 20...253VAC/DC ............................................................................
R Relay (DPDT) 20...72VDC/20...253VAC(3A) .................................................................................
T Transistor (NPN/PNP) 10...55VDC ............................................................................................... 
Z Two-wire 8/16 mA 10...36VDC ......................................................................................................
N NAMUR signal ..............................................................................................................................

Housing / Protection
K Plastic / IP66/IP67 ............................................................................................................................
A Aluminium / IP66/IP68 (0.2 bar) ...................................................................................................
V StSt (precision casting) 316L / IP66/IP68 (0.2bar) ......................................................................
S StSt (electropolished) 316L / IP66/IP68 (0.2bar) ...........................................................................

Cable entry / Cable gland / Plug connection
N ¾NPT / without / without ..............................................................................................................

Additional equipment
X without .............................................................................................................................................

Length (from seal surface)
PUR (480-80000 mm) per 100 mm
FEP (480-80000 mm) per 100 mm
VEGAVIB 63

Vibrating level switch with tube extension for granular bulk solids

Application area
The VEGAVIB 63 is a level switch for granular and coarse-grained bulk solids. The VEGAVIB 63 detects reliably and accurately the min. or max. level. The smooth surface of the vibrating rod, without corners and edges, avoids jamming of the bulk solid and is easy to clean. The position of the switching point is specified through the tube extension.

Advantages
– Minimum time and cost expenditure thanks to simple setup without medium
– Reliable function through product-independent switching point
– Low maintenance costs

Technical data
Version: tube extension up to 6 m
Measuring range: bulk solids from 20 g/l
Process fitting: thread from G1, 1 NPT
flanges from DN 50, 2”
hygienic fittings
Process temperature: -50 … +250 °C
Process pressure: -1 … +16 bar (-100 … +1600 kPa)
SIL qualification: up to SIL2

1 Threaded version G1
2 Flange version
## Approval

<table>
<thead>
<tr>
<th>Approval</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UX</td>
<td>FM(NI)CL I,II,III,DIV1,GP ABCD (DIP)CL II,III,DIV1,GP EFG</td>
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<tr>
<td>UF</td>
<td>FM(IS)CL I,II,III,DIV1,GP ABCDEFG</td>
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<td>UD</td>
<td>FM(XP)CL I,II,III,DIV1,GP ABCDEFG</td>
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<tr>
<td>KX</td>
<td>CSA (NI) CL I,II,III,DIV2,GP ABCDEFG</td>
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<tr>
<td>KD</td>
<td>CSA (XP) CL I,II,III,DIV1,GP ABCDEFG</td>
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## Version / Process temperature

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Standard / -50...+150°C</td>
</tr>
<tr>
<td>B</td>
<td>With adapter / -50...+250°C</td>
</tr>
<tr>
<td>C</td>
<td>Detection of bulk solids in water / -50...+150°C</td>
</tr>
</tbody>
</table>

## Process fitting / Material

### NC
- Thread 1NPT (ASME B1.20.1) PN16 / 316L

### NH
- Thread 1¼NPT (ASME B1.20.1) PN16 / 316L

### ND
- Thread 1½NPT (ASME B1.20.1) PN16 / 316L

### CT
- Clamp 1½" PN16 (ø50.5mm) DIN32676/ISO2852/316L Ra<0.8μm

### CV
- Clamp 2" PN16 (ø64mm) DIN32676/ISO2852/316L Ra<0.8μm

### CO
- Clamp 2½" PN10 (ø77.5mm) DIN32676/ISO2852/316L Ra<0.8μm

### DA
- Flange 1½"150lb RF, ANSI B16.5, 316L

### EA
- Flange 1½"300lb RF, ANSI B16.5/316L

### HA
- Flange 2"150lb RF, ANSI B16.5, 316L

### IA
- Flange 2½"150lb RF, ANSI B16.5/316L

### OA
- Flange 3½"150lb RF, ANSI B16.5/316L

### PA
- Flange 4"150lb RF, ANSI B16.5, 316L

### JA
- Flange 3½"150lb RF, ANSI B16.5, 316L

### SA
- Flange 4½"150lb RF, ANSI B16.5, 316L

### UA
- Flange 4½"300lb RF, ANSI B16.5, 316L

## Electronics

<table>
<thead>
<tr>
<th>Electronics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Contactless electronic switch 20...253VAC/DC</td>
</tr>
<tr>
<td>R</td>
<td>Relay (DPDT) 20...72VDC/20...253VAC(3A)</td>
</tr>
<tr>
<td>T</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>Z</td>
<td>Two-wire 8/16 mA 10...36VDC</td>
</tr>
<tr>
<td>N</td>
<td>NAMUR signal</td>
</tr>
</tbody>
</table>

## Housing / Protection

<table>
<thead>
<tr>
<th>Housing / Protection</th>
<th>Description</th>
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<tbody>
<tr>
<td>K</td>
<td>Plastic / IP66/IP67</td>
</tr>
<tr>
<td>A</td>
<td>Aluminium / IP66/IP68 (0.2 bar)</td>
</tr>
<tr>
<td>V</td>
<td>StSt (precision casting) 316L / IP66/IP68 (0.2bar)</td>
</tr>
<tr>
<td>S</td>
<td>StSt (electropolished) 316L / IP66/IP68 (0.2bar)</td>
</tr>
</tbody>
</table>

## Cable entry / Cable gland / Plug connection

<table>
<thead>
<tr>
<th>Cable entry / Cable gland / Plug connection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>½NPT / without / without</td>
</tr>
<tr>
<td>X</td>
<td>Without</td>
</tr>
</tbody>
</table>

## Additional equipment

### X
- Without

## Length (from seal surface)

- 316L (180-6000 mm) per 100 mm
VEGAWAVE 61

Vibrating level switch for powders

Application area
The VEGAWAVE 61 is a level switch for universal use in powders and fine-grained bulk solids. The level switch detects reliably and robust the min. or max. level. The tuning fork is ideal for use either in adhesive and abrasive products as well as in bulk solids with very low density.

Advantages
- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low costs for maintenance through robust design

Technical data
- Measuring range: bulk solids from 8 g/l
- Process fitting: thread G1½, 1½ NPT
- Process temperature: -50 ... +250 °C
- Process pressure: -1 ... +25 bar (-100 ... +2500 kPa)
- SIL qualification: up to SIL2

1 Threaded version G1½
2 Threaded version G1½ with temperature adapter up to +250 °C
### Approval

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>UX</td>
<td>FM(NI)CL I, DIV2, GP ABCD (DIP) CL II, III, DIV1, GP EFG</td>
</tr>
<tr>
<td>UF</td>
<td>FM(IS)CL I, II, III, DIV 1, GP ABCDEF</td>
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<tr>
<td>UD</td>
<td>FM(XP)CL I, DIV1, GP ABCD, (DIP) CL II, III, DIV1, GP EFG</td>
</tr>
<tr>
<td>KX</td>
<td>CSA (NI) CL I, II, III, DIV 2, GP ABCDEFG</td>
</tr>
<tr>
<td>KF</td>
<td>CSA(IS)CL I, II, III, DIV1, GP ABCDEFG</td>
</tr>
<tr>
<td>KD</td>
<td>CSA (XP) CL I, II, III, DIV 1, GP ABCDEFG</td>
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</table>

### Version / Process temperature

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Standard / -50...150°C</td>
</tr>
<tr>
<td>B</td>
<td>With adapter / -50...250°C</td>
</tr>
<tr>
<td>C</td>
<td>Detection of solids in water / -50...150°C</td>
</tr>
</tbody>
</table>

### Process fitting / Material

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND</td>
<td>Thread 1½NPT (ASME B1.20.1) PN25 / 316L</td>
</tr>
<tr>
<td>HA</td>
<td>Flange 2&quot;150lb RF, ANSI B16.5, 316L</td>
</tr>
<tr>
<td>IA</td>
<td>Flange 2&quot;300lb RF, ANSI B16.5/316L</td>
</tr>
<tr>
<td>OA</td>
<td>Flange 3&quot;150lb RF, ANSI B16.5/316L</td>
</tr>
<tr>
<td>PA</td>
<td>Flange 3&quot;300lb RF, ANSI B16.5, 316L</td>
</tr>
<tr>
<td>JA</td>
<td>Flange 3½&quot;150lb RF, ANSI B16.5, 316L</td>
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<tr>
<td>SA</td>
<td>Flange 4&quot;150lb RF, ANSI B16.5, 316L</td>
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<tr>
<td>UA</td>
<td>Flange 4&quot;300lb RF, ANSI B16.5, 316L</td>
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### Electronics

<table>
<thead>
<tr>
<th>Letter</th>
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<tbody>
<tr>
<td>C</td>
<td>Contactless electronic switch 20...253VAC/DC</td>
</tr>
<tr>
<td>R</td>
<td>Relay (DPDT) 20...72VDC/20...253VAC(3A)</td>
</tr>
<tr>
<td>T</td>
<td>Transistor (NPN/PNP) 10...55VDC</td>
</tr>
<tr>
<td>Z</td>
<td>Two-wire 8/16 mA 10...36VDC</td>
</tr>
<tr>
<td>N</td>
<td>NAMUR signal</td>
</tr>
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</table>

### Housing / Protection

<table>
<thead>
<tr>
<th>Letter</th>
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</thead>
<tbody>
<tr>
<td>K</td>
<td>Plastic / IP66/IP67</td>
</tr>
<tr>
<td>A</td>
<td>Aluminium / IP66/IP68 (0.2 bar)</td>
</tr>
<tr>
<td>V</td>
<td>StSt (precision casting) 316L / IP66/IP68 (0.2bar)</td>
</tr>
<tr>
<td>8</td>
<td>StSt (electropolished) 316L / IP66/IP68 (0.2bar)</td>
</tr>
</tbody>
</table>

### Cable entry / Cable gland / Plug connection

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>N</td>
<td>½NPT / without / without</td>
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</tbody>
</table>

### Additional equipment

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Without</td>
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</tbody>
</table>

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**Vibration – VEGAWAVE 61**
VEGAWAVE 62

Vibrating level switch with suspension cable for powders

Application area
The VEGAWAVE 62 is a level switch for universal use in powders and fine-grained bulk solids. The level switch detects reliably and robust the min. or max. level. The tuning fork is ideal for use either in adhesive and abrasive products as well as in bulk solids with very low density. The position of the switching point can be determined through the length of the suspension cable.

Advantages
- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low costs for maintenance through robust design

Technical data
Version: suspension cable up to 80 m
Measuring range: bulk solids from 8 g/l
Process fitting: thread G1½, 1½ NPT
Process temperature: -50 ... +150 °C
Process pressure: -1 ... +6 bar (-100 ... +600 kPa)
SIL qualification: up to SIL2

1 Version with PUR suspension cable
2 Version with FEP suspension cable
Approval
UX FM(NI)CL I, DIV2, GP ABCD (DIP) CL II, III, DIV1, GP EFG
UF FM(IS)CL I, II, III, DIV 1, GP ABCDEF
KX CSA (NI) CL I, II, III, DIV 2, GP ABCDEFG
KF CSA(IS)CL I, II, III, DIV1, GP ABCDEFG

Version / Process temperature
T Cable PUR / -20...80°C
H Cable FEP / -40...150°C
C Detection of solids in water / -20...80°C

Process fitting / Material
ND Thread 1½NPT (ASME B1.20.1) PN16 / 316L
HA Flange 2"150lb RF, ANSI B16.5, 316L
IA Flange 2"300lb RF, ANSI B16.5/316L
OA Flange 3"150lb RF, ANSI B16.5/316L
PA Flange 3"300lb RF, ANSI B16.5, 316L
JA Flange 3½"150lb RF, ANSI B16.5, 316L
SA Flange 4"150lb RF, ANSI B16.5, 316L
UA Flange 4"300lb RF, ANSI B16.5, 316L

Electronics
C Contactless electronic switch 20...253VAC/DC
R Relay (DPDT) 20...72VDC/20...253VAC(3A)
T Transistor (NPN/PNP) 10...55VDC
Z Two-wire 8/16 mA 10...36VDC
N NAMUR signal

Housing / Protection
K Plastic / IP66/IP67
A Aluminium / IP66/IP68 (0.2 bar)
V StSt (precision casting) 316L / IP66/IP68 (0.2 bar)
B StSt (electropolished) 316L / IP66/IP68 (0.2 bar)

Cable entry / Cable gland / Plug connection
N ½NPT / without / without
X without

Additional equipment

Length (from seal surface)
PUR (480-80000 mm) per 100 mm
FEP (480-80000 mm) per 100 mm
VEGAWAVE 63

Vibrating level switch with tube extension for powders

Application area
The VEGAWAVE 63 is a level switch for universal use in powders and fine-grained bulk solids. The level switch detects reliably and robust the min. or max. level. The tuning fork is ideal for use either in adhesive and abrasive products as well as in bulk solids with very low density. The position of the switching point can be determined through the length of the tube extension.

Advantages
– Minimum time and cost expenditure thanks to simple setup without medium
– Reliable function through product-independent switching point
– Low costs for maintenance through robust design

Technical data
Version: tube extension up to 6 m
Measuring range: bulk solids from 8 g/l
Process fitting: thread G1½, 1½ NPT
flanges from DN 50, 2"
Process temperature: -50 … +250 °C
Process pressure: -1 … +25 bar (-100 … +2500 kPa)
SIL qualification: up to SIL2

1 Threaded version G1½
2 Flange version
### Approval

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>UX</td>
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### Version / Process temperature

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Standard / -50...150°C</td>
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<tr>
<td>B</td>
<td>with adapter / -50...250°C</td>
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<tr>
<td>C</td>
<td>Detection of solids in water / -50...150°C</td>
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### Process fitting / Material

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<th>Acronym</th>
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<tbody>
<tr>
<td>ND</td>
<td>Thread 1½NPT (ASME B1.20.1) PN25 / 316L</td>
</tr>
<tr>
<td>HA</td>
<td>Flange 2&quot;150lb RF, ANSI B16.5, 316L</td>
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<td>IA</td>
<td>Flange 2&quot;300lb RF, ANSI B16.5/316L</td>
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### Electronics

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<td>Contactless electronic switch 20...253VAC/DC</td>
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<td>Transistor (NPN/PNP) 10...55VDC</td>
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<td>Two-wire 8/16 mA 10...36VDC</td>
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<td>N</td>
<td>NAMUR signal</td>
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### Housing / Protection

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<td>K</td>
<td>Plastic / IP66/IP67</td>
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<tr>
<td>A</td>
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<tr>
<td>V</td>
<td>StSt (precision casting) 316L / IP66/IP68 (0.2bar)</td>
</tr>
<tr>
<td>B</td>
<td>StSt (electropolished) 316L / IP66/IP68 (0.2bar)</td>
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### Cable entry / Cable gland / Plug connection

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>½NPT / without / without</td>
</tr>
</tbody>
</table>

### Additional equipment

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Without</td>
</tr>
</tbody>
</table>

### Length (from seal surface)

316L (240-6000 mm) per 100 mm
Electronics VEGASWING 60
Suitable for VEGASWING 61 and 63

Oscillator
- **C.** Contactless electronic switch 20...250V AC/DC
- **R.** Relay (DPDT) 20...72VDC/20...250VAC (3A)
- **R.E.** Relay (f. enamelled) (DPDT) 20...72V DC/20...250V AC (3A)
- **T.** Transistor (NPN/PNP) 10...55VDC
- **ZEX.** Two-wire 8/16 mA 12...36VDC
- **ZEX.E.** Two-wire (f. enamelled) 8/16 mA 12...36VDC
- **NEX.** NAMUR signal
- **NEX.E.** NAMUR signal (f. enamelled)

Approval
- **XX.** without
- **CU.** FM(IS) CL I,II,III, DIV 1,GP ABCDEFG
- **DU.** FM(XP) CL I,II,III, DIV 1,GP ABCEFG
- **XU.** FM(NI) CL I,II,III, DIV 1,GP ABCDEFG
- **CC.** CSA (IS) CL I,II,III, DIV 1,GP ABCDEFG
- **DC.** CSA(XP) CL I,II,III, DIV 1,GP ABCDEFG
- **XC.** CSA(NI) CL I,II,III, DIV 2,GP ABCDEFG

Lock fitting for VEGASWING 63

Process pressure / Process temperature / suitable for
1. Unpressurised/-50...250°C/Approval XX, XA
2. -1...16 bar/-50...150°C/Approval XX, XA, CA, DA, GX, GK
3. -1...64 bar/-50...250°C/Approval XX, XA, CA, DA, GX, GK

Process fitting / Material
- **NC.** Thread 1NPT (ASME B1.20.1) / 316L
- **ND.** Thread 1½NPT (ASME B1.20.1) / 316L

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unpressurized/-50...250 °C</td>
</tr>
<tr>
<td>2</td>
<td>-1...16 bar/-50...150 °C</td>
</tr>
<tr>
<td>3</td>
<td>-1...64 bar/-50...250 °C</td>
</tr>
</tbody>
</table>

1. Version – unpressurized/-50 ... +250 °C
2. Version – -1 ... 16 bar/-50 ... +150 °C
3. Version – -1 ... 64 bar/-50 ... +250 °C
Electronics VEGAVIB series 60

Electronics
- Contactless electronic switch 20...253VAC/DC
- Relay (DPDT) 20...72VDC/20...253VAC(3A)
- Transistor (NPN/PNP) 10...55VDC
- Two-wire 8/16 mA 10...36VDC
- NAMUR signal

For instrument approval
- XX

Lock fitting for VEGAVIB 63

Process pressure / Process temperature / suitable for
1. Unpressurised/-50...250°C / Approval XX
2. -1...16 bar/-50...150°C / Approval XX,CX,CK,LX,GX

Process fitting / Material
- ND Thread 1½NPT (ASME B1.20.1) / 316L
- NA Thread 2NPT (ASME B1.20.1) / 316L

1. Version – unpressurized/-50 ... +250 °C
2. Version – -1 ... 16 bar/-50 ... +150 °C
Electronics VEGAWAVE Series 60

Instrument version
60 VEGAWAVE 61,62,63 .................................................................

Electronics
C Contactless electronic switch 20...253VAC/DC .................................................................
R Relay (DPDT) 20...72VDC/20...253VAC(3A) .................................................................
T Transistor (NPN/PNP) 10...55VDC .................................................................
Z Two-wire 8/16 mA 10...36VDC .................................................................
N NAMUR signal .................................................................................................

for instrument approval
X XX .................................................................................................

WE-E. .................................................................

Lock fitting for VEGAWAVE 63

Process pressure / Process temperature / suitable for
1 Unpressurised/-50...250°C / Approval XX .................................................................
2 -1...16 bar/-50...150°C / Approval XX,CX,CK,LX,GX .................................................................

Process fitting / Material
NA Thread 2NPT (ASME B1.20.1) / 316L .................................................................

WE-E. .................................................................

1 Version – unpressurized/-50 ... +250 °C
2 Version – -1 ... 16 bar/-50 ... +150 °C
VEGATOR 636 Ex

Signal conditioning instrument for limit level signal

Application area
The VEGATOR 636 Ex is a signal conditioning instrument for level detection for vibrating level switches VEGASWING, VEGAVIB and VEGAWAVE in two-wire version. With this instrument simple control tasks can be solved. Typical applications are monitoring functions such as overflow and dry run protection.

Advantages
- Comprehensive monitoring detects short-circuit and line break of the measuring cable and interferences in the sensor
- Simple and comfortable SIL and WHG function test via test key
- Simple installation through carrier rail mounting

Technical data
- Input: 1 x sensor input
- Output: 1 x relay output
- 1 x transistor output
- Switching hysteresis: fix
- Operating voltage: 20 ... 253 V AC, 50/60 Hz
- 20 ... 72 V DC
- Mounting: carrier rail 35 x 7.5 acc. to EN 50022
- SIL qualification: up to SIL2

Approval
- EX0.X ATEX II(1) G [Ex ia] IIC,II(1) D [Ex ia D] .................................................................
- EX0.A ATEX II(1)G[Ex ia]IIC,II(1) D[Ex ia D][M1][Ex ia]+WHG ...........................................
- .CI IECEx [Ex ia] IIC ...........................................................................................................

Plug-in socket
- K Inclusive plug-in socket ...........................................................................................

TOR636

Vibration – VEGATOR 636 Ex
Amplifier NAMUR

NAMUR switching amplifier for limit level signal

Application area
The switching amplifier NAMUR is a signal conditioning instrument for limit level signal for VEGASWING, VEGAWAVE and VEGAVIB sensors with NAMUR interface. It is ideal for simple control tasks. Typical applications are monitoring functions such as overflow or dry run protection.

Advantages
– Economical unit of sensor and signal conditioning instrument for limit level signal
– Integrated fault monitoring of short-circuit or line break
– Simple installation through carrier rail mounting

Technical data
Input: NAMUR interface acc. to IEC 60947-5-6
       single or two-channel
Output: 1 x relay output
Approval: ATEX II (1) GD [Ex ia] IIIC
Supply voltage: 207 ... 253 V AC, 45 ... 65 Hz,
               20 ... 30 V DC
Mounting: carrier rail 35 x 7.5 acc. to EN 50022
SIL qualification: up to SIL2

Amplifier version:
A6-SR2-EX1.W 1 channel, 230VAC, signal output: 1xspdt ........................................................................
A6-SR2-EX2.W 2 channel, 230 V AC, signal output: 2 x spdt ....................................................................
D2-SR2-EX1.W 1 channel, 24VDC, signal output: 1xspdt ..........................................................................
D2-SR2-EX2.W 2 channel, 24VDC, signal output: 2xspdt .........................................................................