

MODEL VHS

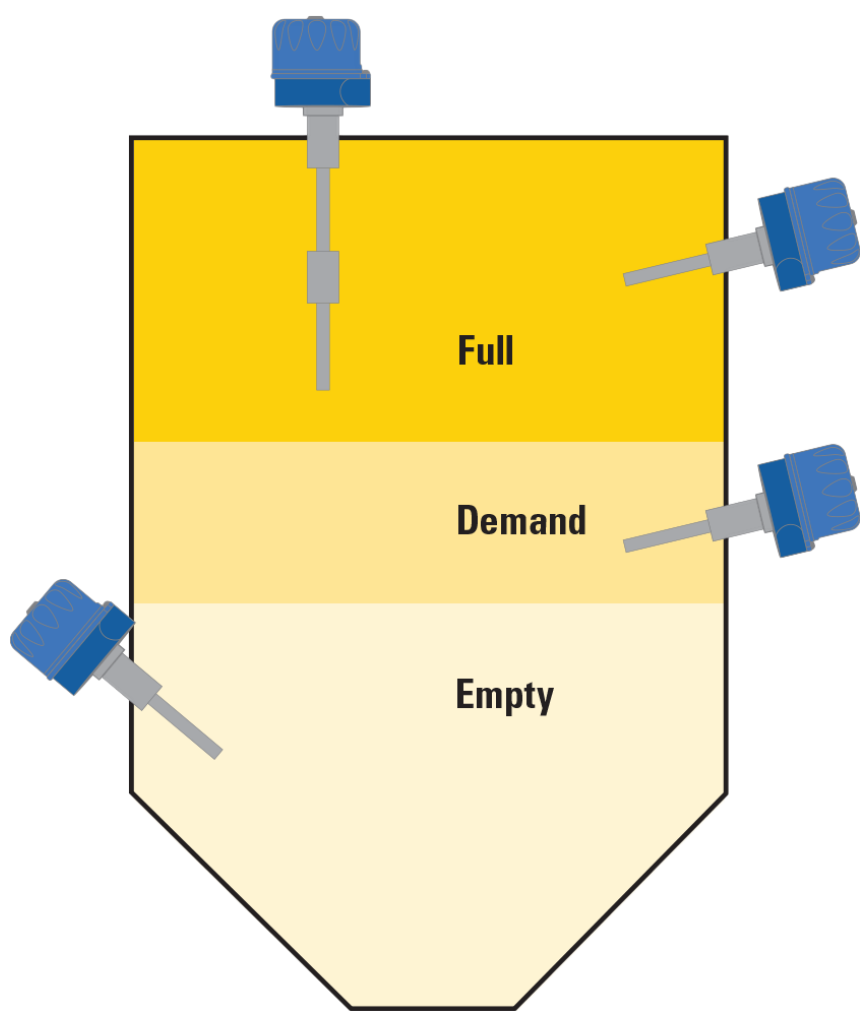


Vibrating Element "Rod" Point Level Sensor

Ideal level sensor technology for powders and granular material. No calibration required, universal AC/DC power supply and proven solid-state technology.

ABOUT

Vibrating element "Rod" point level sensor using piezoelectric crystal technology is a solid-state device for high, low and intermediate level detection of a wide range of bulk solids. These units are a great replacement for RF Admittance / Capacitance type sensors in applications where material dielectric changes or vessel content changes exist because there is no calibration required. They are a great fit for sensing **lightweight** materials, as low as 3.12 pounds per cubic foot.



- ✓ Rugged "Rod" design, sheds material
- ✓ LED indicates Normal / Alarm status
- ✓ Universal AC/DC power supply
- ✓ No calibration required
- ✓ Solid-state design, no moving parts
- ✓ Twist off cover
- ✓ Selectable High/Low fail-safe output
- ✓ Removable wiring terminals
- ✓ Dual conduit entrances
- ✓ Rotatable housing simplifies conduit alignment



BlueLevel Technologies, Inc.
3778 Timberlake Dr.
Richfield, OH 44286 USA

Email: bluelevel@blueleveltechnologies.com
Phone: 330-523-5215
Fax: 330-523-5212

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Vibrating Element “Rod” Point Level Sensor



Technical Data

Power Supply	Universal 20-255VAC/DC
Sensitivity	Selectable, minimum density is 3.12lbs/ft ³ (0.05kg/dm ³ or 50kg/m ³)
Time Delay	Selectable - When Covered: <1.8 sec or 5 ± 1.5 s - When Uncovered: < 2 sec or 5 ± 1.5 s
Fail-Safe	Selectable – High or Low
Housing	Die-cast aluminum, FDA compliant powder coat, NEMA Type 4X, IP65
Process Connection	1-1/2" NPT stainless steel
Probe Materials	316Ti stainless steel
Process Temp	Standard Probe -22° F to +230° F (-30° C to +110° C) High Temp Rod -22° F to +320° F (-30° C to +160° C)
Certifications	CE mark

Ordering Information

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Probe	Version	Output
1 – Standard Rod 2 – High Temp Rod	1 – Standard Length 2 – Pipe Extended 3 – Cable Extended 4 – Split-Architecture	1 – SPDT Relay
Approvals	Process Connection	
1 – Ordinary Location (CE Mark)	1 – 1-1/2" NPT	

Principal of Operation

Model VHS sensors use a mechanical resonance system. The mechanical element is excited and kept in resonance by the sensor’s electronic circuitry. An electrical signal is applied to a piezoelectric crystal. This electrical excitation causes physical deformation of the crystal, which in-turn creates the probe element vibration at its natural resonant frequency. When no material is present around the probe, the vibration exists. With material present and surrounding the probe element, the vibration is dampened and detected by the electronic circuitry. This results in a change in the relay output and local LED indication.

Application and Use

Model VHS vibrating element point level sensors are used to detect the presence and absence of powders and granular bulk solid materials in bins, hoppers and silos. Best performance and use can be found with dry and free-flowing materials. The Model VHS is great for use in detecting **lightweight** materials with density as low as 3.12 lbs/ft³ (0.05 kg/dm³). Model VHS vibrating element sensors are also ideal for vessels with changing contents as the sensors do not require calibration, unlike RF capacitance or admittance sensors. Industries where successful applications can be found include Plastic Processing, Chemical, Agriculture, Food, Pulp & Paper, Recycling, Power, Mining/Quarry and Construction.

Standard Models Available

- Standard probe 8.15" (207mm) insertion length
- Pipe Extended probe from 20" (508mm) to 118" (3m)
- Split-Architecture (remote electronics)
- Cable Extended probe from 39" (1m) up to 65' (20m)
- Ordinary locations



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