

MODEL VHS FORK



Vibrating Element Solids Level Sensor

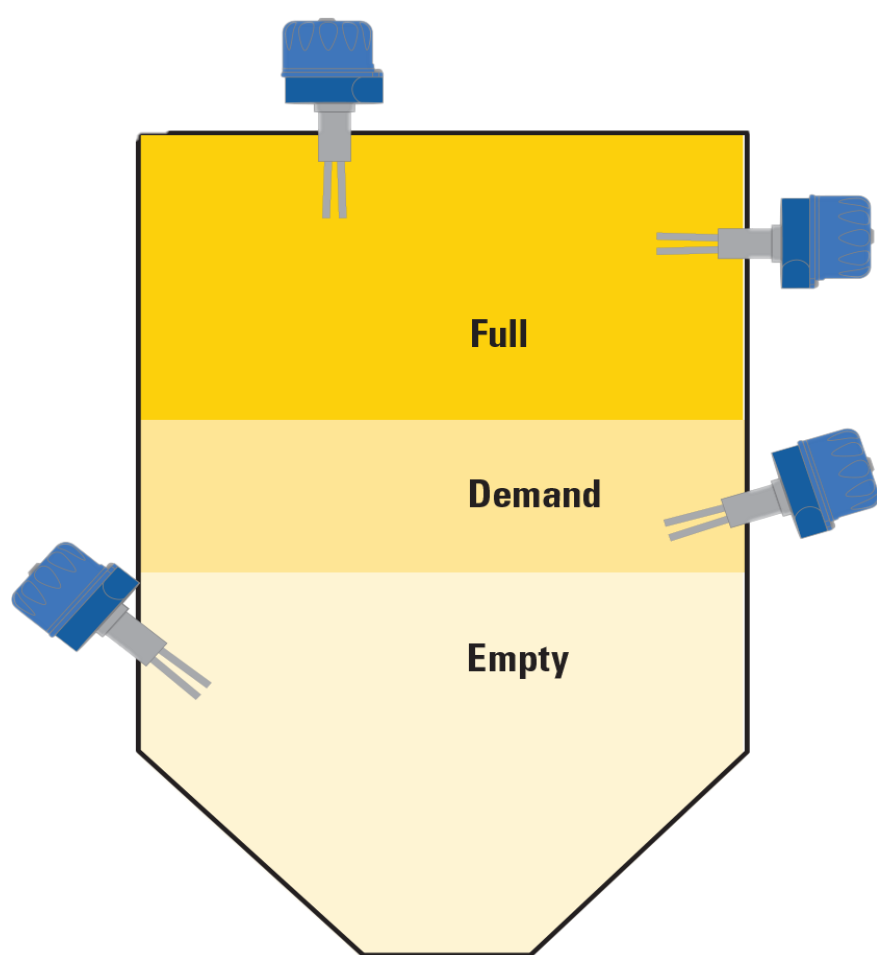
Vibrating element “FORK” style point level sensor using piezoelectric crystal technology is a solid-state device for high, low and intermediate bin level indication and level control of dry free-flowing powders and granular materials.



ABOUT

As these units require no calibration, they are a great replacement for RF Admittance / Capacitance type sensors in applications where material dielectric changes or vessel content changes exist. They are a SUPERB FIT for sensing **ULTRA-lightweight** materials, as low as 0.624 pounds per cubic foot (0.01 kilograms per cubic decimeter).

Industries where successful applications can be found include Plastic Processing, Chemical, Food and many others.



✓ “Fork” design has highest sensitivity

✓ 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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Technical Data

Power Supply	Universal 20-255VAC/20-60VDC
Sensitivity	Selectable, minimum density is 0.624lbs/ft ³ (0.01kg/dm ³)
Time Delay	Fixed - When Covered: ≤ 0.5 s - When Uncovered: ≤ 2 s or ≤ 1 s
Output	SPDT Relay, 8A @ 250VAC
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	-22° F to +266° F (-30° C to +130° C)
Ambient Temp	-22° F to +144° F (-30° C to +60° C)
Certifications	CE Mark

Ordering Information

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Probe	Version	Output
3 - Standard Fork 4 - Short Fork	1 - Standard Length	1 - SPDT Relay

Approvals	Process Connection
1 - Ordinary Location (CE Mark)	1 - 1-1/2" NPT

Principal of Operation

Model VHS Fork 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 fork, the vibration exists. With material present and surrounding the fork, 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 Fork vibrating element point level sensors are used to detect the presence and absence of very **lightweight** 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 Fork is great for use in detecting very **lightweight** materials with density as low as 0.624 lbs/ft³ (0.01 kg/dm³). Model VHS Fork 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, Food and many others.

Standard Models Available

- Standard Fork 6.9" (175mm) insertion length
- Short Fork 5.4" (137mm) insertion length
- Ordinary locations



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