

# Model VHS

## Vibrating Element Solids Level Sensor

### ***Changing Contents, Low Density Materials - No Problem!***

Ideal level sensor technology for powders and granular materials - no calibration, universal AC/DC power supply and proven solidstate technology



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## 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 at the natural resonant frequency. This electrical excitation causes physical deformation of the crystal, which in-turn creates the probe element vibration. 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/ft<sup>3</sup> (0.05 kg/dm<sup>3</sup>). 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)

## Technical Data Summary

Power Supply	Universal 20-255VAC/DC
Sensitivity	Selectable, minimum density is 3.12lbs/ft <sup>3</sup> (0.05kg/dm <sup>3</sup> or 50kg/m <sup>3</sup> )
Time Delay	Selectable
When Covered	<1.8 sec or 5 ± 1.5 sec
When Uncovered	< 2 sec or 5 ± 1.5 sec
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) Hight Temp Rod -22° F to +320° F (-30° C to +160° C)
Certifications	CE Mark

# Model VHS

## Vibrating Element Solids Level Sensor

- ✓ rugged probe - high durability
- ✓ proven technology - highly reliable
- ✓ high sensitivity - senses low density materials
- ✓ universal AC/DC power supply - flexibility
- ✓ solidstate - no moving parts
- ✓ no calibration required - easy setup
- ✓ you are protected - *golden parachute support*

## Ordering Information

Final Assembly Part Number Structure

46 - XXX 1 - 1 XX

### Probe

- 1 - Standard Rod
- 2 - High Temp Rod

### Version

- 1 - Standard Length
- 2 - Pipe Extended
- 3 - Cable Extended
- 4 - Split-Architecture

### Output

- 1 - SPDT Relay

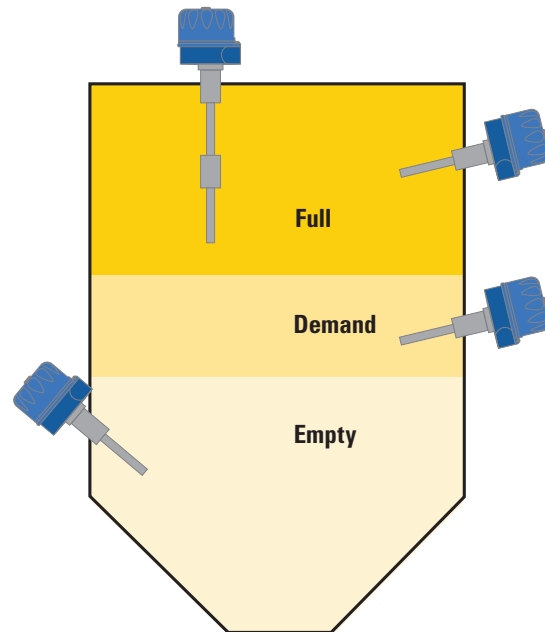
### Approvals

- 1 - Ordinary Location (CE Mark)

### Process Connection

- 1 - 1-1/2" NPT

## Product Use



## The Next Level

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