

VIBRATING FORK

with Hazloc Approvals



Appropriate for Light and Fine-Grained Materials

The VF-90 is a vibrating fork style level switch for universal use in powders and fine-grained bulk solids. The fork design works best in granular materials and smaller particle sizes that will flow freely by and through the fork mechanism, avoiding damp materials that might cling to the forks. The rugged stainless-steel fork resists bending and buildup and requires no maintenance.

Used for High- and Low-Level Detection

The VF-90 is mounted on the side or cone of the vessel to reliably detect high and low levels in bins, silos, tanks, and hoppers. The tuning fork design is ideal for use in light or powdered bulk solids with a very low bulk density that cannot be sensed by a capacitance probe. Other applications include dry cement and sand, animal feeds, and powdered, flaked, or pelletized materials such as wood or plastics.



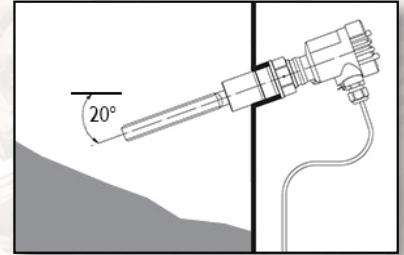
VF-90

Ease of Setup and Little Maintenance

The VF-90 is easy to set up in an empty vessel without any material present and requires no calibration. It has a product-independent switching point, ensuring it operates reliably, regardless of material properties or when used in a new or different material. Once installed, it requires minimal maintenance, saving time and reducing costs. The stainless-steel fork resists buildup of material and requires only occasional cleaning and inspection.

How the VF-90 Works

With the VF-90 series, the tuning fork is used as the sensor element. The fork is mounted parallel to the product movement to generate minimal resistance to product flow. When the medium covers the tuning fork, the amplitude is dampened. The electronics detect this dampening and initiates a switching command alerting to a full or empty condition.



Versatile Housing and Output Options

The housings are available in plastic, aluminum and casted or electropolished stainless steel appropriate for use in food products and pharmaceuticals. They are available with protection ratings up to IP 67. The VF-90 is available with a variety of output options including a contactless electronic switch, and DPDT relay output, a transistor output, and two-wire version.

For Use in Hazardous and Unclassified Locations

The VF-90 is suitable for use in hazardous areas and is approved to ATEX, FM, CSA and IEC standards.

FM (NI) Class I, Div 2, Groups A, B, C, D (DIP) Class II, III, Div 1, Groups E, F, G

FM (IS) Class I, II, III Div 1, Groups A, B, C, D, E, F

FM (XP) Class I, Div 2, Groups A, B, C, D (DIP) Class II, III, Div 1, Groups E, F, G

CSA (NI) Class I, II, III Div 2, Groups A, B, C, D, E, F, G

CSA (IS) Class I, II, III Div 1, Groups A, B, C, D, E, F, G

CSA (XP) Class I, II, III Div 1, Groups A, B, C, D, E, F, G

VF-90 Product Specifications

Process temperature: -58° to +482°F (-50° to +250°C)

Process pressure: -1 to +25 bar/-100 to +2500 kPa (-14.5 to +363 psig)

Ambient temperature: -40° to +176°F (-40 to +80 °C)

Bulk density: > 0.008 g/cm³ (0.0003 lb./in.³)

Process fitting: Thread from G1½, 1½ NPT, flanges from DN 50, 2"

Power: 20 to 253 V AC, 50/60 Hz, 20 to 253 V DC

Signal output: Relay (DPDT), transistor (NPN/PNP), two-wire output, contactless electronic switch

Switching relay: When being covered 0.5 second, when being uncovered 1 second

Housing material: Plastic, aluminum, stainless steel (precision casting), stainless steel (electropolished)

Protection rating: IP 66/IP 67 (NEMA Type 4X)

VF90-0323-BLC