

VIBRATING FORK LEVEL SWITCH MODEL VIB – 505



Suitable for High / Low Level

Self Cleaning

Robust Design

Simple Installation

High Temperature Version

No Calibration required

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VIBRATING TUNING FORK LEVEL SENSORS ARE PIEZOELECTRIC DEVICES WITH TWO BLADES. THE BLADES OF THE SENSOR VIBRATE IF THERE IS NO MATERIAL COVERING THE ACTIVE ELEMENTS.

WORKING

When the blade is covered, the vibration is dampened by material and an electronic circuit forces a relay to switch indicating a covered condition. When the blades are uncovered, the vibration will restart and the relay will indicate an uncovered condition.

PRINCIPLE

In application, the vibrating blades are driven by a piezo crystal excited by the electronics system. The driving signal changes the physical shape of the piezo crystal which causes the mechanical vibration of the blades, much like a piezo type loudspeaker. The perfectly balanced mechanical system then resonates at the frequency of the drive signal. The blade design is carefully balanced to provide a very low loss “tip sensitive” vibrating system and requires a very small amount of energy to keep the system vibrating.

A second piezo crystal is used to detect the vibration of the blades, in turn signalling to the electronics if the blades are covered

TECHNICAL SPECIFICATIONS (STANDARD)

SWITCHING UNIT

Housing: Aluminium, weather proof, powder coated. The device is an integral unit with the probe suitable for back panel mounting.

Cable entry: 2 nos. PG 16

Ambient temperature: 0 ° C to +60° C

Power consumption: 2 VA

Mains Voltage: 230/110 V AC (+/-15%), 50 Hz or 18-55 V DC
65 to 265 V AC (Optional)

Output:

a) 2 sets of potential free c/o contacts rated at 5 amps, 230 V AC for non inductive loads.

b) PNP/NPN with DC Mains Switching delay
Continuously adjustable from 2 to 20 sec. probe free or probe covered. (Optional)

Safety operation: Field selected switch over for min. or max. (FSL/FSH) switching points.

Switch status: Green LED display shows Normal, Red LED shows alarm.

FORK (SENSING PROBE)

Mounting: Screwed – 1.½” BSP (standard) Or Flanged (optional)

Sense: Fork, Stainless steel (SS 316)

Extension: Pipe (SS 304)

Length:

a) 200 (standard) up to 3000 mm and as per application. (Rigid)

b) Flexible, Wire probe operating: 150 deg for the Temp in integral switching vessel unit (Standard). 200°C (on request) with material or are free from the material.



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