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Elixir-T-Uni - Compact Vibrating Fork for Hygienic Applications

Version 2.1

Elixir-T-Uni is a very compact level limit switch used in tanks, containers and pipelines. It is suitable for all kinds of liquids having viscosity upto 10,000 cP & density greater than or equal to 0.7gm/cc.

Principle

Elixir-T-Uni works on the principle of continuous vibration of the fork at its natural frequency. A specially shaped tuning fork is kept vibrating by piezo electric elements. The resonant frequency of the fork changes when its tines are immersed in a fluid. This change in frequency is detected and used for switching. The open collector PNP output can be used to energise relay or as input to PLC.



Approvals IP-67 Marking, RoHS Compliance, CE Marking

Features

More compact, hygienic, foam-immune, silent fork

- Smoother fork made by special process
- Ideal for hygiene-conscious applications (see Figure 1)
- Average surface finish of 0.8 Ra, no buffing required
- Use of Hall sensors to cater higher temperatures
- Intelligent software for self-test for proper functioning
- Immunity to material buildup such as foam
- Status indications for temperature overshoot, fork health
- Silent operation for operator's peace of mind
- No calibration required, easy to install
- Service friendly plug-in connection
- Operational safety, reliability
- Easy circuit testing by test magnet

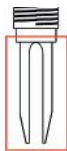
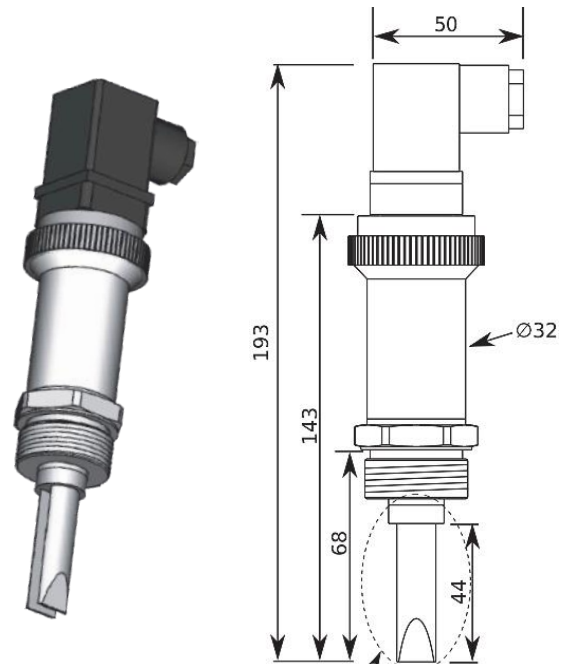


Figure 1: Fork design conducive to hygiene maintenance

Parts

The dimensions (in millimeters) of Elixir-T-Uni are explained in Figure 2.



For Hygienic Application:
Surface Finish in Ra = 0.8µm

Figure 2: Dimensional Drawing of Elixir-T-Uni

Manufacturing Level Instruments & Speed Monitoring Systems

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Applications

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- Paper
- Sugar

Technical Specifications

Mechanical

Resonant Frequency:	1.6 KHz
Housing:	Stainless steel
Mounting:	Threaded: 1/2", 3/4", 1" BSP/NPT Flanged: As per specification Others: Tri-clamp arrangement
Cable Entry:	PG 11 cable gland
Connector type:	Quick ON connector
Fork Length:	44 mm
Probe Length:	65 mm
SS Housing:	Φ 32 mm
Sensing:	Resonating fork SS 316

Electrical

Indication:	LED Indication
Power:	Green
Switching:	Red
Status:	Blue
Input Supply:	18 - 30 V DC
Output:	Switching, Open collector PNP
Temperature:	0°C to 60°C (Electronics), 0°C to 150°C (Material)

Measuring System

Elixir-T-Uni vibrating fork level switch detects the resonant frequency change and changes the output signal according to fail-safe mode selection. Typically, the output is fed to a PLC which then uses it to control the process. The installation diagram (Figure 3) describes the correct (marked green) and incorrect (marked red) mounting arrangements for Elixir-T-Uni.

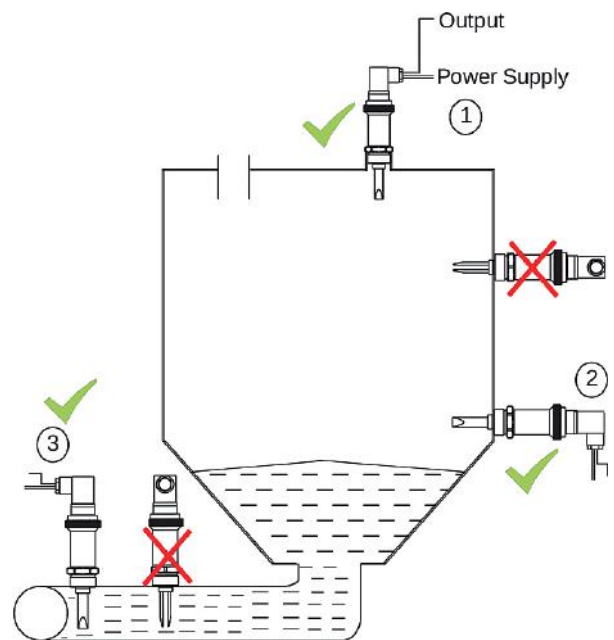


Figure 3: Installation Diagram

Why Sapcon

- Sapcon ~ Synonymous with Level Measurement.
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- Understanding your problems, always ready with solutions.
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