

ELIXIR - Tuning Fork Level Switch for Liquids

Version 2.2

Elixir vibrating fork is a level switch for liquids and is used in tanks, containers and pipelines. As a sturdy replacement of conventional float switch, Elixir offers a variety of built-in features non-existent in floats and other switches, e.g. where materials are sticky, corrosive, agitated, splashing, foaming and having uncertain electrical properties. Elixir vibrating fork is suitable for hazardous areas, available with explosion-proof housings certified by CMRI, Dhanbad.

Principle

A specially shaped tuning fork is kept vibrating using piezo-electric elements. Typically, the fork vibrates at its natural frequency. The frequency of oscillation for the tuning fork changes when immersed in liquids. The change in frequency is detected by the microprocessor leading to a switching decision.

Approvals CE Marking, RoHS Compliance, IP66/68 Marking



Features

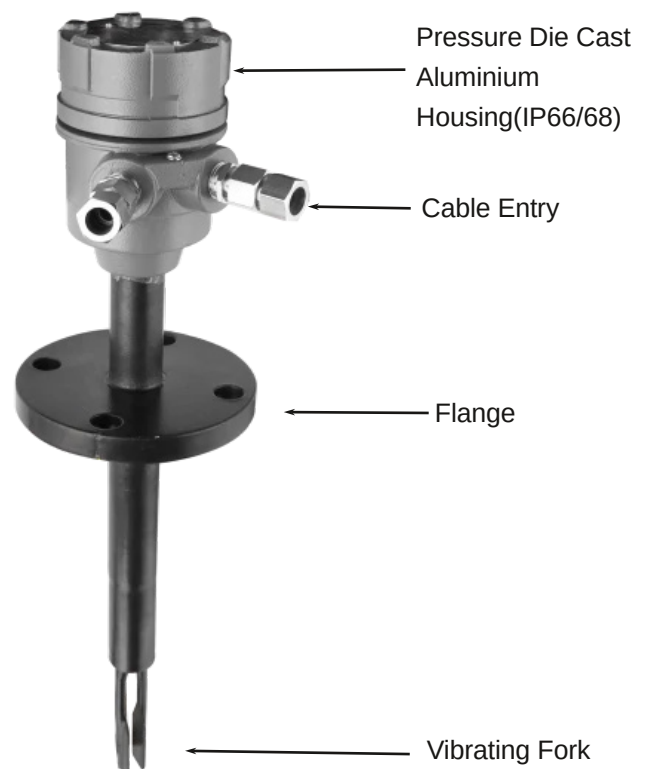
- Less Power Consumption: Less Heat, Long Life
- Universal Power Supply: 18 to 55 V DC, 90 to 265 V AC on the same terminals
- Application Temperature : Up to 200° C
- Suitable up to 10,000 cP (Detects all Industrial Fluids)
- Compact Size: Less space required
- Extendable probe length from 68 to 3000 mm
- ECTFE & PFA coated
- Hygienic fork & Connection
- Output: 8.2V Namur, SPDT & DPDT Relay type current output, ASI-ASI-3, Actuator Sensor Interface, 4-bit bus
- Calibration Free, independent of material's dielectric properties

Applications

- | | |
|-------------------|--------------|
| • Pharmaceuticals | • Brewery |
| • Dairy | • Textile |
| • Pesticides | • Chemicals |
| • Petrochemicals | • Cosmetics |
| • Confectionary | • Edible Oil |
| • Distillery | • FMCG |
| • Packaging | • Sugar |
| • Power | |

Parts

The parts of Elixir is explained in Figure .



Manufacturing Level Instruments & Speed Monitoring Systems

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Technical Specifications

Mechanical Specifications

Housing :

SCUTE: Pressure Die Cast Aluminium weather proof (IP68)

FP2C: Pressure Die Cast Aluminium weather & flame proof for Gas Group IIC, IP66/68

Type : Integral, Remote

Cable Entry : PG 13.5, M20, BSP, NPT

Resonant Frequency (in Air): 400 Hz (100 mm Tines) and 1.6 KHz (44 mm Tines)

Sensing : Resonating Fork, SS316L/C276

Mounting :

Screwed: 1/2" to 1 1/2" BSP/NPT (M)

Flanged: ANSI, DN, JIS, IS

Probe Length : 68 to 3000 mm

Wetted Parts :

- SS304
- SS316
- SS316L
- Hostolloyc276
- PFA Coated
- Halar Coated

Temperature : Up to 200°C

Operating Pressure: Upto 40 bar

Electrical Specifications

Output : SPDT Relay output 1NO, 1NC (Relay rated at 6 A, 230 V AC for non-inductive load) and PNP output (only for supply voltage 18V to 35V DC)

Power Consumption : Less than 3 Watts

Fail-safe Setting :

Field selectable (Min : Failsafe Low, Max : Failsafe High)

Response Time : 0.5 seconds

Time Delay Settings : Cover & Uncover Delay: 1 - 25 secs through DIP switches

Sensitivity Setting : Field Selectable (through toggle switches)

Mains : 90 to 265 V AC at 50/60Hz & 18 to 55 V DC

Switching Indication : Bi-color LED, Red: Alarm, Green: Normal

Minimum Fluid Density : 0.7 gm/cc

Maximum Fluid Viscosity : 10,000 cP

Switching Hysterisis : 5mm (approximate)

Dimensions : Refer Drawings/Customer Support

Product Variant

ELIXIR

TYPE

- Integral
- Remote

HOUSING

- Pressure die-cast aluminium
- Weatherproof plastic, PBT-FR & PC, IP68/66
- Die-cast aluminium weather & Flameproof

OUTPUT

- SPDT Relay output
- DPDT Relay output
- Namur type current output at 8.2V
- ASI
- Two-wire loop powered 8/16mA

POWER SUPPLY

- Universal (18-55 V DC & 90-265 V AC)
- 24 V DC
- 8.2V supplied by Namur isolator

SURFACE COATING

- HALAR (ECTFE)
- PFA

MOUNTING

- Screwed Thread, BSP/NPT 1/2" - 1 1/2", SS 304/SS 316
- Flange, 1" - 2 1/2", SS 304/SS 316/SS316L, C276
- Tri-clamp

VIBRATING FORK

- Tines 44mm, SS 316L
- Tines 100mm, SS 316L

FINISH

- Standard
- Fully Buffed
- Hygienic

EXTENSION / STANDOFF MATERIAL

- SS 304
- SS 316
- C276

TEMPERATURE

- Up to 200°C

PROBE LENGTH

- 68mm
- 105mm
- 130mm
- 175mm
- 100 to 2000mm
- 200 to 3000mm

Connect to us

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