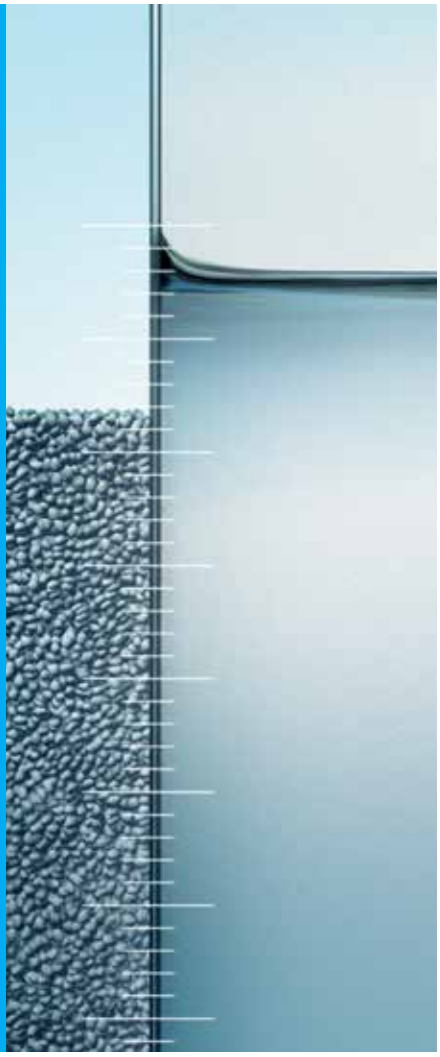
Reliable point level switches
Liquiphant and Liquipoint



Endress+Hauser
People for Process Automation

The perfect complement for point level detection in liquids and pastes

Liquiphant and Liquipoint

Model number	Liquipoint FTW23	Liquiphant® FTL33	Liquipoint FTW33	Liquiphant® FTL50H/FTL51H
				
Measuring principle	The capacitance at the tip of the sensor, and therefore the dielectric value of the medium, is determined using an electrical field. Given that the dielectric value of air and a water-based liquid differ, the Liquipoint FTW23 can differentiate between the two states, i.e. covered and uncovered.	A sensor in the form of a tuning fork is excited to its resonant frequency. The drive operates by a piezo-electric drive. Immersion into a liquid changes the oscillating frequency. This change is analyzed and converted into a switching signal.	A change in resistance between two conductors (electrodes) caused by the presence or absence of the medium leads to a switching signal. If the probe is uncovered, the resistance is theoretically infinitely high. If the medium covers the probe (conductive connection), the resistance assumes a finite value. A current flows which is converted into a switching signal.	A sensor in the form of a tuning fork is excited to its resonant frequency. The drive operates by a piezo-electric drive. Immersion into a liquid changes the oscillating frequency. This change is analyzed and converted into a switching signal.
Features	▪ Basic applications with water-based liquids ▪ Cost effective ▪ Compact design ▪ No calibration required	▪ Universal applications ▪ Active sensor with permanent self-monitoring	▪ Flush-mounted installation ▪ Reliable in highly viscous and lumpy media ▪ Integrated buildup compensation	▪ Universal applications ▪ Active sensor with permanent self-monitoring ▪ Multiple types of outputs
Technical data	▪ Process temperature: -4 to +212°F (-20 to +100°C), CIP/SIP up to 275°F (135°C) for 1 hr ▪ Process pressure: -14.5 to +232 psi (-1 to +16 bar) ▪ Material: 316L / PEEK® ▪ Approvals: EHEDG, WHG	▪ Process temperature: -40 to +302°F (-40 to +150°C) ▪ Process pressure: -14.5 to +580 psi (-1 to +40 bar) ▪ Material: 316L ▪ Approvals: EHEDG, 3-A, WHG	▪ Process temperature: -4 to +302°F (-20 to +150°C) ▪ Process pressure: -14.5 to +362.5 psi (-1 to +25 bar) ▪ Material: 316L / PEEK ▪ Approvals: EHEDG, 3-A	▪ Process temperature: -58 to +302°F (-50 to +150°C) ▪ Process pressure: -14.5 to +1450 psi (-1 to +100 bar) ▪ Material: 316L ▪ Approvals: 3-A, EHEDG, WHG ▪ Safety systems - SIL2/ SIL3

FTL33, FTW23 and FTW33 Product Applicaions/Medias/Features

Process media	FTL33	FTW23	FTW33
Water, yogurt (natural)	✔	✔	✔
Milk/creme, beer, soda	✔	✔	✔
Edible oil	✔	✔	✔
Mustard, mayonnaise, ketchup, fruit pieces	●	X	✔
Tooth paste, chocolate spread	✔	●	✔
Feature			
Safe switching, also in an alarm condition (closed-circuit principle)	✔	✔	✔
Continuous self-monitoring	✔	✔	✔
Function test with test magnet from outside	✔	✔	✔
Process connection	Thread NPT, G ½, ¾, 1"; M24; clamp; dairy clamping; flush mount	Thread G ½", ¾", 1", M24	Thread G ½", ¾", 1"; M24; clamp; dairy clamping
Output	DC-PNP / AC/DC, 2-wire	DC-PNP	
Optional switching delay adjustment	Standard 0.5/1s Optional 0.2s, 1.5s or 5s	Standard 0.5/1s	Standard 0.5/1s Optional 0.2s, 1.5s or 5s
EHEDG/3-A	✔	✔	✔

● Depending on the buildup, viscosity and fruit piece sizes

Know-how of 45 years in point level detection in the food industry. Exclusively 316L material in contact with the process.

Liquipoint FTW33

Your advantages

- Easier and faster cleaning
- No impairment of product quality
- No calibration required in changing media
- Immune against buildup

The safe choice For many years, Endress+Hauser has manufactured instrumentation which meets the highest demands of reliability, safety and hygienic design in food production. Our program comprises optimum process connections for all relevant instruments. Design, material selection and surface properties correspond to the strict international regulations for the food industry.

The experience from the development of instrumentation, which is also used in biotechnology and pharmaceuticals, was consistently implemented in instruments which set standards in terms of design and reliability. We meet the requirements of organizations like EHEDG, FDA and 3-A. This ensures optimum processes and cleaning. Endress+Hauser offers the entire range of instrumentation, data integration and administration to provide innovative solutions for all aspects of the process, from raw materials and production through to waste water treatment.

Endress+Hauser level measurement

Capacitance	Conductive	Electro-mechanical	Vibration	Ultrasonic	Radar	Guided Radar	Gamma	Hydrostatic	Differential
									

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