

# Vibronic

## Point level detection

### Liquiphant FTL51

Point level switch with extension tube for liquids in all industries



More information and current pricing:

[www.es.endress.com/FTL51](http://www.es.endress.com/FTL51)

#### Benefits:

- Use in safety systems requiring functional safety to SIL2/SIL3 in accordance with IEC 61508/IEC 61511-1
- International explosion protection certificates and overfill prevention certificate (WHG)
- No calibration required, easy to start up
- No mechanically moving parts: no maintenance, no wear, long operating life.  
Monitoring of fork for damage: guaranteed function
- Second line of defense to protect the environment
- Variety of standardized process connections for all applications
- Stainless steel (316L) and high-corrosion resistant sensor material (Alloy)

#### Specs at a glance

- **Process temperature** -50 °C...+150 °C (-58 °F...+302 °F)
- **Process pressure / max. overpressure limit** Vacuum...100 bar
- **Min. density of medium** 0.5g/cm<sup>3</sup>(0.4g/cm<sup>3</sup> optional)

**Field of application:** Liquiphant FTL51 is a point level switch with extension tube for use in hazardous areas with all international certificates. Useable in all industries. FTL51 offers functional safety SIL2/SIL3. With the second line of defense highest degree of safety and availability of the device can be guaranteed. Reliable measurement values, not affected by: changing media properties, flow, turbulences, gas bubbles, foam, vibrations or build-up.

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## Features and specifications

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### Point Level / Liquids

**Measuring principle**

Vibration Liquids

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**Characteristic / Application**

Modular housing concept  
wide range of process connections  
Analogue and bus interfaces  
Extensive certificate range (e.g. Ex, WHG)  
pipe extension up to 3m (6m option)

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**Specialities**

Foam detection  
Detect a density change  
second line of defense

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**Supply / Communication**

PROFIBUS PA  
19...253V AC  
10...55V DC-PNP  
19...253V AC or 10...55V DC  
8/16mA, 11...36V DC  
NAMUR  
PFM

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**Ambient temperature**

-50 °C...+70 °C  
(-58 °F...+158 °F)

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**Process temperature**

-50 °C...+150 °C  
(-58 °F...+302 °F)

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**Process pressure / max. overpressure limit**

Vacuum...100 bar

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**Point Level / Liquids****Min. density of medium**0.5g/cm<sup>3</sup>(0.4g/cm<sup>3</sup> optional)

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**Main wetted parts**316L / Alloy

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**Process connection**

Thread:

G3/4A, G1A, R3/4", R1, NPT3/4, NPT1

Flange:

DN25...DN100,

ASME 1"...4",

JIS 25A...100A

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**Process connection hygienic**Tri-Clamp ISO2852

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**Sensor length**

Length 130mm (5.12") (Liquiphant II)

148mm...6000mm (5.83"...236")

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**Communication**

PROFIBUS PA

19...253V AC

10...55V DC-PNP

19...253V AC bzw 10...55V DC

8/16mA, 11...36V DC

NAMUR

PFM

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**Certificates / Approvals**ATEX, FM, CSA C/US, IEC Ex, TIIS, INMETRO, NEPSI

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**Safety approvals**SIL2/ SIL3

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**Point Level / Liquids****Design approvals**

EN 10204-3.1  
NACE MR0175, MR0103  
ASME B31.3  
AD2000

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**Marine approval**

GL/ ABS/ DNV

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**Options**

Heavy duty stainless steel housing mainly for the oil and gas industry

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**Components**

FTL325P/FTL375P Interface PFM  
FTL325N/FTL375N Interface NAMUR

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**Successor**

Liquiphant FTL51B

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**Density****Measuring principle**

Vibration Density

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**Characteristic / Application**

Liquiphant M Density  
with Density Computer FML621  
Temperature and pressure measurement  
Modular housing concept  
Wide range of process connections  
Pipe extension up to 3 m (6 m option)

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**Supply / Communication**

Transmitter power supply (MUS)

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**Ambient temperature**

-50...70°C  
-50...60°C for hazardous applications

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## Density

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### Process temperature

0...80°C (validity of accuracy data)  
-50...0°C / 80...150 °C (with reduced technical data)

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### Process pressure

0...25 bar  
>25..100 bar (with reduced technical data)

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### Wetted parts

316L/C4

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### Sensor length

115...3000 mm  
>3000...6000 mm (Option)

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### Output

Pulse

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### Certificates / Approvals

ATEX, FM, CSA C/US, IEC Ex, TIIS, INMETRO, NEPSI

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### Specialities

Commissioning with ReadWin2000

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### Components

Density Computer FML621

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### Other approvals and certificates

SIL2/ SIL3

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