

# Vibronic

## Point level detection

### Liquiphant FTL51C

Point level switch for liquids with highly corrosion-resistant coating



More information and current pricing:

[www.at.endress.com/FTL51C](http://www.at.endress.com/FTL51C)

#### Benefits:

- Use in safety systems requiring functional safety to SIL2/SIL3 in accordance with IEC 61508/IEC 61511-1
- Different plastic coating (PFA) and enamel coating for applications with aggressive medias
- 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 environmental
- Variety of standardized process connections for all applications

#### Specs at a glance

- **Process temperature** -50 °C...+150 °C (-58 °F...+302 °F) up to 230 °C / 450°F on request
- **Process pressure absolute / max. overpressure limit**  
Vacuum...40 bar (Vacuum...580 psi)
- **Min. density of medium** 0.5g/cm<sup>3</sup> (0.4g/cm<sup>3</sup> optional)

**Field of application:** Liquiphant FTL51C is a point level switch with extension tube and highly corrosion resistant coating. 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.

## Features and specifications

### Point Level / Liquids

#### Measuring principle

Vibration Liquids

#### Characteristic / Application

High protection against aggressive media by using antistatic coating  
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)

#### Specialities

Foam detection  
Detect a density change  
second line of defense

#### Supply / Communication

PROFIBUS PA  
19...253V AC, 2-wire  
10...55V DC-PNP, 3-wire  
DPDT, 19...253V AC, 10...55V DC  
8/16mA, 11...36V DC  
NAMUR  
PFM, 2-wire  
NAMUR with testbutton

#### Ambient temperature

-50 °C...+70 °C  
(-58 °C...+158 °F)

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**Point Level / Liquids****Process temperature**

-50 °C...+150 °C  
(-58 °F...+302 °F)  
up to 230 °C / 450°F on request

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**Process pressure absolute / max. overpressure limit**

Vacuum...40 bar  
(Vacuum...580 psi)

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**Min. density of medium**

0.5g/cm<sup>3</sup> (0.4g/cm<sup>3</sup> optional)

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**Main wetted parts**

ECTFE  
PFA (Edlon)  
PFA (Rubyred)  
PFA (conductive)  
Enamel

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**Process connection**

Flange:  
DN25...DN100,  
ASME 1"...3",  
JIS RF10 K 50

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**Process connection hygienic**

FDA conform with PFA (Edlon)

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**Sensor length**

ECTFE, PFA 130mm, 148mm...3000mm  
(ECTFE, PFA 5.12", 5.83"...118")  
Enamel 130mm, 148mm...1200mm  
(Enmal 5.12", 5.83"...47.24")

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**Point Level / Liquids****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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**Design approvals**EN 10204-3.1

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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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**Density****Measuring principle**Vibration Density

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**Density****Characteristic / Application**

Liquiphant M Density  
with Density Computer FML621  
Temperature and pressure measurement  
High protection against aggressive media by using antistatic coating  
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...80°C  
-50...60°C for hazardous applications

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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 absolute**

0...25 bar  
>25...40 bar (with reduced technical data)

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**Wetted parts**

ECTFE, PFA and Enamel

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**Sensor length**

115...3000 mm  
(depends by the covering)

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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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## Density

### Specialities

Commissioning with ReadWin2000

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### Components

Density Computer FML621

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### Measuring range

Density range: 0.3 to 2 g/cm<sup>3</sup>

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### Other approvals and certificates

SIL2/ SIL3

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More information [www.at.endress.com/FTL51C](http://www.at.endress.com/FTL51C)