

# Liquiphant FTL51B - digital, simple and safe

## Point level switch for all liquid media



More information and current pricing:

[www.si.endress.com/FTL51B](http://www.si.endress.com/FTL51B)

### Benefits:

- Universal measuring principle for limit detection – proven vibronic technology
- Developed according IEC 61508 for highest safety – SIL2/3 applications (3rd party approved)
- Periodic proof testing is quickly and simple organized with guided wizards via the SmartBlue-App or via a test button or magnetic pin from outside. Via these ways, you can initiate the instrument for a fast and easy testing of the safety loop
- Heartbeat Technology allows safe, continuous diagnostics and a simple verification
- **Heartbeat Diagnostics:** Permanent diagnostics increase the safety of the plant. You connect your device via the SmartBlue-App and you easily have real time diagnostics at hand
- **Heartbeat Verification:** The device can be verified without process interruption. The verification report is generated automatically
- **Heartbeat Monitoring:** With the frequency tracking of the sensor data you have all information at hand for predictive maintenance and process optimization strategies

### Specs at a glance

- **Process temperature** -50 °C...+150 °C (-58 °F...+302 °F)
- **Process pressure absolute / max. overpressure limit**  
Vacuum...100 bar Vacuum...1450 psi
- **Min. density of medium** 0.5 g/cm<sup>3</sup> (0.4 g/cm<sup>3</sup> optional)

**Field of application:** The Liquiphant FTL51B is specialized for the process industry and already developed according to IEC 61508 to be used directly in SIL2 and SIL3 applications without big efforts. You conduct periodic proof tests according to SIL or WHG simply mobile with an intuitive wizard. At the end you receive an automated

documentation. Liquiphant measures reliably and is 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

Compact vibronic device with an optional pipe extension up to 6 m (19.7 ft);

Modular housing concept;

Wide range of certificates

#### Specialities

Heartbeat Technology,

Bluetooth® Operation and maintenance SmartBlue App,

LED Module,

RFID TAG for easy identification,

Second line of defense,

Ambient temperature down to -50°C (-60°C optional),

Temperature spacer for high process temperature,

Plug and play functionalities

#### Supply / Communication

19...253V AC / 2-wire,

10...55V / DC-PNP 3-wire,

9...20V DC with relay DPDT,

19...253V AC or 19...55V DC with relay DPDT,

NAMUR,

PFM

#### Ambient temperature

-60 °C...+70 °C

(-51 °F...+158 °F)

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

-50 °C...+150 °C  
(-58 °F...+302 °F)

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

Vacuum...100 bar  
Vacuum...1450 psi

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**Min. density of medium**

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

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**Main wetted parts**

316L  
Alloy

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**Process connection**

Threads:  
G3/4A, G1A, R3/4", R1, NPT3/4, NPT1  
Flanges:  
DN25...DN100  
ASME 1"...4"  
JIS 25A...100A

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**Process connection hygienic**

Tri-Clamp ISO2852

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**Sensor length**

Up to 6 m (19.7 ft)

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**Communication**

2-wire direct load  
DC-PNP 3-wire  
Relays  
NAMUR  
PFM  
Bluetooth® wireless technology

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## Point Level / Liquids

### Certificates / Approvals

ATEX, IEC Ex, CSA, NEPSI, KC, JPN Ex, INMETRO

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### Safety approvals

Overfill protection WHG

SIL2/ SIL 3 according to IEC 61508

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### Design approvals

EN 10204-3.1

NACE MR0175, MR0103

ASME B31.3 Process Piping

AD2000

CRN

AD 2000

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### Marine approval

ABS/ LR/ BV/ DNV GL

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### Options

Heavy duty stainless steel housing

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### Components

FTL325P Interface PFM

FTL325N Interface NAMUR

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## Density

### Measuring principle

Vibration Density

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### Product Headline

Liquiphant with Density Computer FML621

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### Characteristic / Application

Compact vibronic device with an optional pipe extension up to 6 m (19.7 ft),

Modular housing concept,

Wide range of certificates

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**Density****Ambient temperature**

-60 °C...+70 °C  
(-51 °F...+158 °F)

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**Process temperature**

-50 °C...+150 °C  
(-58 °F...+302 °F)

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**Process pressure absolute**

Vacuum...100 bar  
Vacuum...1450 psi

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**Wetted parts**

316L  
Alloy

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**Sensor length**

Up to 6 m (19.7 ft)

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**Certificates / Approvals**

ATEX, IEC Ex, CSA, NEPSI, KC, JPN Ex, INMETRO

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**Specialities**

Heartbeat Technology,  
Bluetooth® Operation and maintenance SmartBlue App,  
LED Module,  
RFID TAG for easy identification,  
Second line of defense,  
Ambient temperature down to -50°C (-60°C optional),  
Temperature spacer for high process temperature,  
Plug and play functionalities

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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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Density

**Other approvals and certificates**

Overfill protection WHG

SIL2/ SIL 3 according to IEC 61508

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