

# Vibronic

## Point level switch

### Liquiphant FTL71

Point level switch with extension tube for liquids in high-temperature applications



More information and current pricing:

[www.casc.endress.com/FTL71](http://www.casc.endress.com/FTL71)

#### Benefits:

- Use in safety systems requiring functional safety to SIL2 in accordance with IEC 61508/IEC 61511-1
- With welded gas-tight feed-through maximum safety in the event of damaged sensor
- Wide variety of electronics, e.g. NAMUR, relay, thyristor, PFM signal output: the right connection for every process control system
- Large number of process connections to choose from: universal usage
- No calibration: quick, low-cost start-up
- No mechanically moving parts: no maintenance, no wear, long operating life.
- Monitoring of fork for damage: guaranteed function
- FDA approved materials (PFA Edlon)

#### Specs at a glance

- **Process temperature** -60 °C...+280 °C (-76 °F...+540 °F) (300°C / 572°F, 50h cumulated)
- **Process pressure absolute / max. overpressure limit** Vacuum...100 bar (Vacuum...1450 bar)
- **Min. density of medium** 0.5g/cm<sup>3</sup> (0.4g/cm<sup>3</sup> optional)

**Field of application:** Liquiphant FTL71 is a point level switch with extension tube for use in hazardous areas with all international certificates. FTL71 is especially designed for applications with high process temperatures up to 280°C and can be used up to SIL2, in homogeneous redundancy up to SIL3. An integrated second line of defense offers the highest degree of safety. 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

Modular housing concept

High process temperatures up to 280°C

wide range of process connections

Analogue and bus interfaces

Extensive certificate range (e.g. Ex, WHG)

compact, e.g. pipes

Dual Sealing / Second line of defense

#### Specialities

Foam detection

Detect a density change

second line of defense

#### Supply / Communication

PROFIBUS PA

19...253V AC

10...55V DC-PNP

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

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

NAMUR

PFM

#### Ambient temperature

-50 °C...+70 °C

(-58 °F...+158 °F)

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

-60 °C...+280 °C  
(-76 °F...+540 °F)  
(300°C / 572°F, 50h cumulated)

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

Vacuum...100 bar  
(Vacuum...1450 bar)

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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**

316L / Alloy  
PFA and Enamel on request

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**Process connection**

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

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**Sensor length**

Length 130mm (5.12") (Liquiphant II)  
148mm...3000mm / 6000mm optional  
(5.83"...118" / 236" optional)

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**Communication**

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19...253V AC  
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19...253V AC bzw 10...55V DC  
8/16mA, 11...36V DC  
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PFM

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## Point Level / Liquids

### **Certificates / Approvals**

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

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### **Safety approvals**

SIL

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### **Design approvals**

EN 10204-3.1

NACE MR0175, MR0103

ASME B31.3

AD2000

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### **Marine approval**

GL/ ABS

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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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