

# Capacitance Level measurement Liquicap FMI51

For continuous level and interface  
measurement in liquids



More information and current pricing:

[www.casc.endress.com/FMI51](http://www.casc.endress.com/FMI51)

## Benefits:

- Use also in safety systems requiring functional safety to SIL2 in accordance with IEC 61508
- Reliable and universal application thanks to wide range of certificates and approvals
- No calibration necessary (factory preconfiguration). No calibration necessary for media with a conductivity of 100 $\mu$ S/cm and higher
- Material in contact with the process made of corrosion-resistant material, FDA-listed materials
- Menu-guided local configuration via plain text display (optional)
- Two-stage overvoltage protection

## Specs at a glance

- **Accuracy** Repeatability 0,1%
- **Process temperature** -80°C...200°C -112°F...392°F
- **Process pressure absolute / max. overpressure limit** Vacuum ... 100 bar (Vacuum ... 1450 psi)
- **Max. measurement distance** 0.1 m ... 4.0 m (0.3 ft ... 13 ft)
- **Main wetted parts** Insulation material: PTFE,PFA 316L

**Field of application:** Liquicap FMI51 is a reliable fully insulated rod probe for continuous level monitoring in liquids, particularly in build-up forming media and extremely high temperatures. The measurement is independent of the dielectric constant (dc). Used in conjunction with Fieldgate FXA320 (remote measured value interrogation using Internet technology), Liquicap is an ideal solution for Inventory Management Solutions.

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## Features and specifications

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### Continuous / Liquids

**Measuring principle**

Capacitive

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**Characteristic / Application**

Fully insulated rod probe, for standart- and extreme process conditions (temperature, pressure, build-up)

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**Interface measurement**

Interfaces liquid / liquid also with emulsion layers

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**Specialities**

Inactive length

Factory calibrated

short response time by change of value

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**Supply / Communication**

12-36V DC HART

PFM

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**Accuracy**

Repeatability 0,1%

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**Linearity error for conductive liquids**

<0,25%

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**Ambient temperature**

-50°C...+70°C

-58°F...+158°F

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**Process temperature**

-80°C...200°C

-112°F...392°F

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

Vacuum ... 100 bar

(Vaccum ... 1450 psi)

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**Continuous / Liquids****Main wetted parts**

Insulation material: PTFE,PFA  
316L

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**Process connection**

G1/2, G 3/4, G 1, G1 1/2 /NPT 1/2, NPT 3/4, NPT 1", NPT1 1/2  
Flanges from DN25.../ASME 1".../JIS...

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**Process connection hygienic**

Tri-Clamp ISO02852 gap free plated  
Dairy coupling  
Flush-mounted seal

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**Sensor length**

Total length: 6m (20ft)  
Inactive length: max. 2m (7ft)

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**Max. measurement distance**

0.1 m ... 4.0 m  
(0.3 ft ... 13 ft)

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**Communication**

4...20mA HART  
PFM

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**Certificates / Approvals**

ATEX, FM, CSA, IEC Ex, TIIS, INMETRO, NEPSI, EAC

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**Safety approvals**

SIL

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**Design approvals**

EN 10204-3.1  
NACE MR0175

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**Hygienic approvals**

3A, EHEDG

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## Continuous / Liquids

### Marine approval

GL/ ABS/ DNV

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### Options

Separate housing  
gas-tight probe seal

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### Application limits

Insufficient clearance towards ceiling  
Changing, non-conductive  
media, conductivity  
< 100  $\mu\text{S}/\text{cm}$   
Notice the pressure and temperature derating

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