

Discover the Liquiphant family: Digital, simple and safe

Easy to use, IIoT ready point level switches for all liquid media developed according to IEC 61508.



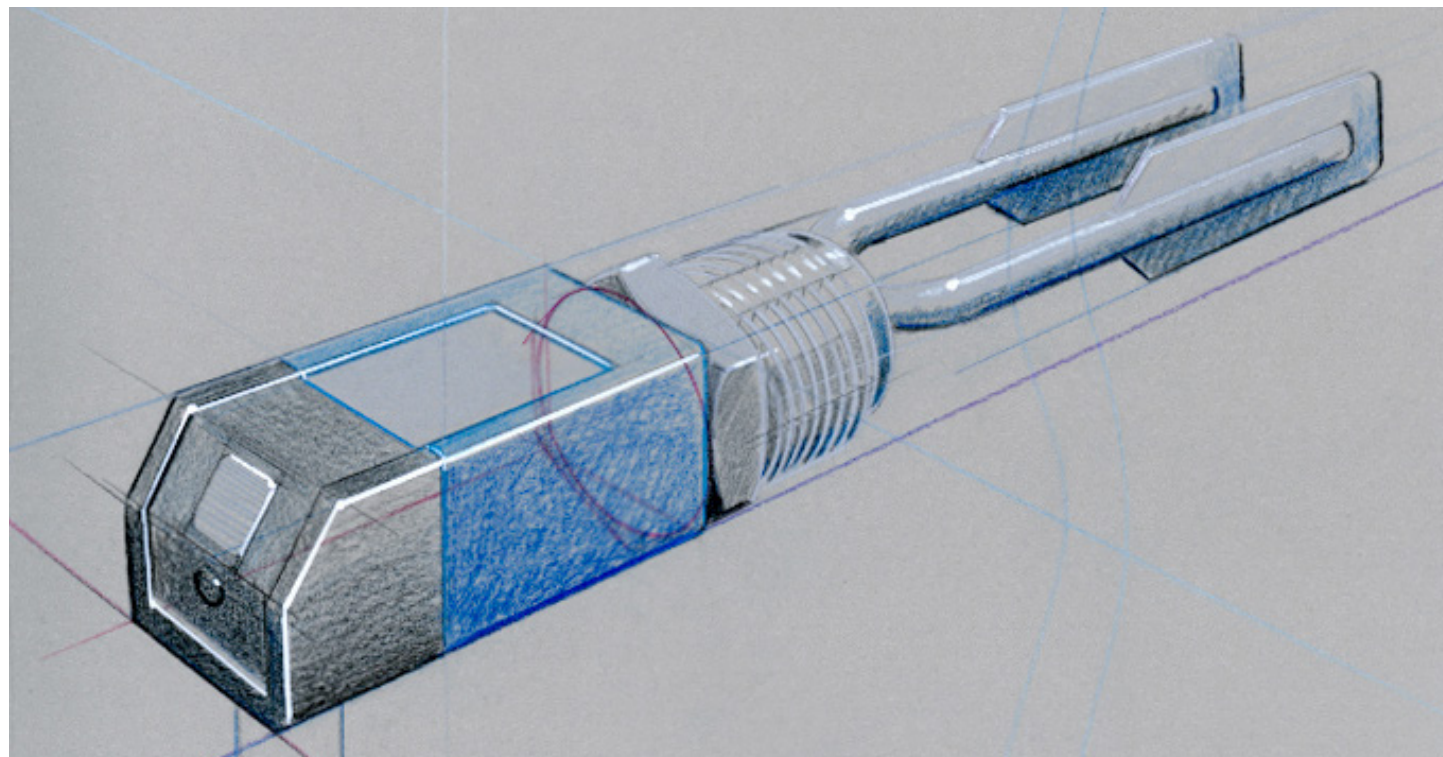
Proven Technology

Towards the end of the 1970s, Endress+Hauser founder Georg H. Endress created a **vision** of a permanently sealed sensor made entirely of metal.

Endress's vision involved a sensor with a single rod to check the presence of liquid.

Capacitive and conductive measuring principles were unsuited to the task, since they could not be used in an instrument composed entirely of metal.

At the start of the 1980s, a group of developers devised a solution to their employer's conundrum by developing a symmetrical double-rod device. A new measuring principle was born: **vibronic**.

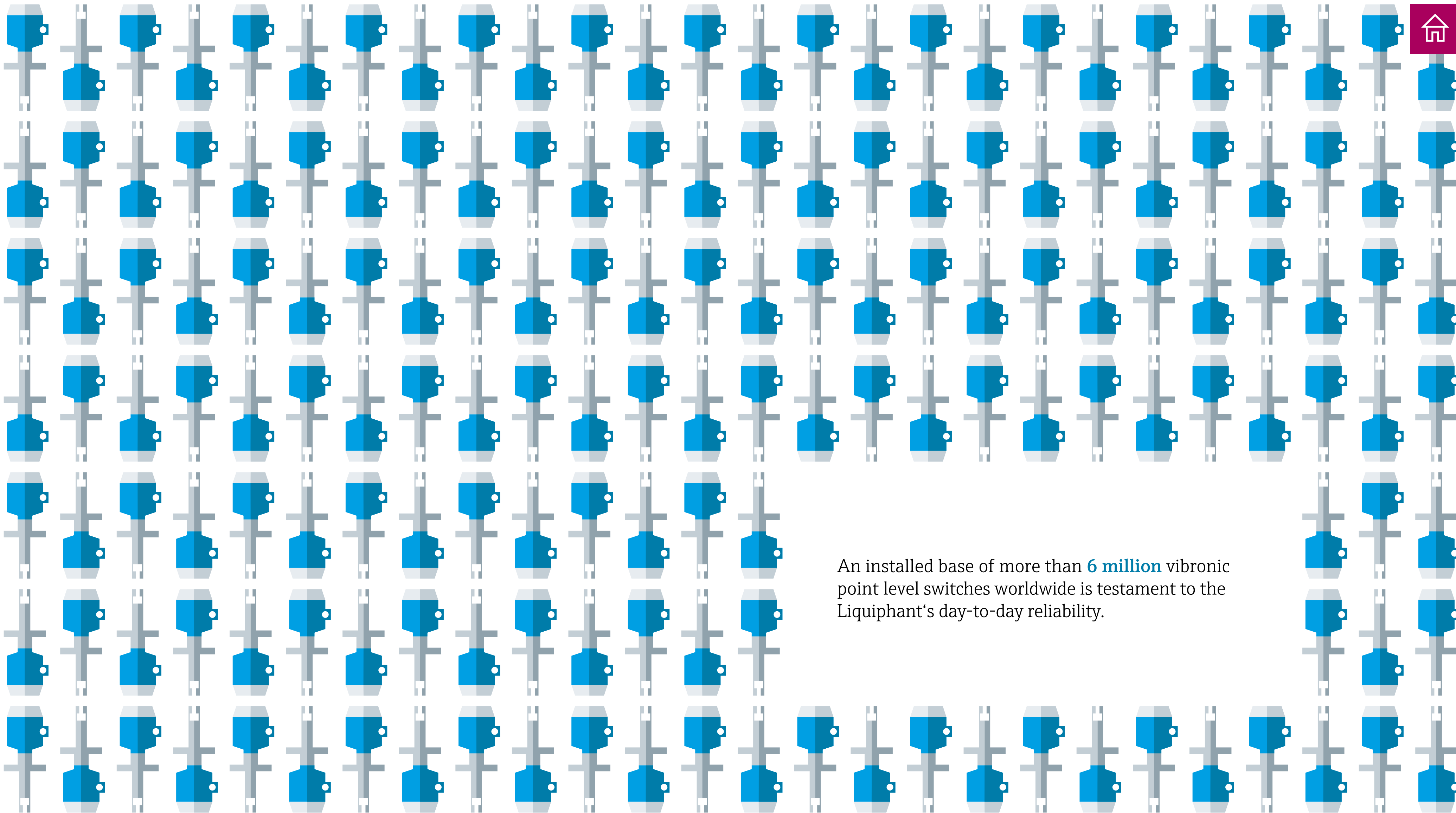




Uncovered

Covered

A piezoelectric device causes the fork to vibrate. When the medium covers the metallic fork, the vibration frequency changes, and the sensor converts this information into an output signal.



An installed base of more than **6 million** vibronic point level switches worldwide is testament to the Liquiphant's day-to-day reliability.



The Liquiphant increases the safety of your plant

The new Liquiphant family point level switches reliably detect all media suitable for pumping.



Increase
plant availability

Prevent
dry running

Enhance
productivity

Avoid
overflowing

Convenient
periodic proof test

Protect
pumps

Increase
plant safety

Plug
and play



Increasing efficiency through Heartbeat Technology

The Liquiphant uses **Heartbeat Technology** to provide an X-ray view of your plant, making you aware of the status of your measuring devices and processes at all times.

Permanent diagnostics **increase the safety** of your plant, while the SmartBlue app provides you with continuous real-time data provided by the Liquiphant.

You verify if the Liquiphant is operating correctly **without interrupting the process**. Simply push a button on your mobile device to obtain a report for the Liquiphant device, and use the data provided to plan maintenance of your plant. The verification function thus **saves you time and effort**.

The device monitoring function along with the process data contained in the verification report and frequency monitoring of the sensor data fulfill the conditions for **predictive maintenance** and highlight areas for **process optimization**.

The report enables you to **detect corrosion early** by comparing the actual vibration frequency to the frequency at delivery.





Reliable measurement even under challenging conditions

The new Liquiphant family **works reliably in all types of liquid media** and is unaffected by the temperature and pressure in the process. Even the following conditions do not comprise the **safety function**:

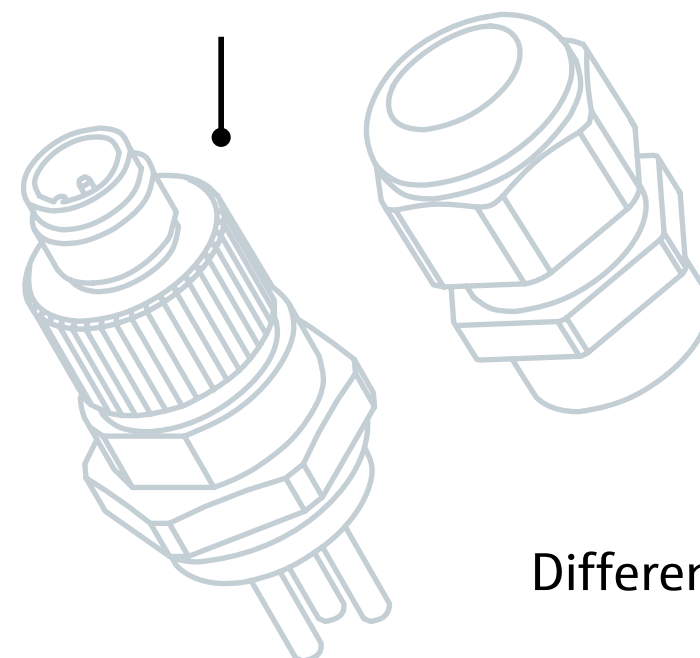
- Build-up
- Suspension, bubbles and foam
- Viscosity, regardless of dielectric constant and conductivity
- External vibrations
- Turbulence



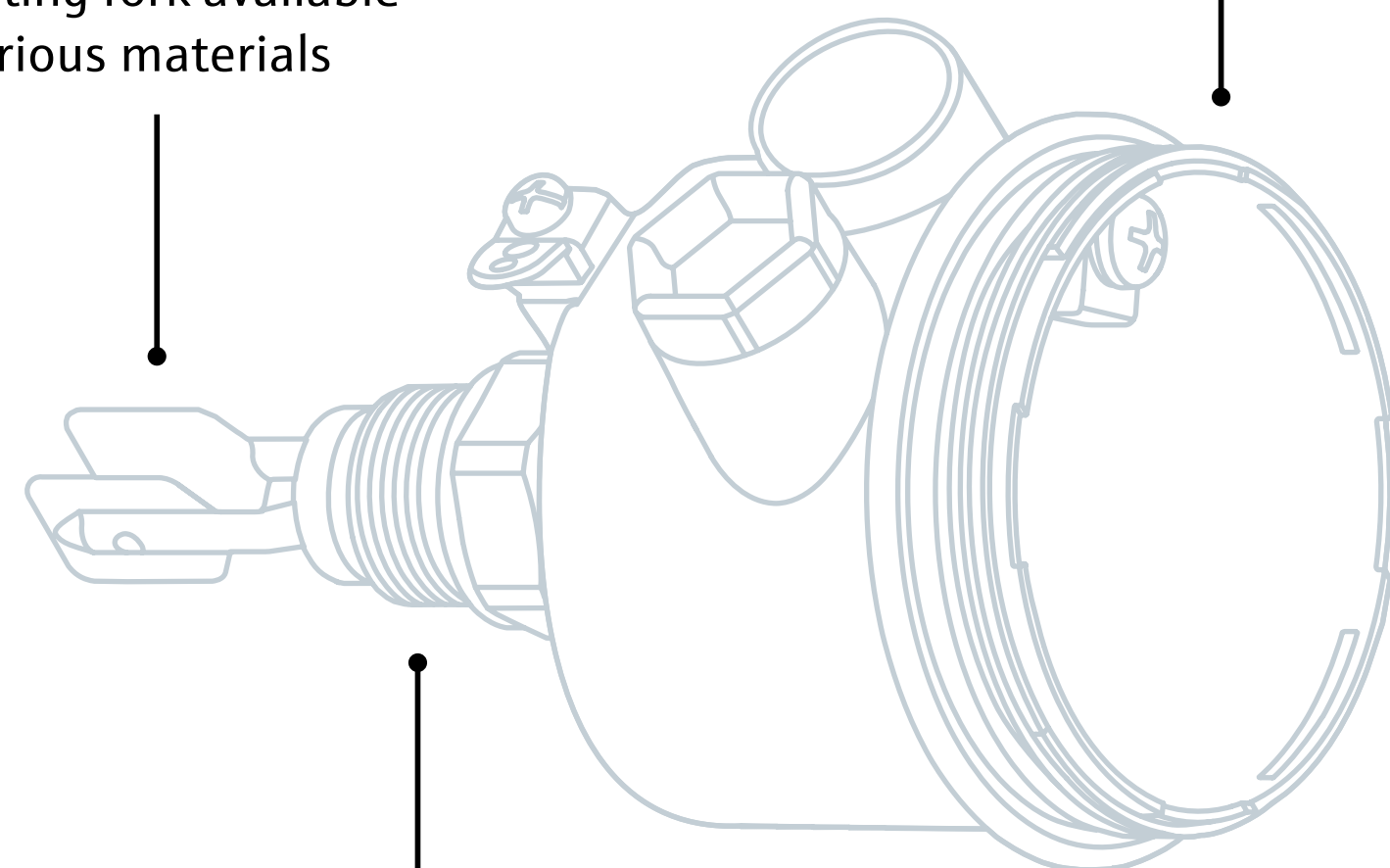


Versatility

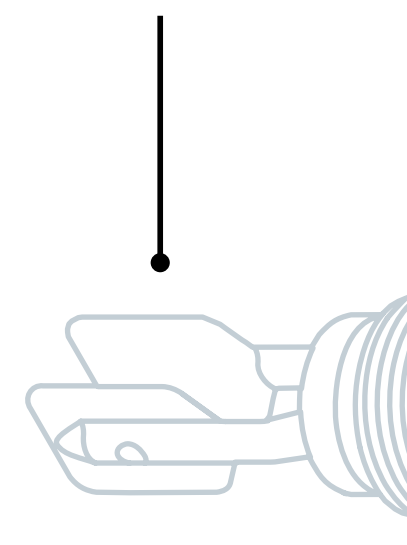
Cable entries



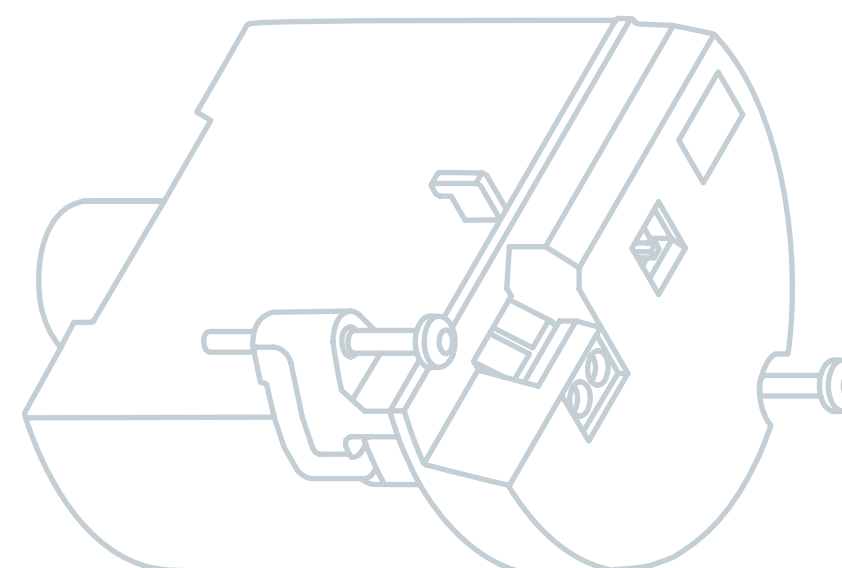
Different housing variants



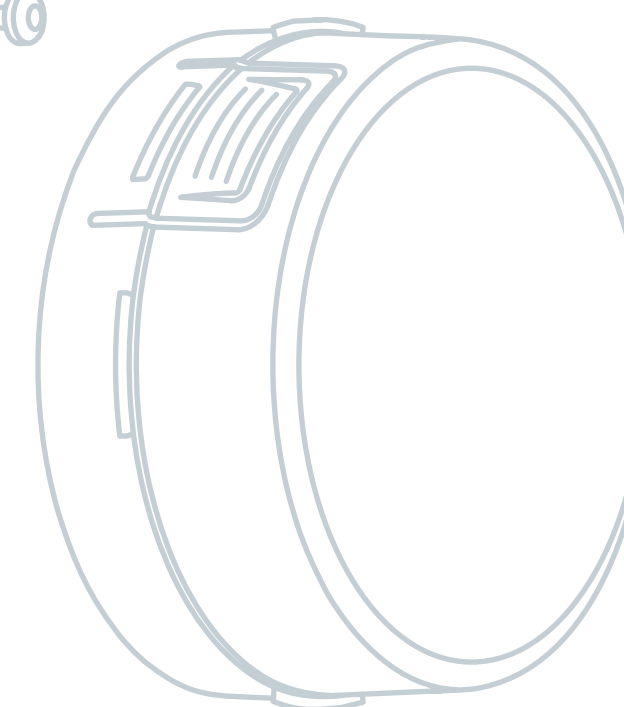
Vibrating fork available
in various materials



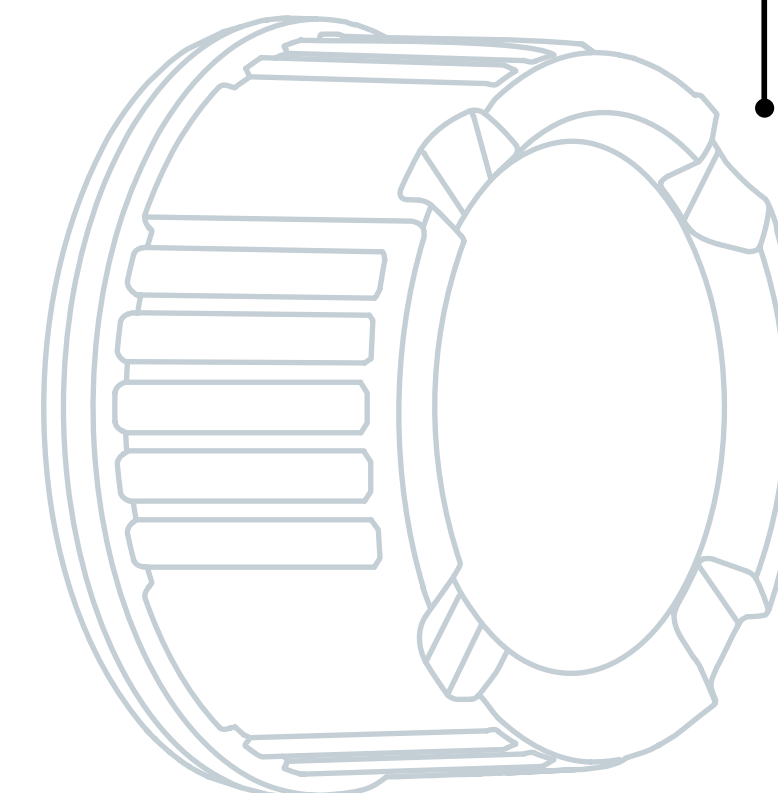
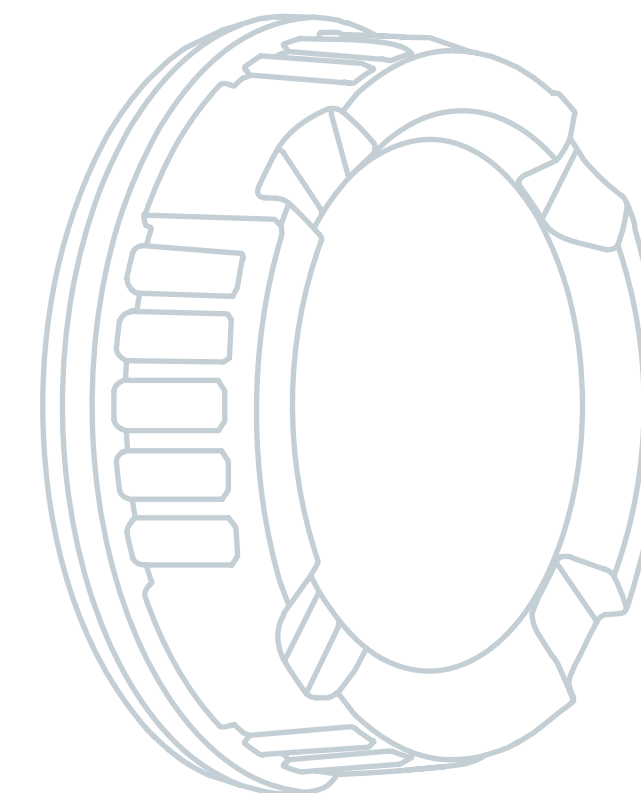
The right process
connection for
every application



Electronics module with switch
outputs based on requirements



Optional cover with
viewing window for LED
or Bluetooth module





Flexible application

For which purpose do you want
to use the Liquiphant?



Flexible application

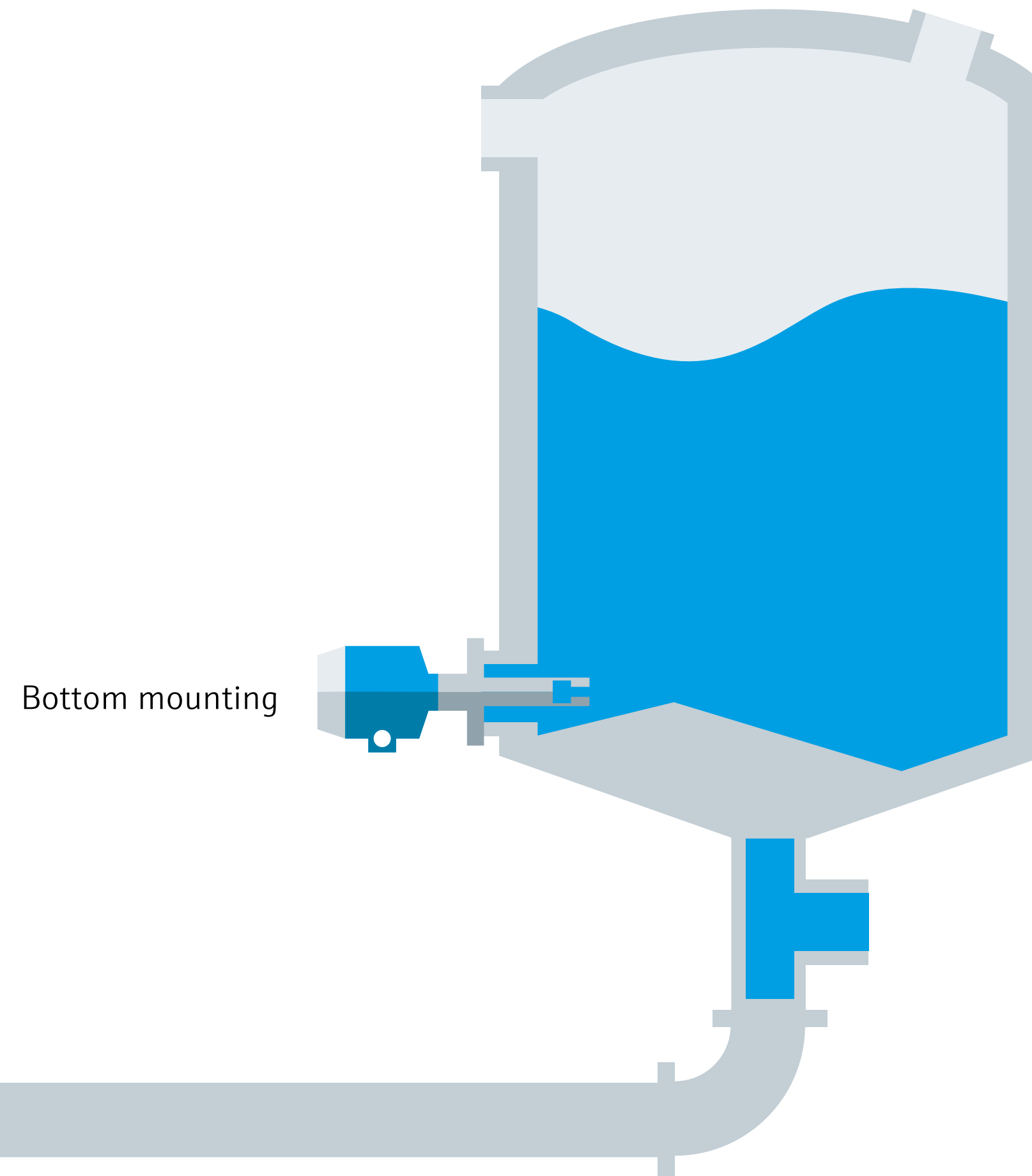
For which purpose do you want
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Flexible application

For which purpose do you want
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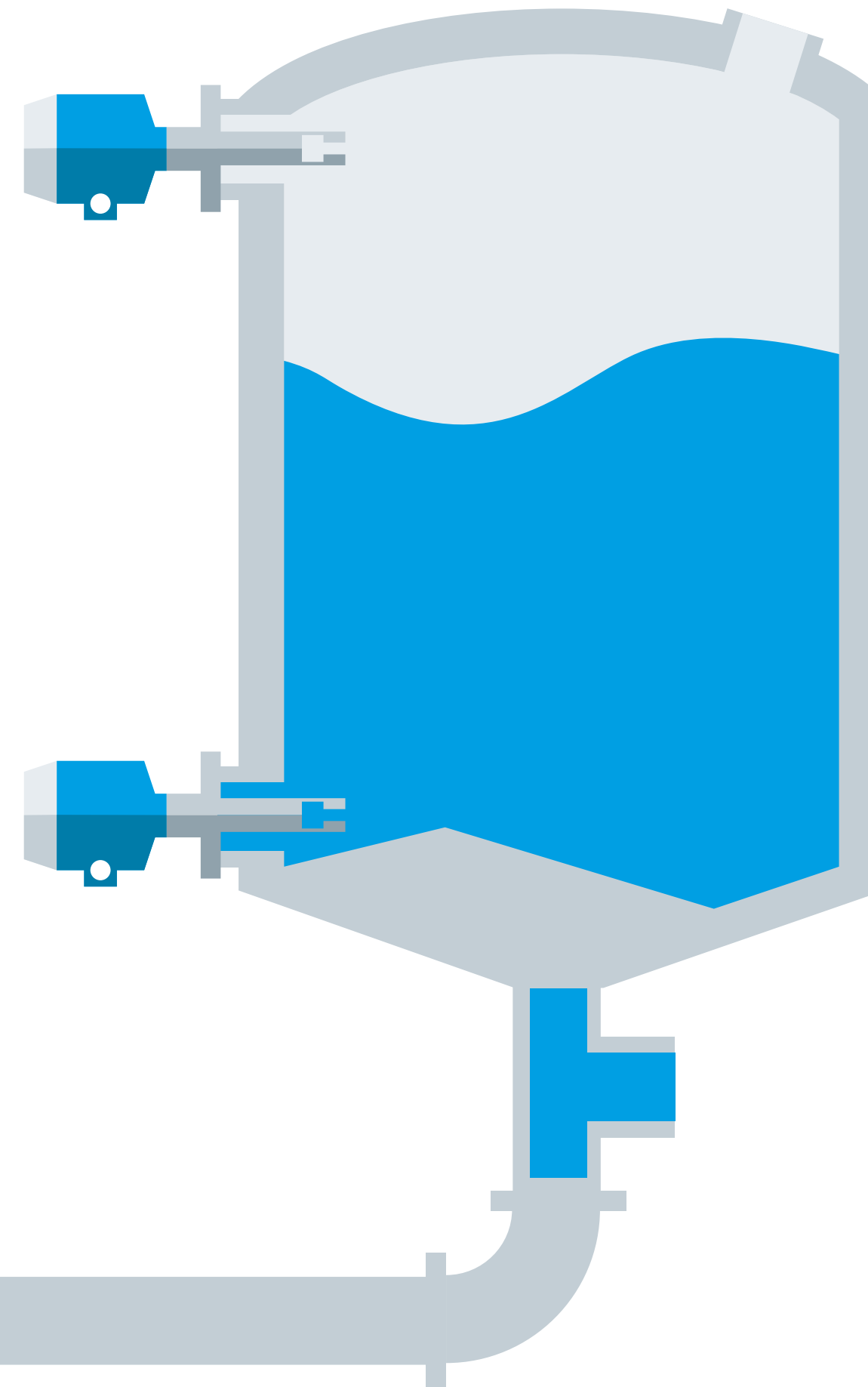




Flexible application

For which purpose do you want
to use the Liquiphant?

Side mounting





Flexible application

For which purpose do you want
to use the Liquiphant?



Tube mounting



Digital communication

Via **Bluetooth connectivity** and **digital communication**, the device can be **accessed remotely**. The advantages are obvious. Often, measuring points are difficult to reach or are located in challenging or even dangerous environments.

Thanks to digital communication, all relevant device data can be **accessed directly** and conveniently from the **control system** or via **mobile devices**, thus ensuring **safe monitoring** of processes. Users always have **real-time data** at hand.

The following parameters can be checked remotely:

- Fork state
- Health status
- Device parametrization
- Documentation of all data



Multiple devices – one family

The new Liquiphant models are used in storage tanks, containers and pipes for point level detection of all kind of liquids. The new generation is based on the proven technology of predecessor devices and sets standards for the IIoT era.

Liquiphant FTL51B



Liquiphant FTL51B – the allrounder for various tasks

The Liquiphant FTL51B is specialized for the process industry and works even there, where other measuring principles come to their limits. The vibronic device is the perfect substitute for float switches or optical sensors.

Technical data

Process temperature:	From -50°C to +150°C
Process pressure:	Up to 100 bar
Ambient temperature:	From -60°C up to +70°C
Viscosity:	Up to 10,000mm ² /s
Extension tube:	Up to 6m (20ft)
Medium density:	>0.4 g/cm ³

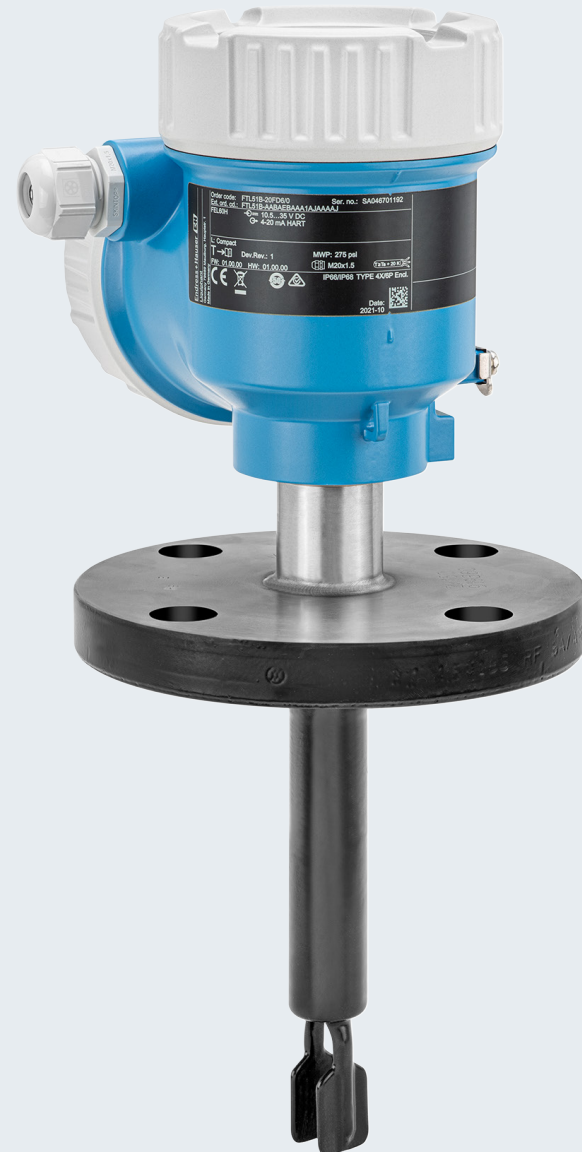
[Find out more about Liquiphant FTL51B](#)



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Liquiphant FTL62



Liquiphant FTL62 – the specialist for aggressive liquids

The Liquiphant FTL62 has a strong focus on specific applications with aggressive liquids. To protect the fork from being attacked by aggressive media, the sensor is coated with different materials like ECTFE (Halar), PFA (Edlon™, Ruby Red, conductive) or Enamel.

Technical data

Process temperature:	From -50°C to +150°C
Process pressure:	Up to 40bar
Ambient temperature:	From -60°C up to +70°C
Viscosity:	Up to 10,000mm ² /s
Extension tube:	Up to 3m
Medium density:	>0.5 g/cm ³

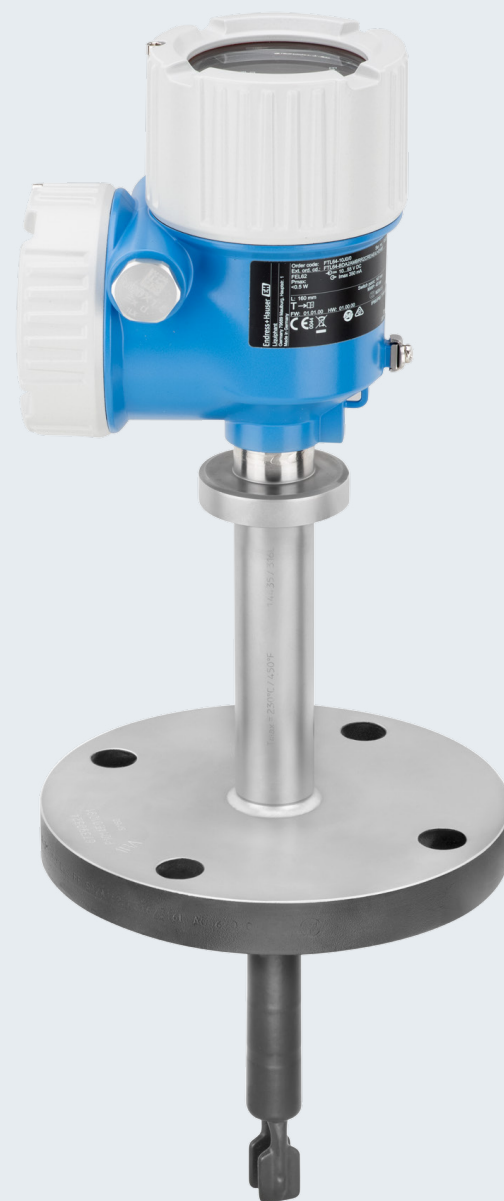
[Find out more about Liquiphant FTL62](#)



Multiple devices – one family

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Liquiphant FTL64



Liquiphant FTL64 – the right choice for the reliable detection of hot liquids

The Liquiphant FTL62 has a strong focus on hot liquids. For temperatures above 150°C it is the right choice. Optional PFA coating allows the use of Liquiphant FTL64 in aggressive media up to 230°C.

Technical data

Process temperature:	From -60°C to +280°C
Process pressure:	Up to 100bar
Ambient temperature:	From -60°C up to +70°C
Viscosity:	Up to 10,000mm ² /s
Extension tube:	Up to 3m (Optional PFA coating for aggressive media)
Medium density:	>0.5 g/cm ³

[Find out more about Liquiphant FTL64](#)



Your benefits at a glance

- **Proven** vibronic **technology**
- Safety by design: The devices are **developed in accordance with IEC 61508** for SIL2/SIL3 applications
- **Minimum maintenance effort** thanks to permanent diagnostics and verification without process interruptions
- **User-friendly proof testing** via the SmartBlue-App, digital communication or a magnetic pin from the outside
- **Simple installation** without calibration to the medium
- **Easy operation** thanks to guided wizards
- Continuous **visibility of device status** thanks to LED module

