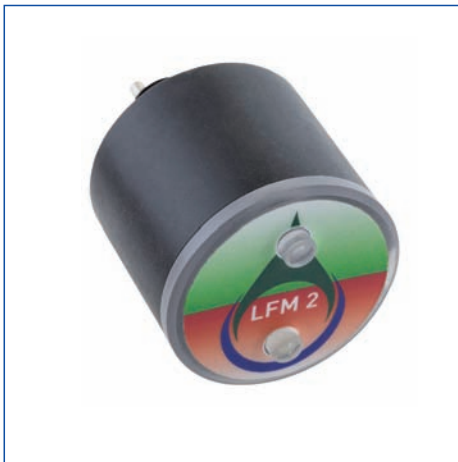




**HERBERGER**<sup>®</sup>  
WASSERAUFBEREITUNG GMBH

# CONDUCTIVITY METRES





## **WATER TECHNOLOGY SINCE 1984**

Herberger Wasseraufbereitung GmbH, based in Eschweiler in the Aachen technology region, develops, manufactures and sells cutting-edge technology in water treatment. The particular focus is on the construction of reverse osmosis systems, conductivity measuring devices and probes as well as the distribution of filter materials, accessories and water chemicals.

The company was founded in 1984 by Josef Herberger in Waghäusel, Baden-Württemberg. Until 2014 the company was run as a sole proprietorship. Since the takeover in February 2014 by Thomas Henzler and Dr. Ulrich Kögler as part of a succession plan, Herberger Wasseraufbereitung operates as a GmbH. The constant expansion of the company led to a relocation first to Reilingen, then later to Eschweiler near Aachen. At this location we develop, test and manufacture our products ourselves with a high degree of vertical integration.

Our product portfolio is subject to constant development and modernization. Innovation is very important to us. We are also involved in research projects and project partnerships with industrial partners, universities and long-standing customers. This is where new solutions are researched, new materials are tested and new products are developed until they are ready for the market. Our products are permanently tested in our test laboratory. Our large factory hall allows us to react flexibly to market requirements.

Our company now employs up to 10 people. We maintain good contacts with external partner companies, so that we can also work on comprehensive problems in water technology. We exhibit our products at international trade fairs and get suggestions for further development of our diverse product range.

## CONDUCTIVITY METRES / OVERVIEW

Our conductivity measuring devices are designed for quality monitoring of water treatment systems, demineralization cartridges and can be used in pure water, ultrapure water and as well as in aqueous solutions. The materials used are plastics such as POM, PVC or PP and high-quality stainless steel. In co-operation with our customers we also design and manufacture individual solutions.

### Our 4 product lines

Conductivity metres with <b>2-fold / 3-fold LED-display</b>	<b>LFM 2 AT</b>
Conductivity metres with <b>3-fold LED-display</b>	<b>LFM 3</b>
Conductivity metres with <b>switch contact</b>	<b>LFM 3 SK</b>
Conductivity metres with <b>digital display</b>	<b>LFM D</b>

## LFM 2 AT

### Conductivity metre with LED blinking display in 2 second interval.

Version with 2 x LED (green/red) or 3 x LED (green/yellow/red).

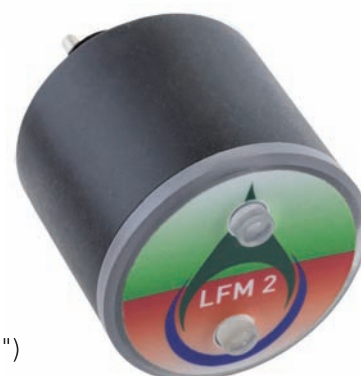
The switching threshold can be chosen before production (3  $\mu$ S - 100  $\mu$ S).

The power supply is provided by a 3V lithium button cell which can be exchanged when discharged. Due to the low power consumption of the LEDs used, the battery life is at least 5 years long.



Version in PVC-tee

Arrangement upon choice:  
straight or angle flow



Version with screw-in thread  
(options: 1/4" - 3/8" - 1/2" - 3/4")

### VERSIONS

- pre-assembled in a PVC-tee (for screwing onto a mixed bed cartridge)
- with screw-in thread in 1/4", 3/8", 1/2" or 3/4" (metric threads upon request)
- with screw-in thread and separate PVC-tee

### TECHNICAL DATA

<b>Power supply:</b>	3V-LI-button cell exchangeable; lifetime min. 5 years
<b>Measurement range:</b>	0 - 3 / 10 / 20 / 30 / 50 / 100 $\mu$ S (upon choice when ordering)
<b>Accuracy:</b>	+/- 2%
<b>LED:</b>	2-fold (green/red) 3-fold (green/yellow/red)
<b>Materials used:</b>	<ul style="list-style-type: none"> <li>● version in PVC-tee (8 bar at 20°C, max. 2 bar at 40°C)</li> <li>● version with screw-in thread in POM (8 bar at 20°C, max. 2 bar at 70°C)</li> <li>● removable polycarbonate cover for battery replacement</li> <li>● electrodes in stainless steel 1.4404</li> </ul>
<b>Protection class:</b>	IP68



## LFM 2 AT

### WITH 3/8" BRASS SCREW-IN THREAD

### Conductivity metre with LED blinking display in 2 second interval.

Version with 2 x LED (green/red) or 3 x LED (green/yellow/red).

The switching threshold can be chosen before production (3  $\mu$ S - 100  $\mu$ S).

The power supply is provided by a 3V lithium button cell which can be exchanged when discharged. Due to the low power consumption of the LEDs used, the battery life is at least 5 years long.



### VERSIONS

- with screw-in thread in 3/8" in brass

### TECHNICAL DATA

<b>Power supply:</b>	3V-LI-button cell exchangeable; lifetime min. 5 years
<b>Measurement range:</b>	0 - 3 / 10 / 20 / 30 / 50 / 100 $\mu$ S (upon choice when ordering)
<b>Accuracy:</b>	+/- 2%
<b>LED:</b>	2-fold (green/red) 3-fold (green/yellow/red)
<b>Materials used:</b>	<ul style="list-style-type: none"><li>● POM (8 bar at 20°C, max. 2 bar at 70°C)</li><li>● 3/8" screw-in thread in brass</li><li>● removable polycarbonate cover for battery replacement</li><li>● electrodes in stainless steel 1.4404</li></ul>
<b>Protection class:</b>	IP68

## LFM 3

### QUALITY MONITORING OF MIXED BED CARTRIDGES

#### Conductivity metre with 3-fold LED-display

green: 0 - 10  $\mu\text{S}$  (or 0 - 5  $\mu\text{S}$ )

yellow: > 10 - 20  $\mu\text{S}$  (or 5 - 20  $\mu\text{S}$ )

red: > 20  $\mu\text{S}$

#### VERSIONS

- battery operated with display on click
- power adapter operated with permanent display
- automatic: display only when waterflow through tee (recommended only with power adapter)
- mounted on PVC-tee
- wall mounted with separated PVC-tee

#### TECHNICAL DATA

<b>Power supply:</b>	9 VDC (battery or power adapter)
<b>Measurement range:</b>	I) 0-10 $\mu\text{S}$ ; 10-20 $\mu\text{S}$ ; > 20 $\mu\text{S}$ II) 0-5 $\mu\text{S}$ ; 5-20 $\mu\text{S}$ ; > 20 $\mu\text{S}$ III) other upon request
<b>Dimensions:</b>	112 x 62 x 31 (W x H x D in mm)
<b>Removable lid:</b>	for battery replacement
<b>Connection:</b>	3/4" outer and union thread



On tee to screw  
on mixed bed  
cartridges



Wall mounted with  
separate tee

## LFM 3 AUTOMATIC

### MEASUREMENT AUTOMATIC ON FLOW

#### Conductivity metre with 3-fold LED-display

green: 0 - 10  $\mu\text{S}$  (or 0 - 5  $\mu\text{S}$ )

yellow: > 10 - 20  $\mu\text{S}$  (or 5 - 20  $\mu\text{S}$ )

red: > 20  $\mu\text{S}$

Measurement only takes place when water flows through the PVC-tee.



### VERSIONS

- battery operated with display on click (possible)
- power adapter operated with permanent display (recommended)
- mounted on PVC-tee

### TECHNICAL DATA

<b>Power supply:</b>	9 VDC (battery or power adapter)
<b>Measurement range:</b>	I) 0-10 $\mu\text{S}$ ; 10-20 $\mu\text{S}$ ; > 20 $\mu\text{S}$ II) 0-5 $\mu\text{S}$ ; 5-20 $\mu\text{S}$ ; > 20 $\mu\text{S}$ III) other upon request
<b>Dimensions:</b>	112 x 62 x 31 (W x H x D in mm)
<b>Removable lid:</b>	for battery replacement
<b>Connection:</b>	3/4" outer and union thread

## LFM 3 SMS

Conductivity metre **with SMS function** for remote monitoring of mixed bed cartridges with critical applications.

Mounted on PVC-tee with 3/4" outer and union thread.

### Conductivity metre with 3-fold LED-display

green: 0 - 10  $\mu\text{S}$  (or 0 - 5  $\mu\text{S}$ )

yellow: > 10 - 20  $\mu\text{S}$  (or 5 - 20  $\mu\text{S}$ )

red: > 20  $\mu\text{S}$

### With SMS-card!

Sends a text message every time the status changes to a pre-selected mobile phone.



### TECHNICAL DATA

**Power supply:** 9 VDC (battery or power adapter)

**Measurement range:** I) 0-10  $\mu\text{S}$ ; 10-20  $\mu\text{S}$ ; > 20  $\mu\text{S}$   
II) 0-5  $\mu\text{S}$ ; 5-20  $\mu\text{S}$ ; > 20  $\mu\text{S}$   
III) other upon request

**Dimensions:** 112 x 62 x 31 (W x H x D in mm)

**Removable lid:** for battery replacement

**Connection:** 3/4" outer and union thread

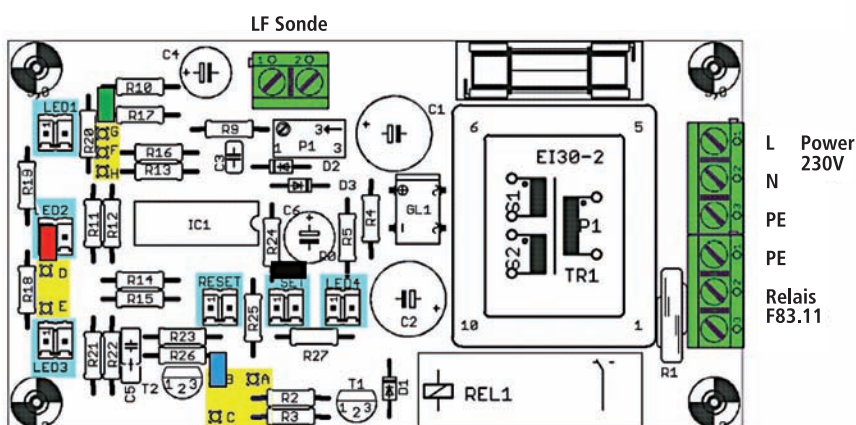


## LFM 3 SK

### WITH POTENTIAL-FREE OUTPUT

Conductivity measuring device with mini-controller for water treatment systems and demineralization cartridges.

### Connection of the circuit board



### TECHNICAL DATA

<b>Display:</b>	permanent with 3 LEDs	<b>Material:</b>	ABS in light grey
<b>Measurement range:</b>	green: 0-8 µS/cm yellow: 9-15 µS/cm red: > 15 µS/cm (triggers the integrated relay)	<b>Protection class:</b>	IP65
<b>Potential free output:</b>	changeover relais with adjustable time-delay	<b>Temperature range:</b>	5°C - 40°C
<b>Time-delay:</b>	pre-adjusted to +/- 6 hours	<b>Version:</b>	wall mounted
<b>Power supply:</b>	230 V	<b>Conductivity sensor:</b>	cell factor c=0,6 1/cm mounted in tee with 3/4" threads
<b>Relay:</b>	230 V AC/DC, 16 A	<b>Cable:</b>	2 metre 2 x 0,25 mm <sup>2</sup> without shield
<b>Box:</b>	160 x 80 x 85 (W x H x D in mm)	<b>Material electrodes:</b>	1.4404 (stainless steel)
		<b>PVC-tee:</b>	DN20 in PVC-U
		<b>Temperature:</b>	max. 40°C

## LFM D

**WITH DIGITAL DISPLAY, TEMPERATURE COMPENSATION, OUTPUT**

**Conductivity metre with permanent digital display**

- potential-free switch contact (changeover)
- adjustable limit value
- temperature compensation
- visual alarm signal in red when crossing limit value
- additional 12 V contact for accessories



### VERSIONS

- mounted on PVC-tee to screw onto a desalination cartridge
- wall mounted with separate conductivity sensor in PVC-tee

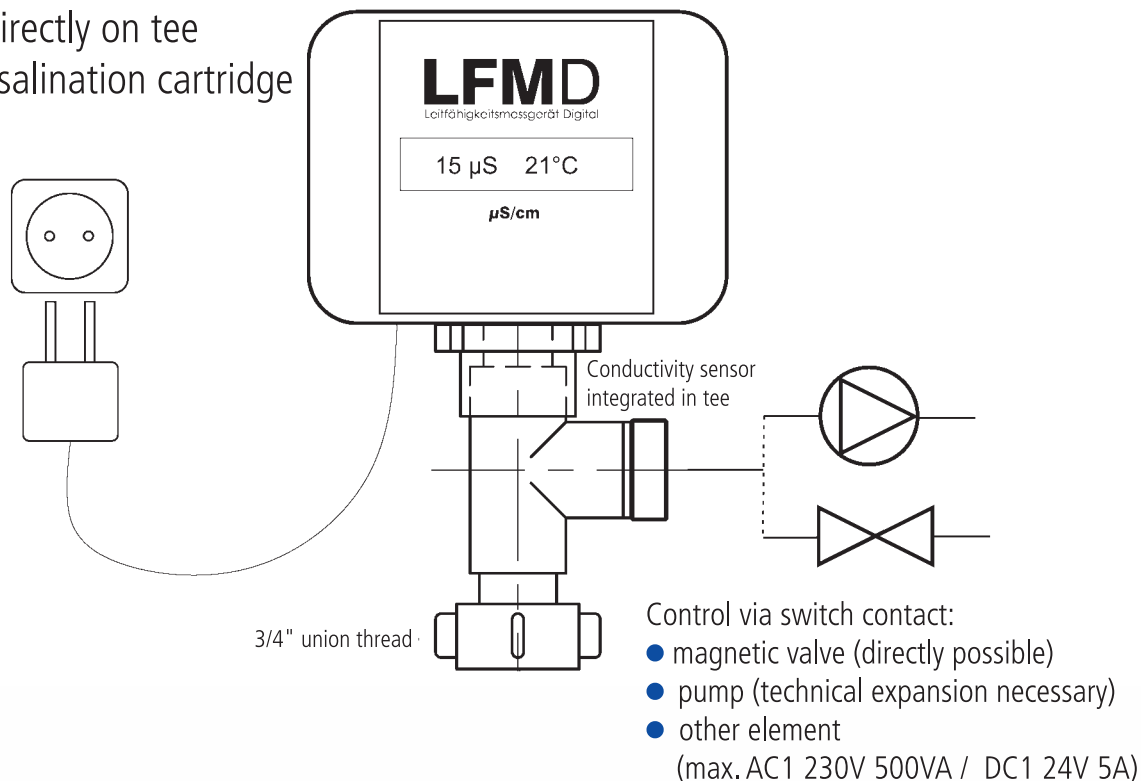
### TECHNICAL DATA

<b>Power supply:</b>	12 V power adapter	<b>Switch contact:</b>	potential free changeover contact
<b>Measurement range selectable:</b>	0 - 20 µS/cm 0 - 200 µS/cm 0 - 2000 µS/cm	<b>Maximum electrical load:</b>	AC1 500 VA DC1 24V 5A
<b>Temperature measurement range:</b>	0 - 100°C	<b>Additional supply contact:</b>	12 V
<b>Applicable according to conductivity sensor:</b>	Sensor made of ● PVC max. 40°C ● POM max. 60°C ● PVDF max. 80°C	<b>Connection:</b>	selectable in advance: ● via cable clamps ● via connectors
		<b>Water connection:</b>	3/4" outer and union thread

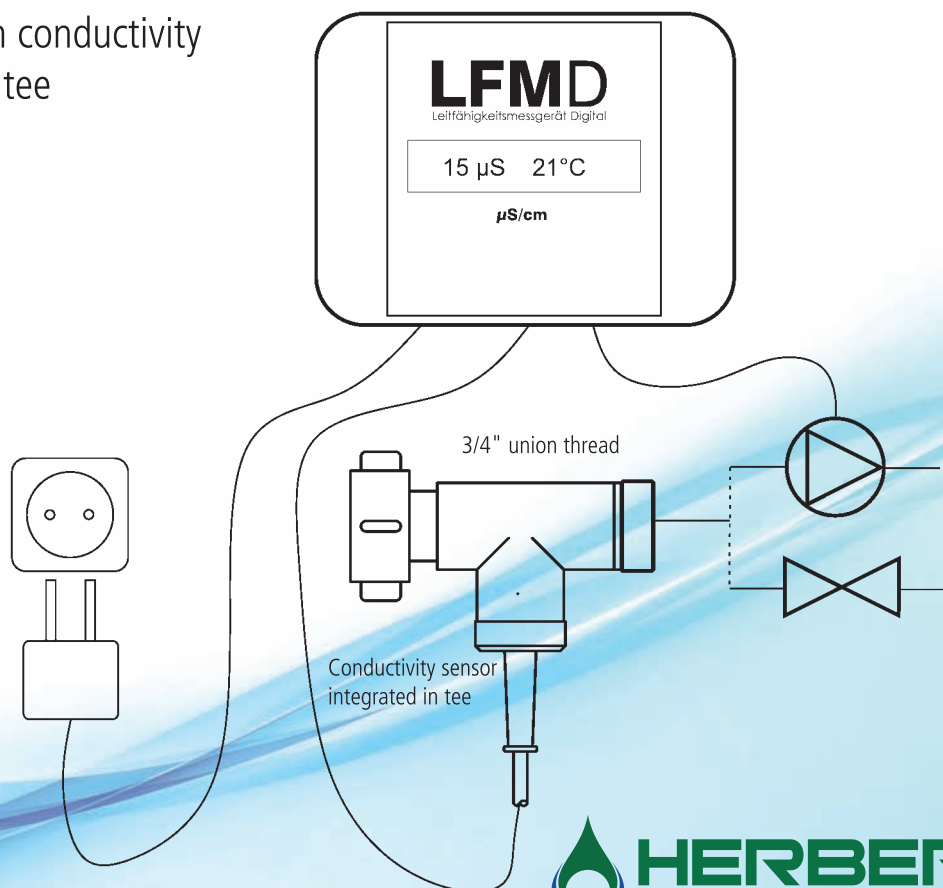
## LFM D: INSTALLATION PLAN

### UPON CHOICE WALL MOUNTED OR DIRECTLY ON PVC-TEE

Version mounted directly on tee  
to screw onto a desalination cartridge



Wall mounted with conductivity  
sensor in separate tee





## **HERBERGER Wasseraufbereitung GmbH**

Gartenstraße 38      T : +49 (0) 2403 7851680  
D-52249 Eschweiler      F : +49 (0) 2403 7851681

E.: [info@osmosetechnik.com](mailto:info@osmosetechnik.com)  
W.: [www.osmosetechnik.com](http://www.osmosetechnik.com)