

OPERATING INSTRUCTIONS

Conductivity meter

N-LF5R



These operating instructions apply to the following unit variants:

Article description	Measuring range	Article number
N-LF5R, conductivity meter with integrated 3/4" screw-in measuring cell and potential-free relay output	0-5 μ S/cm	851075

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1. Description

Device for measuring the electrical conductivity of aqueous solutions in connection with two-electrode measuring cells without temperature compensation. Designed as a measuring device with integrated screw-in measuring cell and potential-free relay output.

- Application examples: Complete desalination, reverse osmosis (2-stage), mixed bed cartridges, EDI
- Operation on 9 V DC via supplied plug-in power supply unit
- Relay output: 1 potential-free relay with switchable mode of operation of relay control
- Limit value display optically via LEDs

2. Technical data

- Measuring range: 0 - 5.00 $\mu\text{S}/\text{cm}$
- Limit value displays: Optical by means of LEDs, limit values adjustable between 0 and 100 % of the measuring range
- Accuracy N-LF5R: ± 2.5 % of full scale value
- Limit value 1 preset to 1.00 $\mu\text{S}/\text{cm}$ (relay)
- Limit value 2 preset to 0.50 $\mu\text{S}/\text{cm}$
- Resolution: two decimal places
- without temperature compensation
- 1 potential-free relay contact, max. 2 A / 250 V AC, 60 W / 62.5 VA
- Power supply: 9 V DC via plug-in power supply unit 100 - 240 V AC
- Power consumption: approx. 1 W
- Protection class: IP 65
- Housing: Polycarbonate housing, 82 x 60 x 57 mm
- Side connections for plug-in power supply unit and for relay output
- Unit with mounted measuring cell:
 - $\frac{3}{4}$ " thread, material PP, nominal pressure PN 6, Tmax. 60°C



- Material electrode pins: 1.4571
- Permissible operating pressure: 6 bar

3. Display, operation and settings

Display

- Display 2nd line: Conductivity in $\mu\text{S}/\text{cm}$
- Display 3rd and 4th line: Limit values 1 and 2
- If the permissible measuring range is exceeded: E.EE μS

LEDs

- **G1 red:** Conductivity limit value 1 exceeded
- **G2 red:** Conductivity limit value 2 exceeded

Limit value setting:

- Press the G1 and G2 keys simultaneously for 3 seconds
- By means of the G1 key, the limit value 1 can be adjusted
- By pressing the G2 key, the limit value 2 can be adjusted
- approx. 5 seconds after the last actuation, both limit values are stored and the setting mode is locked
- The step size is 1% of the measuring range end value.

Relay setting:

Default setting

The relay is energised at conductivities above the set limit value G1 and de-energises when the conductivity falls below the limit value or in the event of a voltage failure.

Manual operation, function test

Press and hold the G1 button, for the duration of the actuation the relay output changes the current operating state.

Setting the mode of operation of the relay

Press and hold the G2 button for 3 seconds. The display shows "Mode of operation relay" and in the bottom line "ON con>lim" (default) or "ON con<lim".

After releasing the key, the mode of operation is saved. Each new call via the G2 key changes the mode of operation (< or > lim) back accordingly.

Significance

ON	switched on
con	Conductivity
>	greater than
<	smaller than
lim	limit value 1

Reset:

Press the G1 key and start the operation. The limit values are now reset to limit value 1, preset to 1.00 $\mu\text{S}/\text{cm}$ and limit value 2, preset to 0.50 $\mu\text{S}/\text{cm}$ and the mode of operation of the relay is set to "On con>lim".

Language setting:

Press and hold the G1 and G2 buttons and start the appliance. In the first 5 seconds after switching on, release the G1 key and wait until the countdown has finished. Use G1 and/or G2 to select between German and English. After waiting two seconds, the current language is accepted and saved.

Calibration:

The units are pre-calibrated. A correction is usually not necessary.

Operating conditions:

The electrode pins must be completely immersed and properly flowed around!
During installation, make sure that no air bubbles can form on the electrode pins.

4. Mounting and other operating conditions

- Screw the measuring cell into the $\frac{3}{4}$ " socket using an SW 36 spanner.
- Use supplied O-ring or Teflon tape for sealing
- Lightly tighten low-voltage plugs and relay plugs with integrated seal on the unit
- Use plug-in power supply outside of water-hazardous areas!