MEASUREMENT DEVICES AND GATEWAYS

⟨ᴗ⟩ SMART KITCHEN

Maintenance and troubleshooting

Lithium batteries

- Running out of batteries is the most common reason if the measurement device does not work. The battery lifetime is usually 1 to 5 years, depending on the device type. There is an approximate battery level indicator in the service. When the battery voltage drops, a low battery icon appears next to the device information on the dashboard. When the battery is empty, the device stops operating.
- Only lithium batteries should be used in the device. Lithium battery capacity is sufficient to achieve the promised operating time and to operate in extreme conditions, such as low temperatures. If other battery types are used, the operating time will be significantly reduced, and the device will not work at temperatures other than room temperature.
- The appropriate battery model can be found on the product brochure and in the service from Settings → Measurement devices → Select device → Technical information: Battery type . Unscrew the mounting screws to replace the batteries. When closing the device, make sure that the gasket is in the correct position.

Incorrect measurement results and measurement data gaps

- **If the measurement results are obviously incorrect, for example temperatures of hundreds of degrees,** there is a problem with the device's internal communication bus or a failure in the measuring sensor. The measurement device should be replaced with a new one.
- **If there are gaps in the measuring data of a single measurement device**, the device's data message signal range is at the limit in relation to the Gateway devices. The Bluetooth signal strength can be checked with an nRF Connect smartphone application and the LoRa signal strength with LoRa signal scanner. The signal carrying capacity can be improved by repositioning the measurement device or gateway or by installing a LoRa repeater between them.
- **If the measurement results of all measurement devices have simultaneous gaps**, most probably the problem is in the Gateway device. There is either a weak or missing internet connection or no power on the Gateway device. The internet connection must be checked and, if necessary, the functionality of the Wi-Fi network must be ensured. If the Gateway device uses its own mobile network connection, the functionality of the mobile network and the device network connection must be checked. There are separate Configuration instructions for the Gateway devices.
- **If the Gateway device has been offline, or the measurement device out of the signal range**, the measurement data stored in the measurement device's internal memory can be transferred to the SmartKitchen service by using an **SmartKitchen Handy Android app**. The internal memory stores the measurement data for about a week. SmartKitchen Handy application is available in the Google Play Store and can be found with a keyword "ioliving". SmartKitchen username and password are used to log in to the Handy application. The application lists all the SmartKitchen devices found within a Bluetooth range. To transfer the measurement data, the measurement device is selected from the list. By selecting "**Transfer data**" application reads the measurement data via Bluetooth and transfers it to the service via the phone's data connection or the active wireless network.. It takes a few seconds to read and transfer the data.