

SMARTebox Batt

Remote monitoring of drinking water and wastewater networks

The SMARTebox Batt is an IoT solution for the remote reading of flow meters, pressure sensors, and alarm contacts, enabling remote monitoring and anomaly detection in high-consumption and drinking water distribution networks. Additionally, leaks can be identified by monitoring pressure levels.

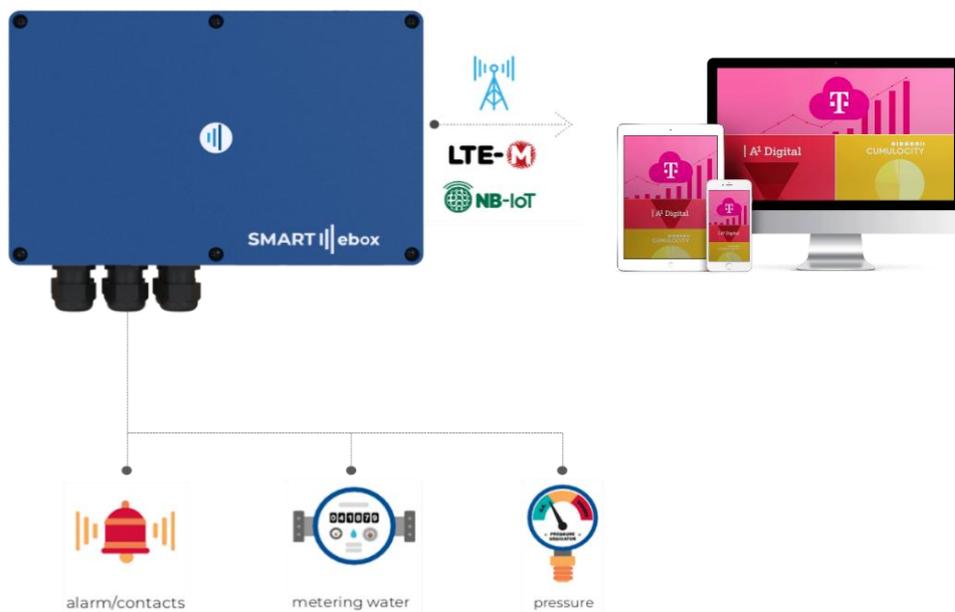
The data logger is battery-powered, waterproof, and compatible with all instruments commonly used in water networks. Thanks to cellular connectivity via LTE-M and NB-IoT, the SMARTebox Batt enables monitoring of decentralized and underground installations. If the signal is heavily attenuated in shafts, an external antenna can optionally be used.

Data transmission and integrity are ensured via the Telekom PSA-certified communication path to the IoT platform. Using the open REST API of the IoT platform, the data can be accessed by any operator system.



Keyfeatures

- Battery-powered using 6 standard C cells, 15,000 mAh
- 4 pulse inputs for consumption meters
- 2 x 4–20 mA inputs for third-party pressure sensors
- Alarm and fault contact
- Waterproof housing
- Remote configuration via IoT platform
- REST API for integration with the operator system
- Web app for sensor commissioning





RADIO

NB-IoT / LTE-M	B1 B2 B3 B4 B5 B8 B12 B13 B18 B19 B20 B25 B28 B66 B71 B85 B103
2G	B2 B3 B5 B8
Regionen	WorldWide
4G LTE	optional LTE Cat 1 B1(2100) B3(1800) B7(2600) B8(900) B20(800)
Bluetooth (Optional)	v5.0 (Bluetooth low energy) -94 dBm (1 Mbit/s)



LOCAL SERVICE

GNSS	GPS, GLONASS, Beidou, Galileo
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Sensor and Data Acquisition

Layout	Interior view	
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Sensors	Meter and flow sensor	4 digital inputs for pulse counting, N.O. Minimum pulse duration: 2 ms Max. value per meter and flow input: INT32
	Sensor input	2 analog inputs for third-party sensors via 4–20 mA loop Sensor supply up to 15V
	Fault input	Alarm input N.O.
	Cable entry	6 x M22 cable glands

Wiring diagram	
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Synchronization IoT platform	Counter and sensor inputs	Adjustable measurement interval cycle: 30–65,535 seconds. The measurements for pressure, counter readings, and average flow during the interval can be buffered (max. 90 recordings) or synchronized live directly with the IoT platform. In the case of live synchronization, the minimum measurement interval must be set to 15 minutes. For the counter and flow sensors, a start and stop event (configurable number of pulses within a configurable time frame) can be set. This allows determination of periods during which water flow is detected.
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	Event control	When the alarm input is triggered, the alarm event is immediately synchronized with the IoT platform. Additionally, all current measurement values are transmitted during the alarm. When a configurable counter value is reached, synchronization with the IoT platform can also be triggered.
	REST-API	All raw and processed measurement values and events provided by the IoT platform are available to operator systems via the standardized REST API.
IOT Platform	Area monitoring	In addition to the raw values from on-site sensors, the following measurement data can optionally be provided in the IoT platform: <ul style="list-style-type: none"> • Calculation of average flow rates • Calculation of nighttime flow • Calculation of daily volume, daily maximum, and minimum flow rates
	SMS alerting	The IoT platform additionally offers the option of SMS alerting when threshold values are exceeded.



COMMISSIONING AND MAINTENANCE

Batteries	6 x C cell 1.5V, 7000mAh. To replace the batteries, switch off the device using the magnetic contact after opening it. After replacing the batteries, switch the device back on.
Power on and off	<p>Powering on: Hold the magnet against the marked spot for 4–6 seconds. The LED will flash briefly at the start. Remove the magnet for at least 5–7 seconds. The LED will blink during those 5 seconds and then stay lit briefly at the end. The device is now powered on.</p> <p>Powering off: Hold the magnet against the marked spot for 4–6 seconds. Remove the magnet for at least 5 seconds. The LED will blink during those 5 seconds and then flash rapidly at the end. The device is now powered off.</p>
Service life	With one measurement and synchronization of counter readings per day, the service life is 8 years. The service life strongly depends on the selected measurement and synchronization settings. For customized cycles, please contact your sales partner.



GENERAL

Power supply	6 x C cell 1.5V, 7000mAh
Operating temperature / humidity	-40°C...85°C / Max. 85%
Storage temperature	-40°C...85°C / Max. 85%
IP rating	IP65
Weight	840g
Dimensions	231 x 125 x 90 mm
Mounting	Wall mounting via 4 mounting holes
Approval	

Compliance	2014/53/EU (Radio Equipment Directive) Radio EN301511 v12.5.1 EN301908 v13.1.1 EMC (Electromagnetic Compatibility) EN 301489-1 v2.2.0 General Part EN 301489-52 v1.1.0 DIN EN 61326-1 - 2018-09 DIN EN 61010-1:2020-03;VDE 0411-1:2020-03 Cybersecurity EN 18031:2024
Warranty	1 year

REMOTE MANAGER



Fleet management:

Activate, monitor, and diagnose your devices from a single location – your desktop or mobile app.

Monitor the status of your connected system by analyzing charts from various widgets. A wide range of evaluation options is available to you here.

Cockpit:

Create threshold monitoring, events, critical alarms, warnings, and reports.

Open API:

Generate notifications or simply use the REST API from the cloud platform to supply your third-party systems with all data.



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