User Guide

essent**im** spot

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Notes

⚠	Warning: This symbol represents a warning. It describes a dangerous situation or indicates safety risks.
☞	Note: This symbol indicates important information.
🗑	The symbol of a crossed-out dustbin indicates that this device contains electronic components and must not be disposed of with household waste in accordance with Directive 2002/96/EC (WEEE).

Legal notice

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Warranty and liability

The device complies with the basic safety and health requirements of the relevant EU regulations and has been tested for proper functioning at the factory. When claiming warranty, the device number must be indicated (see product label on the device). Failure to comply with the manufacturer's specifications or legal requirements or unauthorized modifications to the equipment or unauthorized replacement of individual parts or accessories may significantly impair the electrical safety of this product and void the warranty. Any liability, property damage or personal injury resulting from the device being used contrary to the instructions in this manual is excluded. We reserve the right to make technical design and execution changes at any time without prior notice as a result of continuous further development and product improvement. No liability is accepted for damage resulting from improper use. Warranty claims are then also void. Liability for any damage to property or personal injury that occurs is then transferred to the operator.

Safety Instructions

Read these instructions carefully before commissioning and using the device and always keep the instructions within easy reach!

⚠️ **Warning**
Always observe all safety instructions in this document! Non-observance may result in personal injury or damage to property! Always keep the safety instructions and the user manual permanently always keep the safety instructions and the user manual in an accessible and permanent place.

- Observe all technical limits as well as storage conditions for the device.
- If there is obvious damage to the device, it must be taken out of service and stored safely.
- Do not attempt to repair or modify the device. For maintenance and repair, the device must be sent to the manufacturer or to an agency designated by the manufacturer.
- Before operation, the safety instructions and the user manual must have been read and understood by the user. The device may only be operated by persons to whom this applies.
- In addition to the instructions and safety notes in this manual, the basic regulations for occupational safety must be observed.
- The system is safe and reliable and complies with the relevant EU directives. Improper use may result in damage to the user, third parties or material objects.
- The user is responsible for safety risks arising from biological material or samples used and monitored with the sphere.
- Maintenance or repairs may only be carried out by the manufacturer or by persons or companies authorized by the manufacturer.
- Do not operate the device in potentially explosive atmospheres, aggressive atmospheres or explosion protection zones.
- The device is not a toy. Keep the device away from children and animals.
- Avoid liquid penetration into the device.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in a legible condition.
- Do not open the device with a tool.
- The product should not be sterilized!

Intended Use and User

The SPOT is a wireless, battery-powered multi-sensor device for stationary equipment and transport monitoring.
The SPOT measures temperature, motion and door status.

⚠️ **Warning**
Always observe the safe operating conditions specified here!
Failure to do so may result in personal injury and/or damage to property.

- Operating temperature depending on battery specification -30°C resp. -20°C to +60°C
- The SPOT should not be used in rooms where explosive substances are processed.
- The SPOT can be stored between -40°C and +85°C.
- Avoid mechanical stress on the SPOT, damage to the housing may cause damage to the lithium button cell. This can lead to leakage of liquids from the battery or short circuits and temperature development.
- During transport, the transport regulations of the respective transport service provider with regard to lithium button cells must be taken into account. For further information please contact your transport service provider or essent**im** GmbH.
- Dispose of empty button cells promptly - but not in the household waste. Dispose of them properly or send them back to us.

The user is, for example, a trained laboratory employee / assistant / technician / student. Each user must have read and understood the safety instructions and the operating instructions.

Device Description

General Information

The essent**im** SPOT is a wireless sensor with recording function (data logging function). The data is transmitted wirelessly and stored in parallel in the local memory.

The SPOT measures temperature, motion and is additionally equipped with a reed addon to monitor door openings, for example.

The measurement data of the SPOT can be read out with the essent**im** Wireless Sensor Network. This requires an essent**im** scouter light as a router.
For more information, please visit https://essentim.com/essentim-sensoren.

Device

LED-Status indicator

Magnetical Switch

Hidden button to turn on / off or for turned on feedback

Mounting option on two sides

Technische Daten

Manufacturer	essent**im** GmbH
Model	SPOT
Type	Wireless Multi-Sensor-Unit
Battery Type	3 V Lithium CR2477 button cell - replaceable
Operating condition (EN / IEC 61010-1)	
● Operating location	Indoor, no use or storage in explosive atmospheres.
● Ambient temperature	depending on battery specification -30°C resp. -20 to +60 °C
● Humidity	Temporary immersion in water up to a maximum depth of 1 meter for a maximum of 30 minutes
● Other	Do not expose to chemicals or mechanical stress. The product should not be sterilized! Observe the cleaning instructions in the user manual to prevent damage.
Storage and loading conditions	
● Temperature	-40 to +85°C
● Other	Protected from frost and heat, not in contact with hazardous substances in a place protected from dust and sunlight.
Other conformities	FCC, ISED, EU, UKCA, MIC, AS-NZS
IP protection class (EN 60529)	IP67
Sensor specification / measuring range	
● Temperature	-20 to +60°C (typ. +/-0.5°C)
● Motion	Standstill detection, motion detection
● Door Status	Door open (= 1), Door closed (= 0)
Interfaces	Radio interface 2.4 GHz
Dimensions	80 x 51 x 19 mm (length x width x height)
Weight	35 g

Transport and Storage

Warning

Fire hazard! The product contains a UN38.3 compliant lithium battery. Lithium batteries that have been damaged or have the potential to cause a dangerous evolution of heat, fire or short circuit must not be shipped.

The essent**im** SPOT must be secured during transport to prevent possible mechanical impacts.

During transport, the transport regulations of the respective transport service provider with regard to lithium button cells must be taken into account. For further information please contact your transport service provider or essentim GmbH.

Note

Long-term storage may shorten the maximum battery life.

Storage conditions	
- Temperature	-40 to +85°C
- Others	Protected from frost and heat, not in contact with hazardous substances in a place protected from dust and sunlight,

Commissioning

The following steps must be performed when using the SPOT for the first time:

1. Press centrally on the front label with the inscription "SPOT".

2. The SPOT flashes red. A connection to the essent**im** Wireless Sensor Network (essent**im** scouter light) is required. To do this, open the essent**im** Wireless Sensor Network platform and register the new SPOT. The device name in the software corresponds to the serial number of the SPOT, which can be read on the back of the device. If you have integrated an essent**im** Wireless Sensor Network, the SPOT will connect automatically.

3. Once the SPOT has connected, the status LED will flash green. The SPOT is now ready for use.

4. The measured values can be read out in the essentim Wireless Sensor Network.

Device Functions

The essent**im** SPOT has several measurement and interaction features. Please note that some functions, such as reading the battery status, can only be performed in combination with the essent**im** Lab Wireless Sensor Network.

Button

The button has two functions:
- Switching on and off
- Turned on Feedback

LED Funktions

Die Status-LED des SPOTs blinkt bei Normalbetrieb nicht. Durch kurzes Drücken des Buttons (Turned on Feedback) zeigt der SPOT seinen Status an.

Colors of the status LED and their meaning:

Green LED   SPOT ok or active connection with essentim Wireless Sensor Network

Red LED   Error or power off

Positioning

In combination with the essent**im** Wireless Sensor Network, pay attention to the positioning of the SPOT for solid data transmission. Walls or devices between SPOT and scouter light will hinder the reception quality.

Feel free to contact the essent**im** support support@essentim.com for an optimal layout of your monitoring system.

The SPOT can be placed individually inside or outside the device to be monitored. If you want to use the door status function additionally follow the instructions in the next section.

Sensor positioning for door status detection

The "⊂⊃" symbol on the top of the SPOT must be no more than 2 cm away from the contact magnet when the door is closed (Door State = 0). Proceed as follows:

- Define a suitable location in the cabinet for the SPOT.
- Fix the SPOT at this defined place in the cabinet
- Close the cabinet and mark the place of the symbol "⊂⊃" on the SPOT on the outside of the door, e.g. with an adhesive tape
- Prepare the magnet:
    - Take the magnet and the enclosed adhesive foil out of the package.
    - Remove the 3M protective foil and stick this side on the magnet under strong pressure.
- Now remove the other protective foil and stick the magnet upright on the marked position on the inside of the door.

To ensure the correct magnet position, you can now check the Door State in the essent**im** wireless sensor network:

- Door Closed: Door State = 0
- Door open: Door State = 1

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Cleaning, Maintenance and Repair

Cleaning

The essent**im** SPOT can be cleaned with demineralized water or isopropanol (70%). The cleaning fluid should be applied with a lint-free cloth.

Warning
The appliance can be damaged by using the wrong cleaning agents or cleaning agents that are not specified in the operating instructions or by sharp objects! Observe the information on chemical resistance!

essent**im** recommends the following cleaning procedure:

1. Moisten a cloth with isopropanol (70%) and wipe over the surface
2. Leave the liquid for one minute
3. Wipe the SPOT dry, preferably with a microfiber cloth
4. Wait another five minutes so that all isopropanol residues have evaporated
5. The procedure can be repeated if necessary
6. The SPOT is ready for use again

Warning
The SPOT must not be sterilized! essent**im** does not approve sterilization processes of any kind, as both thermal and chemical processes can destroy the SPOT and lead to property damage and personal injury!

Maintenance and Repair

Checking the measuring accuracy
To determine the measuring accuracy, we recommend performing an annual metrological traceability.

Defect
In case of a defect, please contact essent**im** GmbH.
support@essentim.com
www.essentim.com

Disposal

The SPOT is marked in accordance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE).

WEEE registration number of essentim GmbH: DE 22316070.

This product must not be disposed of with household waste.

The SPOT and the included lithium button cell can be returned to a designated primary treatment facility for the disposal of electrical and electronic equipment at your own expense for environmentally sound disposal. As a designated B2B product, you can alternatively return the SPOT (sufficiently stamped) to essentim GmbH. We will dispose of the device at our expense in a proper and environmentally friendly manner.

Changelog

22.03.2022	Erstellung der Bedienungsanleitung	V 1.0
22.04.2022	Translation	
24.01.2024	Verweise zu essentim lab app und scouter entfernt Ergänzung Umgebungstemperatur abhängig von Batteriespezifikation kleinere Anpassungen und neue Versionierung	V 1.1

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