






User Guide

essentim
smart power meter

Inhaltsverzeichnis

Notes	4
Safety Instructions	5
Intended Use and User	6
Device Description	7
Technical Data	8
Transport and Storage	9
Initial Setup	10
Device Functions	11
Cleaning, Maintenance and Repair	12
Disposal	13
Changelog	14

Notes

	<p>Warning: This symbol represents a warning. It describes a dangerous situation or indicates safety risks.</p>
	<p>Note: This symbol indicates important information.</p>
	<p>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).</p>

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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 and storage conditions for the device
- If the device is obviously damaged, it must be taken out of service and stored safely.
- Do not attempt to repair or modify the device.
- The user must have read and understood the safety instructions and the user manual before operating the appliance. The appliance may only be operated by persons to whom this applies.
- In addition to the instructions and safety information in this manual, the basic regulations on 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 property.
- 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 contact with liquids or high humidity.
- Prevent liquid from entering 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 device must not be sterilized.

Intended Use and User

The intelligent smart power meter is a wireless current measurement sensor for devices with an output of up to 3000 W. It is available with various plug types such as EU, USA and UK. The data is transmitted wirelessly and securely via the essentim gateway, enabling encrypted 24/7 readout via the essentim web application.



Warning

Always observe the safe operating conditions specified here!

Failure to do so may result in personal injury and/or damage to property.

- Operating conditions: -10°C to +40°C, non-condensing humidity up to 95%
- The smart power meter should not be used in rooms in which potentially explosive substances are processed.
- Avoid mechanical loads on the smart power meter.

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

Device Description

General Information

The smart power meter current and energy monitoring is a wireless current and energy monitoring sensor for devices with a power of up to 3000 W. In conjunction with an essentim scouter light (gateway), the data can be read out wirelessly, encrypted and securely via the essentim web application 24/7. This allows the user to effectively monitor and centrally manage the operating status of electrical appliances.

smart power meter



Technical Data

Manufacturer	essentim GmbH
Model	smart power meter
Type	Current and energy monitoring sensor
Power supply	100-240 VAC 50/60 Hz (13 A max)
Operating conditions (EN / IEC 61010-1)	<ul style="list-style-type: none"> ● Operating location: Indoor, no use or storage in explosive atmospheres. ● Ambient temperature: 0 to +40 °C ● Humidity: Maximum 95 % relative humidity, non-condensing ● Altitude: 5000 m ● 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 conditions	<ul style="list-style-type: none"> ● Temperature: -10 bis +40°C ● Other: Protected from frost and heat, not in contact with hazardous substances in a place protected from dust and sunlight. ● Lifecircle: 5 years
EMV/radio	LVD: VDE 0620 / BS 1363 / NFC 61-314 / AN 61058-1 EMV: AN 301 489-1&-52 / FCC TEIL 15C HF: AN 301 908-13 / FCC TEIL 24E EMF: AN 50360
Other conformities	UL 498A, UL 60730/FCC/CE/UKCA/RoHS
IP protection class (EN 60529)	IP20
Sensor specification / measuring range	<ul style="list-style-type: none"> ● Power: 0 - 3000W (typ. ±10W + 0,5 % MV) ● Voltage: 100 - 240VAC (typ. ±5V + 0,5 % MV) ● Current: 0 - 13A (typ. ±50mA + 0,5 % MV) ● On / Out: 0 or 1
Dimensions	103 x 61 x 34,6 mm
Weight	approx. 80 g

Transport and Storage

The essentim smart power meter must be secured during transportation to prevent possible mechanical impact.



Note

Improper transportation can lead to personal injury and damage to property. Please observe all instructions for safe transportation. Observe the storage conditions under Technical data

Initial Setup

The following steps must be performed when using the smart power meter for the first time:

1. Check the power supply of the device to be monitored and compare it with the requirements of the smart power meter.
2. Disconnect the device to be monitored from the power supply.
3. Plug the smart power meter between the device and the mains supply.
4. The smart power meter is ready for operation immediately after plugging it in. The measured values can be read out immediately in the essentim web application in conjunction with a scouter light (gateway).

Note



The serial number of the smart power meter corresponds to the device name in the essentim web application.

The smart power meter can heat up during use. This heating does not affect the device being monitored or the measured values of the smart power meter.

Device Functions

Button and LED functions

Switching on and off

To switch on, press the button, the status LED lights up green.

To switch off, press the button, the status LED lights up red.

Cleaning, Maintenance and Repair

Cleaning

The essentim smart power meter can be cleaned with demineralized water or isopropanol (70%). The cleaning fluid should be applied with a lint-free cloth.



Warning

Incorrect cleaning agents or cleaning agents not specified in the operating instructions or sharp objects may damage the device! Observe the information on chemical resistance!

Die essentim GmbH empfiehlt das folgende Vorgehen zur Reinigung:

1. Unplug the smart power meter
2. Moisten a cloth with isopropanol (70%) and wipe over the surface
3. Allow the liquid to act for one minute
4. Then wipe the smart power meter dry, preferably with a microfiber cloth
5. Then wait another five minutes so that all isopropanol residues have evaporated
6. The procedure can be repeated if necessary
7. The smart power meter can be used again



Warning

The smart power meter must not be sterilized! essentim GmbH does not approve sterilization processes of any kind, as both thermal and chemical processes can destroy the smart power meter and lead to property damage and personal injury!

Maintenance and Repair

No maintenance necessary. The lifetime is set at 5 years.

In the event of a defect, please contact essentim GmbH.

support@essentim.com

www.essentim.com

Disposal

The smart power meter is marked according to 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 smart power meter can be taken 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 device (sufficiently stamped) to essentim GmbH. We will dispose of the device at our expense in a proper and environmentally friendly manner.

Changelog

05.02.2024	Creation of User Guide smart power meter	V1.0

