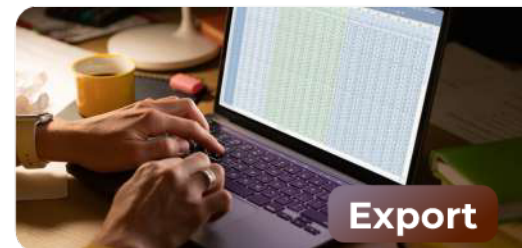


Energy Monitoring

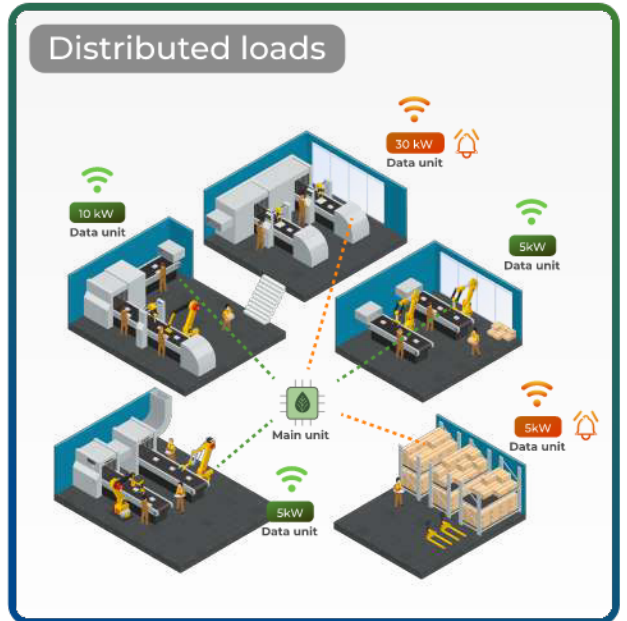


Energy monitoring to increase Energy Efficiency in **Industry** and **Commerce**



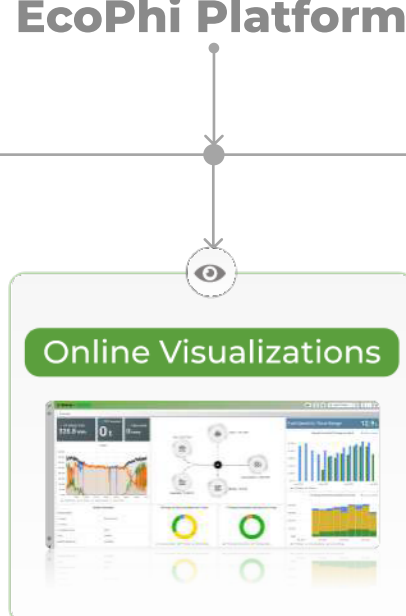
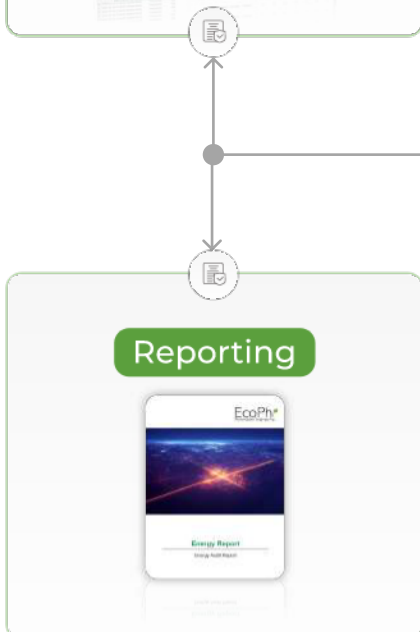
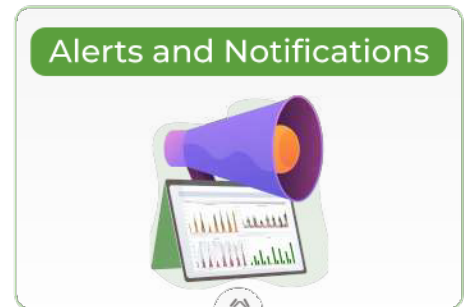
- ✓ Turnkey solution with hardware and cloud software
- ✓ For short and long term energy monitoring
- ✓ Real-time visualization
- ✓ Continuous monitoring
- ✓ Identify short-term and long-term savings potential
- ✓ Detecting high power consumers
- ✓ Assistance for energy audits
- ✓ Sizing of solar systems

Overview



Power Tracker Individual

Power Tracker Main/data units



Energy Monitoring



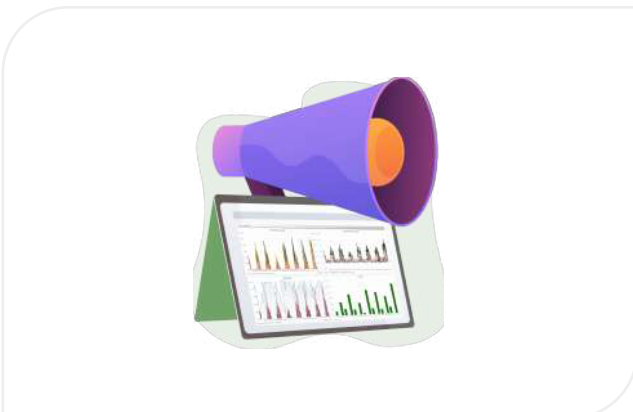
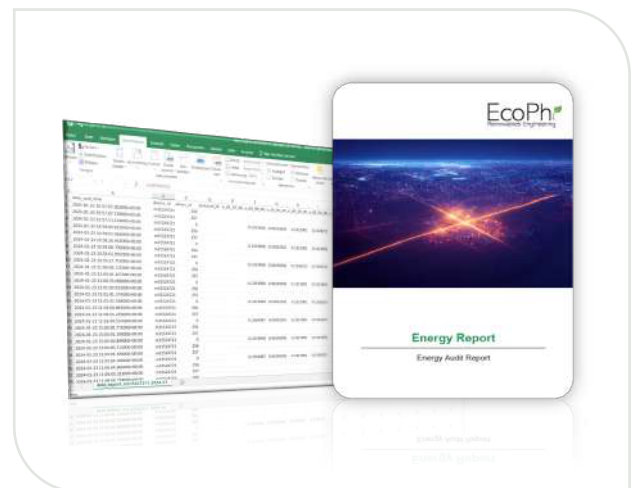
Real-time energy monitoring from anywhere

A clear and comprehensive overview of the energy consumption. As soon as the monitoring boxes are connected, you can see and analyze the energy data directly on the EcoPhi Cloud platform. This allows you to access the information at any time from different end devices.

Various Data Exports and Reports

For further analysis, information exchange, documentation or integration into existing software solutions, EcoPhi offers a variety of data export options.

In addition, regular and individual reports as email or PDF are also possible. This way, you receive the most important information summarized and see deviations at an early stage.



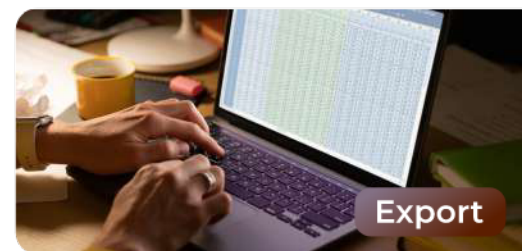
Alarm in case of high consumption

You can be alerted when critical values are exceeded or when increased consumption has been recorded over a longer period of time. This allows you to react quickly to increased power consumption. The alarms can be configured individually.

Energy Monitoring



The Cloud Platform features at a glance



Platform Features

Easy to understand dashboard with summary and detailed information

Quick analysis online

Multiple users with separate login

Data resolution up to 30 seconds

Historical data permanently available

CSV, Excel and XML data export

API interface for integration with existing infrastructure

Customizable alarms

Ad-hoc PDF Energy Report

Different recipients for alarms and reports

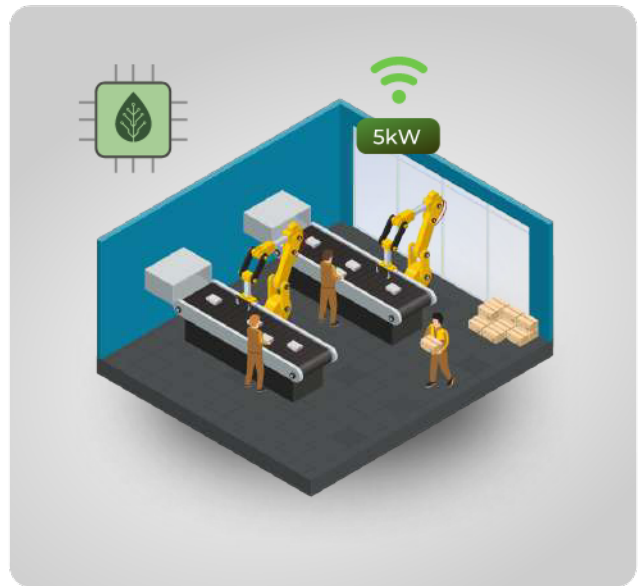
Regular email reports

Branding of the platform, reports and dashboards on demand

Local storage of the data on the device

Power Tracker Individual

With the Power Tracker Individual, individual consumers and central power distributors can be monitored. The resulting load profile can be used to analyze usage behavior and thus enable short-term and long-term savings. The Power Tracker Individual is available for up to 3-phase connections.



Ideal for

🔌 For short-term or long-term measurements

The Power Tracker Individual can be used as a tool for short-term measurements, e.g. as part of energy audits, or installed permanently for long-term energy measurements.

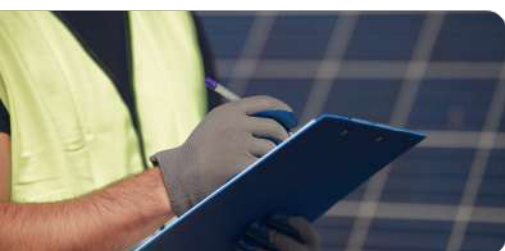
🔌 Flexible measuring range with current transformers

By measuring via current transformers (CT), the Power Tracker Individual covers a wide measuring range.

EcoPhi offers split core current transformers for easy installation. Third-party clamps with an output signal of 0-5A can also be used.

🔌 Flexible and reliable data transmission

A SIM card is already included in the price of all devices. Thus, the Power Tracker Individual is immediately ready for use. The data is stored locally on the device so that no data is lost even in the event of connection failures. A connection via Wi-Fi or LAN is also possible.



Power Tracker Individual

Technical Specifications

Interfaces and connections

Measured values	Voltage, current, power, energy, apparent / active power
Local data storage	Yes, via integrated SD card
Data resolution	30 sec.- 1 min.
Data storage in case of connection failure	Yes
Power supply	100-250VAC (per phase)
Data transmission	GSM: 2G, 3G, LTE; Wifi, LAN
Measuring range	100A to 5000A With separate current clamps

Power Tracker Distributed loads

With our LoRa Power Tracker solution, you can simultaneously monitor distributed loads. This is ideal for factories and commercial facilities over large areas.

The Power Tracker Main Unit collects energy data on site and communicates with distributed measuring units (Data Unit).

The communication with the individual Data Units is wireless and avoids the need for complicated cabling.



Required: PowerTracker Main Unit (N20 or N50), 1 Measuring unit for each measuring point

Ideal for



🔋 Stable data transmission without cables

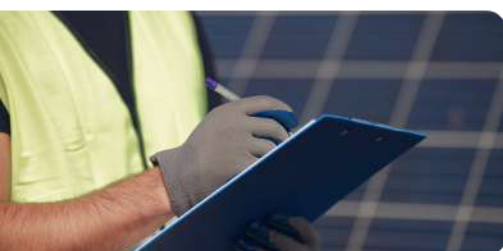
By using the proven LoRa technology, data from distributed measuring points are reliably sent to the central hub.

🔋 Up to 50 measuring points

With the Power Tracker solution for distributed energy monitoring, up to 50 measuring points can be covered wirelessly. The central hub transmits all data to the cloud via GSM, LAN or Wi-Fi.

🔋 Flexible measuring ranges

The Power Tracker Data Units are available in two versions: One uses current transformers, the other is integrated directly into the circuit via a 3-phase connector (CEE plug). This enables different measuring ranges within one network.

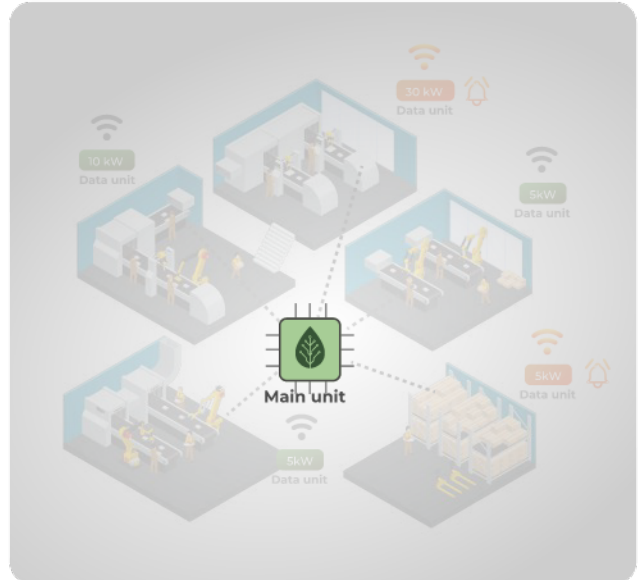


Power Tracker Main Units

The Power Tracker Main Units for distributed energy monitoring are the central unit for monitoring distributed loads.

The setup of the units is quick and easy. Thanks to the integrated SIM card, the main units can be directly activated.

The main units receive the energy data of the distributed data measuring units. A data measuring unit can also be connected directly at the location of the main unit.



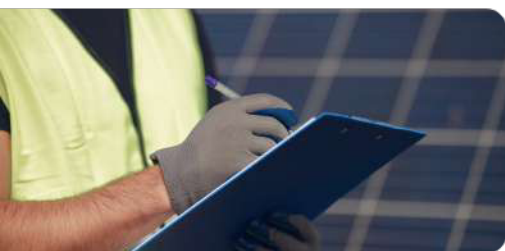
Variants

🌿 Power Tracker N20 – Main Unit

Up to 20 distributed data measuring units can be connected wirelessly to the Power Tracker N20. The Main Unit reliably transmits the data of all data measuring units via GSM, LAN or Wi-Fi to the cloud platform.

🌿 Power Tracker N50 – Main Unit

In the larger version, up to 50 distributed data measuring units can be connected wirelessly. The Main Unit includes an energy meter for medium voltage so that it can be used as a central measuring device to monitor the medium voltage source and separate low-voltage consumers.



Power Tracker Main Unit

Technical Specifications

Property / Version	Power Tracker N20 – Main Unit	Power Tracker N50 – Main Unit
Measuring points	20	50
Measured values	Voltage, current, power, energy, apparent / active power	
Measuring range	100A to 5000A With separate current clamps	
Local data storage	Yes, via integrated SD card	
Data resolution	1 – 5 min.	
Data storage in case of connection failure	Yes	
Power supply	100-250VAC (per phase)	
Data transmission	GSM: 2G, 3G, LTE; Wifi, LAN	
Data reception	LoRa	

Power Tracker **Measuring Units**

The Power Tracker Main Units for distributed energy monitoring can be combined with the separate LoRa-enabled Data Measuring Units.

The Data Units are available in two versions, one for direct connection to a power cable for individual consumers. Another version allows the use of current transformers for individual consumers or load circuits.

Within the same network, both types can be combined. This enables high flexibility and at the same time easy installation.



Variants

🔌 Data Measuring Unit – Plug

In-line measurement. Each Data Measuring Unit contains an energy meter up to 63A with CEE plug connections via which loads can be connected directly. Thus, individual consumers can be monitored.



🔌 Data Measuring Unit – CT

Measurement via split core current transformers (CT). Each unit contains an energy meter for connecting current transformers. This makes the measurement range very flexible



Power Tracker **Measuring Units**

Technical Specifications

Property / Version	Power Tracker Data Unit (CT)	Power Tracker Data Unit (Plug)
Measured values	Voltage, current, power, energy, apparent / active power	
Measuring range	100A to 5000A With separate current clamps	
Measuring range	100A to 5000A With separate current clamps	0-63A per phase
Data resolution	30 sec.- 1 min	
Power supply	100-250VAC (per phase)	
Data transmission	Via LoRa to the Main Unit	