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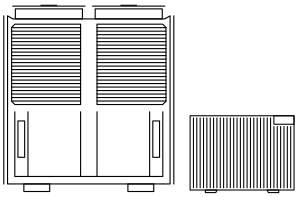
# EMS ENERGOMATE

## SMART ENERGY MANAGEMENT FOR MODERN BUSINESSES

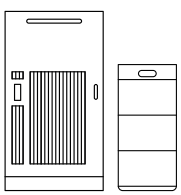
**Manage power output, energy storage, and consumption with a predictive algorithm designed to maximize efficiency and reduce operating costs.**

An intelligent Energy Management System (EMS) for companies looking to reduce costs, eliminate demand peaks, and maximize the use of their own energy production.

**Compatible with:**



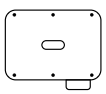
ERA HEAT PUMPS



HUAWEI BESS



AC/DC EV CHARGERS



PV INVERTERS

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**01.**
### No penalties for Exceeding Power limits

EMS continuously monitors distribution grid limits, such as reserved capacity and power demand, and prevents any exceedance.

**02.**
### SPOT Market Arbitrage

Automatic electricity purchasing and selling on the day-ahead market precisely when market conditions are most favorable.

**03.**
### Negative Prices, Zero Loss

When SPOT prices turn negative, EMS prioritizes electricity purchases from the grid and stores the energy for later use.



**04.**
### Peak Shaving

EMS intelligently controls BESS charging and discharging to prevent exceeding the 15-minute peak demand threshold.

**05.**
### Smart Control of Electricity and Heat

Energomate EMS manages ERA heat pumps and EV chargers based on real-time energy prices, weather conditions, and consumption forecasts.

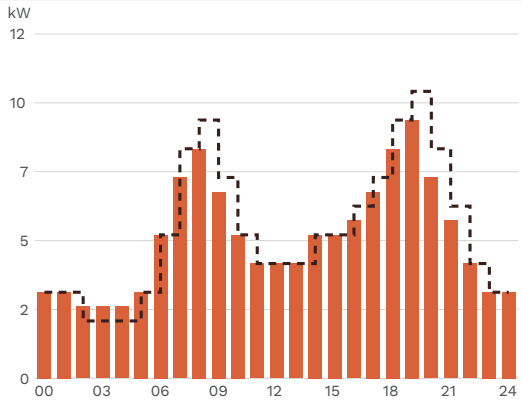
**06.**
### Maximizing Energy Value

Every kWh generated is optimized to deliver maximum value, whether through self-consumption, battery storage, or profitable energy trading with the grid.

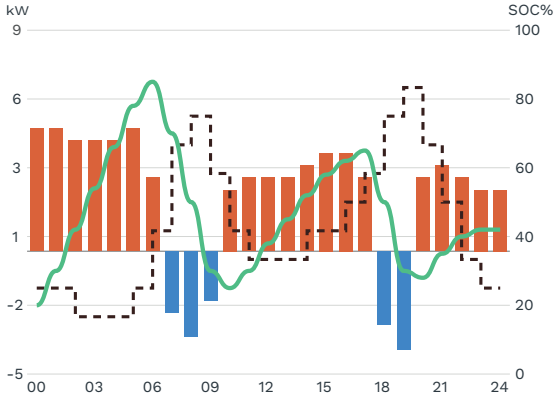
## IMPACT OF EMS ON DAILY LOAD PROFILE

SPOT electricity price · Grid consumption · Grid export (sale) · Battery State of Charge (SOC, right axis)

**Without EMS**




**With EMS Energomate**




## TECHNICAL SPECIFICATIONS

### INPUTS & OUTPUTS

| | | |
|---|---|---|
| **ETH** | Ethernet switch | 5-port switch for connecting control devices and SmartLogger |
| **RS485** | Modbus RTU Interface | Serial communication bus for third-party meters and inverters |
| **PWM** | SSR relay output | Pulse control of domestic hot water tank heating output |
| **0–10V** | SSR relay output | Analog control of domestic hot water tank heating output |
| **RO** | Relay output | Switching of storage tanks, circulation pumps, valves, etc. |
| **SG Ready** | Smart Grid Interface | Heat pump and HVAC control based on real-time electricity prices |
| **AI** | Analog Input | PT1000 temperature sensors for monitoring tank and medium temperatures |
| **DI** | Digital Input | Boost buttons for manual activation of heating or charging |

### CONTROL CABINET TECHNICAL SPECIFICATIONS

| | | | |
|---|---|---|---|
| **Dimensions (H×W×D)** | 400 × 400 × 200 mm | **Enclosure Material** | Steel |
| **Weight** | 15 kg | **Protection Rating** | IP66 |
| **Power Supply** | 85–264 VAC / 24 VDC, 1,5 A | **Comunication** | ETH 5× port · Modbus RTU |