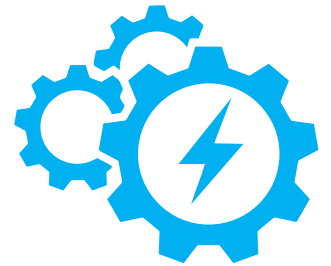


# HYBRID ENERGY MANAGEMENT SYSTEM (HEMS) LICENSE BLUE'LOG XC



Item no. 557.014-557.022

## BACKGROUND

The market for hybrid energy systems is growing rapidly. Energy generation, storage, and consumption technologies are being combined into a single system managed by a central control component.

The Hybrid Energy Management System (HEMS) from meteocontrol is specifically designed for scenarios combining PV production with battery storage or using standalone battery storage. The HEMS solution orchestrates the complex flow of energy within your system, ensuring seamless integration with a single grid connection point.

## LICENSE DESCRIPTION

The "HEMS license blue'Log XC" is a software extension that enables your blue'Log XC to optimize your energy generation and consumption based on your needs and local grid connection requirements.

## FEATURES

### + PV self-consumption

*Use a maximum of self-produced energy.*

This feature is commonly used in commercial and industrial settings to meet the energy demands of local loads, e.g. large consumers, using electricity generated on-site by PV systems. The integration of a battery means that the bulk of required energy is generated on-site, resulting in significant savings in electricity costs. HEMS efficiently manages this process, ensuring that PV power is only supplied to the grid after the local load is met and the battery is fully charged.

### + Zero feed-in

*Never inject power into the grid.*

In areas with limited grid connection capacities, grid operators often require new plants to consume most or all of the electricity they generate. This restriction limits the amount of power that can be fed into the grid. HEMS ensures compliance with this limit by curtailing PV power only when the local load is covered and the battery is fully charged.

### + Band shaving (e.g. peak shaving)

*Avoid peak loads and/or power injection to avoid high electricity costs.*

In industrial settings, power-based electricity prices can drive up the total cost of electricity. HEMS can be configured such that peak loads are "shaved" by the battery system. To guarantee low electricity costs, the battery only discharges once the power at the grid connection point falls below a certain predefined threshold. Similarly, you can also manage the maximum feed-in power by configuring a threshold beyond which the battery will store excess PV power.

+ **Setpoint control**

*Control the system at the grid connection point.*

HEMS can receive and implement external active power setpoints from grid operators to maintain grid stability. If a grid operator sends a curtailment command, the excess PV power is not simply “wasted”; instead, it is stored in the battery for future use. The setpoint commands can be received via digital inputs, or analog inputs, or Modbus.

+ **Reactive power control**

*Enhance voltage stability.*

In addition to managing active power, HEMS can also contribute to voltage stability by supplying reactive power at the grid connection point. Reactive power can be controlled by methods including Q(V), Q control, power factor control, and others. You decide whether the reactive power demand is primarily met by the PV system or the battery.

+ **Energy trading**

*Profit from stock exchange fluctuations (arbitrage).*

Energy traders can remotely control the hybrid energy system via a dedicated interface, allowing your system to participate in intra-day and day-ahead auctions. The Remote Power Control (RPC) license is required to unlock this interface.

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## REQUIREMENTS

- + Standalone battery storage system or system comprised of PV and battery storage
- + blue'Log XC with firmware  $\geq 30.0.13$
- + Meter at the grid connection point

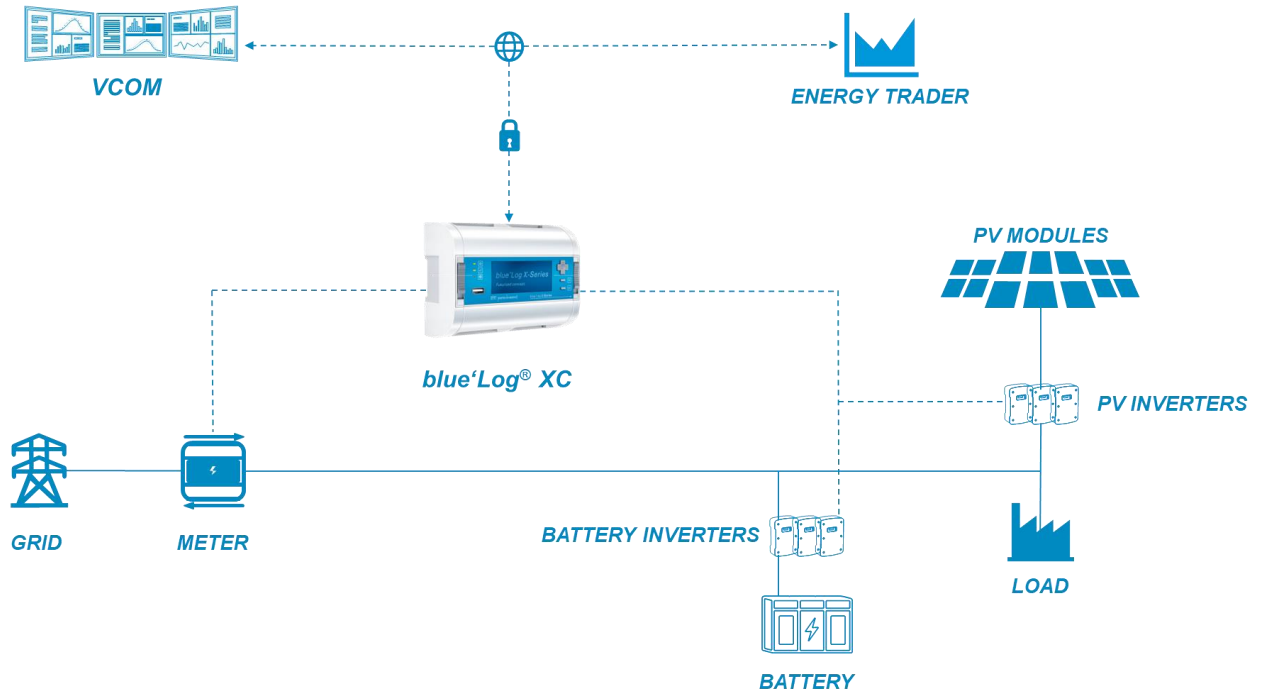
### Overview of licenses

The license depends on the capacity of the battery in MWh and is linked to a specific device. When ordering, please provide the 14-digit hardware serial number of the blue'Log XC controller.

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557.014	Hybrid energy management system (HEMS) license $\leq 0.2$ MWh blue'Log XC
557.015	Hybrid energy management system (HEMS) license $\leq 1$ MWh blue'Log XC
557.016	Hybrid energy management system (HEMS) license $\leq 3$ MWh blue'Log XC
557.017	Hybrid energy management system (HEMS) license $\leq 5$ MWh blue'Log XC
557.018	Hybrid energy management system (HEMS) license $\leq 10$ MWh blue'Log XC
557.019	Hybrid energy management system (HEMS) license $\leq 20$ MWh blue'Log XC
557.020	Hybrid energy management system (HEMS) license $\leq 50$ MWh blue'Log XC
557.021	Hybrid energy management system (HEMS) license $\leq 100$ MWh blue'Log XC
557.022	Hybrid energy management system (HEMS) license Utility blue'Log XC

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Example of a HEMS system layout

Further information: [www.meteocontrol.com](http://www.meteocontrol.com)