

WHAT IS SEMS BUFFER?

SEMS BUFFER is the energy management system with accumulation and management of the photovoltaic installation, designed to cover the needs of the most demanding energy consumption.

It is an intelligent system that adapts, grows and connects to the solar communities of tomorrow.



What are its characteristics?



Scalable

Large storage capacity system with which you can add Ampere smart battery modules if your energy consumption needs to grow.



Adaptable

Our intelligent system adapts to the available space and is configured adhoc to the customer.



Indoor or outdoor

The decision is up to you. Easy to install, the system is available for Indoor and Outdoor installations (optional through a heavy duty container that protects it from adverse weather conditions).



Insulating container

If you opt for an outdoor installation we include non-slip aluminium flooring, LED interior lighting, emergency lighting and auxiliary socket line, in a 10 or 20 ft containerised system with modular storage.

We manage the energy for a sustainable world

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SEMS BUFFER

The ultimate solution for storing and managing energy on a large scale.

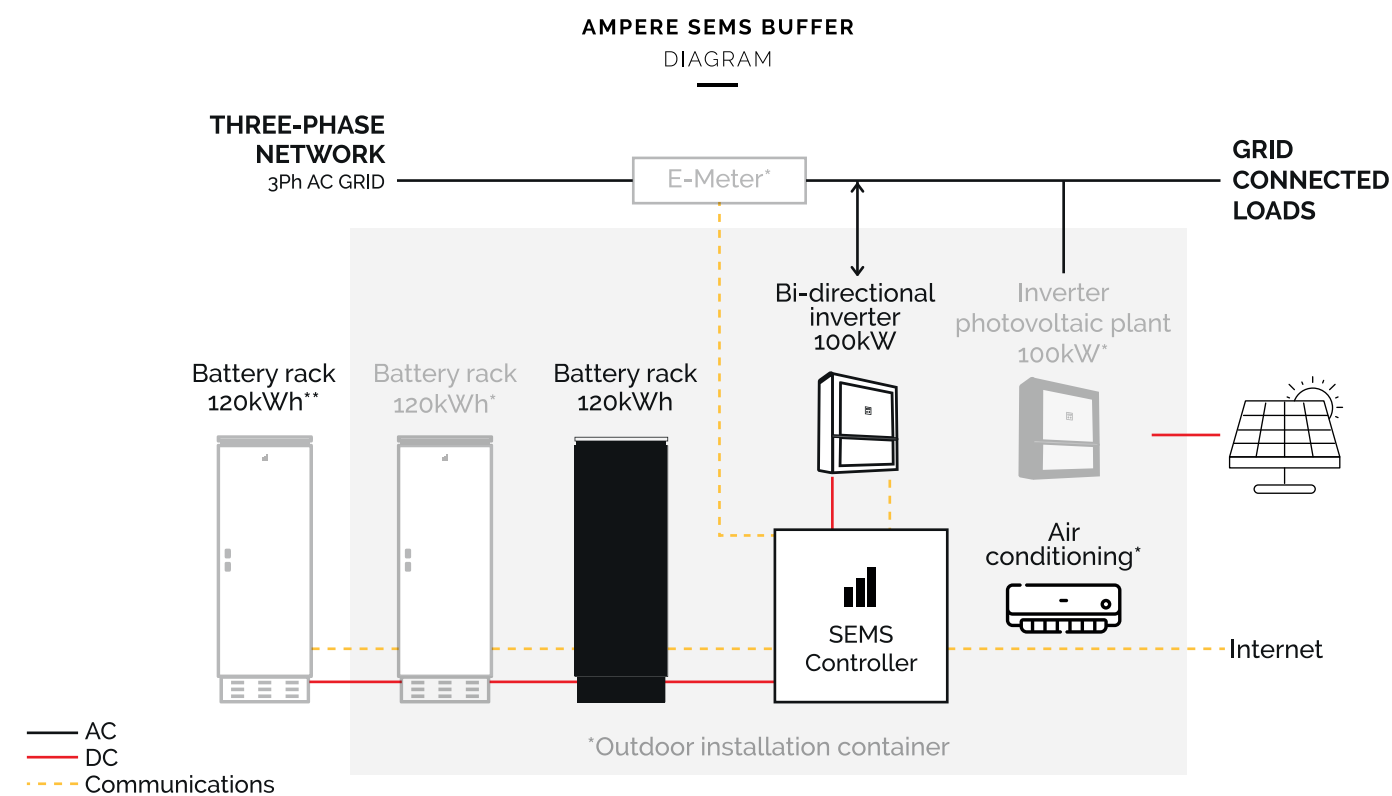
 AMPERE ENERGY

SEMS BUFFER

Nobody stores and manages energy like us

The SEMS BUFFER system with high storage capacity and artificial intelligence is designed to meet the energy consumption needs to satisfy large-scale energy consumption needs; be it at industrial level, neighbourhood communities, schools, town halls, etc.

Together, we are the energy that moves the world!



*Optional | **Not available for 10 feet containers



SEMS (SMART ENERGY MANAGEMENT SYSTEM)

SEMS is an intelligent energy management system. This technology, connected to the Internet and the AMPi software, allows intelligent, predictive and automatic control of energy flows*. It monitors the price per kWh and makes a weather and consumption forecast, achieving the maximum possible savings and efficiency.

All Ampere equipment has SEMS, which is the sum of two components:

- **Control hardware** connected to battery and solar inverters, Energy Meters for consumption measurement and batteries.
- Cloud-based monitoring and control **software**.

* Coming soon



Artificial Intelligence and energy independence

Ampere Energy systems are powered by AMPi (Artificial Intelligence Software) and are designed to achieve maximum energy independence from the grid.



Plug & Play

Everything you need in one easy-to-install system. Battery modules with modular capacity, bi-directional battery inverter, inverter (optional) for PV, intelligent energy manager SEMS and AMPi. Design and technology together to make life easier.



Three-phase and modular

Three-phase system with a modular design that adapts to energy needs and grows with them through storage batteries.



My Ampere

Thanks to our MyAmpere APP (iOS / Android) you can monitor and manage your system remotely from any mobile device.



Peak Shaving

Our system, along with the battery, helps to reduce power peaks, which allows you to contract a lower power or avoid economic penalties, saving on the fixed term of the electricity bill.



Peer to Peer*

The equipment is prepared to share the energy generated with other users and thus benefit economically from the transaction.



Virtual Power Plant

The SEMS is able to provide information and receive set-points from Amperia, Ampere's Virtual Power Plant. This allows the device to participate in grid services through a global action triggered by a grid actor.



Access to solar communities

Thanks to this functionality, systems can work by offsetting virtual energy consumption from several distributed consumers, facilitating the use of renewable energy in solar communities.

SEMS BUFFER TECHNICAL DATASHEET

General specifications	BUFFER 100/xxx Indoor	BUFFER 100/xxx Container
Dimensions (L x A x H)	Depending on the distribution of the elements	2,98 x 2,44 x 2,59 m.
Weight	Depending on configured capacity and extensions	
Working temperature	-5°C a +40°C	
Relative humidity	5% - 85% (non-condensing)	
IP	IP 20	IP 43
Communication ports	Ethernet, RS-485 MODBUS	
Energy Management	AMPERE SEMS integrated	
Energy Meter	Energy Meter three-phase bidirectional included. RS-485 MODBUS	
Air conditioning	Required between 25°C y 35°C	Included

Battery Module	BUFFER 100/xxx Indoor	BUFFER 100/xxx Container
Useful Capacity (kWh)*	120/240/360 kWh	120/240 kWh
Number of cycles (90% DoD, 25°C / 77°F)	> 6000	
Refrigeration	Natural Convection	
Maintenance	Integrated predictive maintenance	

Power inverter	BUFFER 100/xxx Indoor	BUFFER 100/xxx Container
Type**	Three-phase two-way inverter	
Rated Discharge Power***	100kW	
Rated Power Load***	60kW	
Rated AC voltage	3/N/PE; 400VAC	
Maximum AC Current	145 ARMS /fase	
Nominal Frequency	50/60 Hz	
Power Factor	1	
Adjustable power factor	Yes (Smax = 100kVA y Qmax = 100KVAR)	
THD	<3%	
Refrigeration	Forced ventilation	

* Modular capacity to choose from. For other capacities and/or powers, please contact Ampere Energy.

** Possibility of integrating an additional 100kW PV inverter.

*** Instantaneous power delivery is managed by SEMS Controller according to operating conditions and battery state-of-charge.

The maximum power delivered to the grid by the PV inverter + bi-directional battery inverter is 100 kW.

DISCLAIMER: Specifications are subject to change without notice for product improvement.