

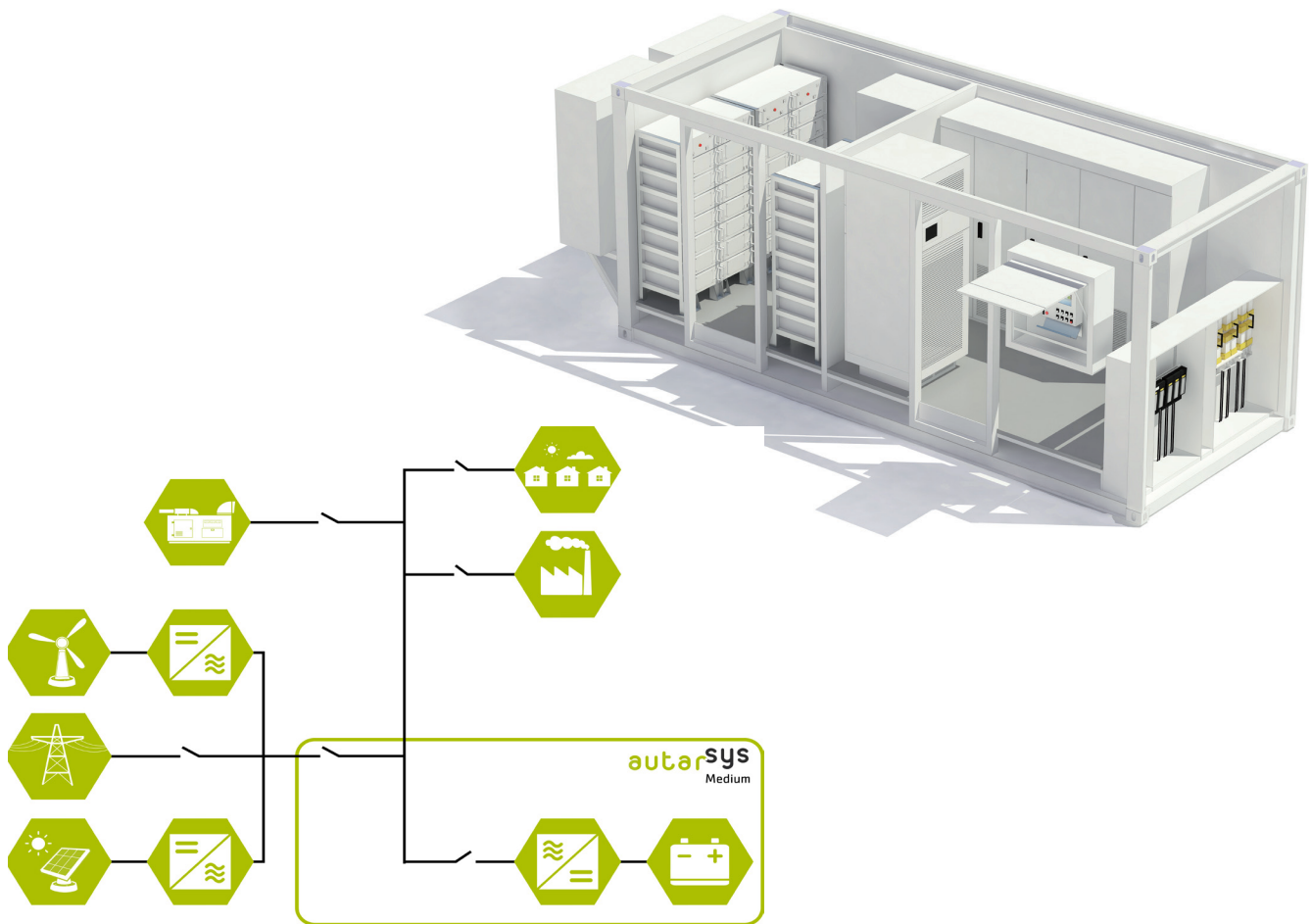
Medium Energy Storage Systems



Productsheet

Renewable energy supply with next generation technology



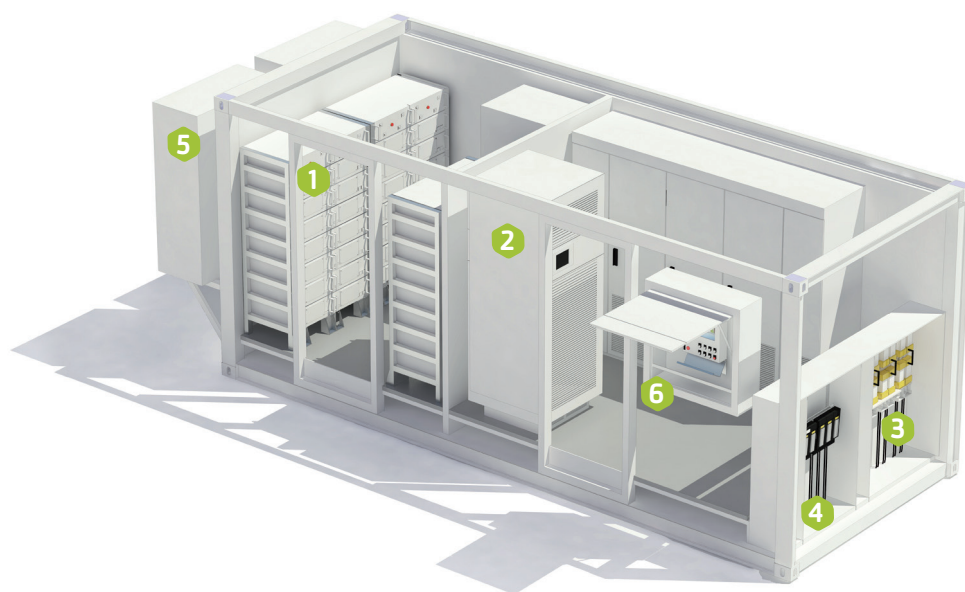


The Autarsys Medium is a modular Energy Storage System (ESS) and serves different applications. As a turn-key solution, it is possible to integrate the Autarsys Medium as an Off-Grid and On-Grid application. With the Inverter of the ESS, it is possible to offer consumers a stable voltage supply with constant frequency. Combined with conventional (e.g. Diesel) or renewable (e.g. PV, Wind, Biogas) energy sources the system offers a project specific energy management function. The system has a rated power of 100 to 800 kW and an energy storage capacity between 65 and 1092 kWh, depending on the cell type and the application of the ESS.

CONTROL	ENERGY MANAGEMENT	MONITORING	SERVICE
Frequency control (P(f))	Renewable (e.g. Sun, Wind), conventional (e.g. Diesel) energy sources	Actual/historical operating data	User administration and logging of user interactions
Voltage control (Q(U))	Optimal use of energy sources	Logging of power data related to the guarantee	Alarms (fault, sabotage, fire) with different escalation levels
Harmonic compensation	Direct communication between renewable/conventional sources and the ESSmanagement through product lifetime	Control and monitoring via HMI, local and per remote access	Logging of all events and data



- 1 Battery racks
- 2 Battery inverter
- 3 AC connections
- 4 DC connections
- 5 Air Conditioning system
- 6 Control interface



System Ranges*	Minimum	Maximum
Power [kVA]	100	800
Energy Capacity [kWh]	65	1092
C-rate (continuous)	≤ 2.5	
*The Autarsys Medium ESS power, energy capacity and C-rate can lie between the ranges mentioned above. Example configurations of the Medium ESS for different C-rates are described below.		

	Medium-ESS <0.5C	Medium-ESS <1C	Medium-ESS <2.5C
System Parameters			
Rated Power [kVA]	100	200	300
Energy Capacity [kWh]	273	273	131
AC Voltage [V]		480 ± 10%	
Nominal current [A]	125	250	375
Peak Current [A]	175	350	525
Frequency [Hz]	50/60	50/60	50/60
Power Factor Correction (PFC)		-1 to +1 lagging and leading	
THD _U [%]	<2	<2	<2
Operating temperature ¹ [°C]	-10/+50	-10/+50	-10/+50
Inverter efficiency [%]	>96	>96	>96
Overall efficiency (round trip) [%]	88	88	88
Dimensions (LxWxH) [m]	6.06x2.44x2.90	6.06x2.44x2.90	6.06x2.44x2,90
Max. weight (without batteries) [t]	15.4 (7.7)	15.4 (7.7)	15.4 (7.7)
Storage Battery			
Cell Chemistry	Li-ion NCM	Li-ion NCM	Li-ion NCM
Cell manufacturer	Samsung	Samsung	Samsung
Specified cycles (Energy / Power) ²	4000	4000	6000
Calendar life ²³	20	20	20
Operating temperature [°C]	23 ±5	23 ±5	23 ±5
Efficiency [%]	>96	>95	>93
Applications*			
	Standard	Optional	
Off-Grid	✓		
On-Grid	✓		
Black start capability			✓
Islanding			✓
Fuel save			✓
Energy Management	✓		
Renewable Control Mode ⁴			✓
Arbitrage / Load shifting			✓
Frequency regulation P(f)			✓
Voltage stabilization Q(U)			✓
Harmonic compensation up to 51 st	✓		
Reactive power compensation			✓
UPS-functionality			✓
SWER-net integration			✓
Interface			
Touch display		✓	
Data monitoring (SCADA)		✓	
Ethernet (LWL optional)		✓	
Modbus		✓	
GMS (GPRS)/ Satellite communication		✓	
Standard (additional available on request)			
EN 61000-6-2, EN 61000-6-4, CE-Conformity			
Installation Requirements			
Max. altitude above MSL [m]		1000	
Noise emission (1m distance) [dB]		<60	

Details:

- ¹ Project specific modifications are possible
- ² Depends on the application
- ³ Full cycle per day
- *The standard solution and configuration may vary depending upon the application required

autarsys
Make your own energy.

Contact

Headquarters
Autarsys GmbH

Johann-Hittorf-Str. 8
12489 Berlin, Germany

mail@autarsys.com
www.autarsys.com

Phone
+49(0)30.609849800