

Solition Mega series

Technical data sheet

Applications



Commercial and industrial applications



Agriculture



E-mobility



Renewable energy



Biogas plant



Utilities

Technical characteristics and data



Battery system	Solition Mega Zero Five (Air cooled)	Solition Mega One (Air cooled)	Solition Mega Three (Liquid cooled)
Battery technology	LiFePO ₄ (LFP)		
Storage capacity	up to 552kWh	up to 1104kWh	up to 3440kWh
C-rate (charging/discharging)	Max 1C / 1C, typical 0.5C / 1C		0.5C / 0.5C
Battery configuration	up to 4 x 138kWh racks with 15 modules each	up to 8 x 138kWh racks with 15 modules each	6x,8x or 10 x 344kWh racks with 8 modules each
Scalability	in increments of 138kWh		in increments of 344kWh
BMS	With mains DC-switch and protection for over and under voltage, over current, temperature, SoC, system voltage, string voltage, temperature alarms		
Master BMS	LCD touch screen with graphical interface		
Certification batteries*	Modules and cells: UN38.3 Cells: GB/T36276, UL1973, UL1642, UL9540A, IEC62619		

Converter			
Converter	Max. 1 converter rack	Max. 2 converter rack	Max. 1 converter unit per container
Inverter type	Bi-directional four quadrant		
AC power	Up to 500kW (250kW) at 400V	Up to 1000kW (500kW) at 400V	Up to 1725kW at 690V
Scalability	In increments of 62.5 kW		In increments of 215kW at 690V
AC voltage	400 V ± 10 % (3-phase + PE) (with additional transformer: 480 V ± 10 %)		690 V - 15 % +10 % (3-phase + PE)
AC grid current	Max. 760 A	Max. 1520 A	Max. 1612 A
AC frequency	50 Hz (49.5 Hz ~ 50.5 Hz) or 60 Hz (59.5 Hz ~ 60.5 Hz)		
Cos. Phi	0.1 ~ 1 leading or lagging		
Peak efficiency	98.2 %		99%
Output THD	≤ 3 %		
Protection	Min./max. AC voltage, frequency, battery voltage, max. power, temperature, overcharging, overdischarging		
DC voltage range	600 V ~ 900 V		1070 V ~ 1500 V
Certification converter and container*	ETL listed (conforming to UL1714, UL1741SA, UL9540, CPUC Rule 21, CSA 22.2), CE, G99, IEC62109, IEC62040, EN50549, UNE206007-1, UNE 217002, UE 2016/631, AS/NZS 4777.2:2020, NRS 097-2-1, Complies to AS5139, AS4487-2013, AS61000		
Off-grid	Data available on request		

* The list is constantly updated, for updated information please contact us.

Solition Mega series

Technical data sheet

Technical characteristics and data (continued)



System	Solition Mega Zero Five (Air cooled)	Solition Mega One (Air cooled)	Solition Mega Three (Liquid cooled)
Housing	Housing steel frame, sheet metal and insulated walls	Freestanding 20ft ISO High Cube container with double locking doors and two separate chambers for converters and batteries	Freestanding 20ft ISO High Cube container and additional outdoor housing for the PCS
Dimensions (incl. HVAC; L x W x H)	2.99 x 2.44 x 2.89 m	6.06 (6.64) x 2.44 x 2.90 m	Battery container: 6.06 x 2.44 x 2.90 m, PCS housing: 2.20 x 1.30 x 2.16 m
Weight	< 9t	< 18t	Battery container: ~35t, PCS: ~2t
Auxiliary power	3 Ph5W 230V / 400V		
External communication	Modbus TCP/IP		Modbus TCP/RTU, IEC104, IEC61850
Internet	4G connection		
Isolation	Via optional transformer		
Nominal round trip efficiency	91%		
Scalability	Multiple containers can be combined as one system		
Indoor	Indoor solutions without container are also possible on request		not recommended

Environmental conditions

Operation temperature	-20°C to +50°C (de-rating > 45°C)		
Noise at full power	< 78 dB @ 1m distance, silencer is possible	< 78 dB @ 1m distance, silencer is possible	< 75 dB @ 1m distance, silencer is possible
Operating altitude	3000 m (> 2000 m de-rating)	3000 m (> 2000 m de-rating)	3000 m (> 3000 m de-rating)
Space requirements	At least 2.5m around the container must be freely available for service access		

Warranty conditions

Capacity guarantee*	10 years or 4000 cycles with 75% EoL, whatever comes first; conditions: max. 0.5C/1C, 15-28°C, 90% DoD	10 years or 4000 cycles with 70% EoL, whatever comes first; conditions: max. 0.5C/1C, 15-28°C, 90% DoD	10 years or 6000 cycles with 70% EoL, whatever comes first; conditions: max. 0.5C/0.5C, 15-28°C, 90% DoD
System guarantee*	5 years		

* For full information please see our warranty conditions.

Safety

Cooling	Batteries: HVAC, Converters: Forced air cooling	Batteries: 2x 5kW or 10kW HVAC; UL compliant, Converters: Forced air cooling	Batteries: Liquid cooling, Converter: Forced air cooling
Enclosure/Housing	IP 55		Battery container: IP 54, Converter: IP 55
Fire extinguisher system	Automatic Aerosol fire suppression system		
Fire extinguisher controller	Stand alone with battery backup, heat and smoke detectors and external alarm signals		