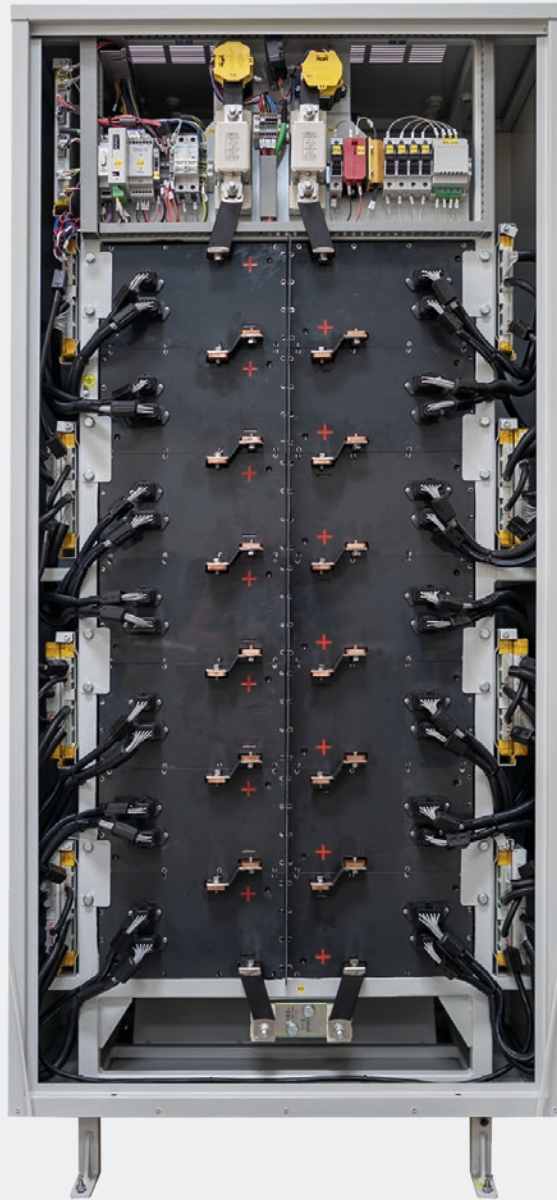




NANO
POWER



ESS TITAN NANO POWER

ENERGY STORAGE SYSTEMS

THE MAIN ELEMENT OF ANY ENERGY STORAGE SYSTEM IS THE CELL.

Its quality determines the performance of the entire system. With the ALTAIRNANO LTO CELLS the energy storage system reaches superior performance, service lifetime and load cycles.



HIGH POWER PERFORMANCE

The ESS TITAN can reach a continuous power of 5C and a pulse power of 10C. The system can be fully charged and discharged within 12 minutes



WIDE TEMPERATURE RANGE

The Altairnano LTO 70Ah can work in the following temperature range from -50°C to + 60°C. Therefore, the entire system will provide significant cost reductions due to lowered requirements on the heating/cooling system



25,000 CYCLES

With 25,000 full charge and discharge cycles, the Altairnano LTO 70Ah cell is suited for long-term operation with low maintenance costs. Maintenance and replacement costs are minimal and increase the return on investment of the whole ESSsystem

KNOW ALL DETAILS THAT MATTER

AVERAGE CELL TEMPERATURE (°C)							
	25	30	35	40	45	50	55
DOD (%)	CYCLE LIFE (CYCLES TO 80% OF ORIGINAL CHARGE CAPACITY)						
100	25.000	19.847	15.753	12.504	9.925	7.878	6.253
90	30.864	24.503	19.449	15.437	12.253	9.726	7.720
80	39.063	31.011	24.615	19.538	15.508	12.309	9.770
70	51.020	40.504	32.150	25.519	20.255	16.077	12.761
60	69.444	55.131	43.760	34.734	27.569	21.883	17.369
50	100.000	79.388	63.014	50.016	39.700	31.512	25.012
40	156.250	124.044	98.459	78.151	62.031	49.237	39.081
30	277.778	220.523	175.038	138.935	110.278	87.532	69.478
20	625.000	496.178	393.836	312.603	248.125	196.947	156.325
10	2.500.000	1.984.711	1.575.344	1.250.412	992.502	787.788	625.298

ADVANCED BMS SYSTEM

The BMS is designed with a focus on system safety, the voltage and temperature are checked on a cell level. The BMS has 4 function models from normal operation all the way up until warning mode, with immediate battery pack disconnection. BMS can be connected directly to the fire suppression system.

SAFETY

From a chemical point of view the lithium-titanate cell is one of the safest lithium-based cells with an exceptionally high tolerance against overcharging. The Altairnano 24V 70 LTO battery modules increase the safety with enclosing cells into the hermetic closed battery module which is capable of withstanding hard module/cell penetration without fire or explosion. Together with advanced BMS these make the ESS system technology super safe.

REMOTE MONITORING

Optional remote monitoring offers 24/7 access to the battery system performance data with the possibility of customising the interface according to customer requirements with automatic reporting of operating states.



GRID SERVICES

- Frequency regulation
 - Reactive power
 - Voltage control
- Loss compensation
- System protection
- Energy imbalance



SOLAR ENERGY INTEGRATION



WIND ENERGY INTEGRATION



PEAK SHAVING



UPS

CONFIGURE YOUR OWN SYSTEM (FROM 21KWH TO ∞)

ESS	TYPE	NOMINAL CAPACITY	USEABLE CAPACITY	BATTERY VOLTAGE	NOMINAL POWER	CYCLE LIFE TIME	CONFIGURATION
ESS TITAN NANO POWER	336-100	21 kWh	80%	336 VDC	100 kW	39.000 Cycles	1 battery rack
	336-200	42 kWh	80%	336 VDC	200 kW	39.000 Cycles	2 battery racks
	336-300	63 kWh	80%	336 VDC	300 kW	39.000 Cycles	3 battery racks
	336-400	84 kWh	80%	336 VDC	400 kW	39.000 Cycles	4 battery racks
	336-500	105 kWh	80%	336 VDC	500 kW	39.000 Cycles	5 battery racks
	336-600	126 kWh	80%	336 VDC	600 kW	39.000 Cycles	6 battery racks
	672-200	42 kWh	80%	672 VDC	200 kW	39.000 Cycles	2 battery racks
	672-400	84 kWh	80%	672 VDC	400 kW	39.000 Cycles	4 battery racks
	672-600	126 kWh	80%	672 VDC	600 kW	39.000 Cycles	6 battery racks
	672-800	168 kWh	80%	672 VDC	800 kW	39.000 Cycles	8 battery racks
	672-1000	210 kWh	80%	672 VDC	1000 kW	39.000 Cycles	10 battery racks
	672-1200	252 kWh	80%	672 VDC	1200 kW	39.000 Cycles	12 battery racks



NANO
POWER

WE CREATE POWERFUL SOLUTIONS



WEIGHT: 470KG

[EBZ nano power s.r.o.](http://www.nanopower.eu)

Tiskařská 599/12 • 108 00 Praha, Czech Republic

www.nanopower.eu • info@nanopower.eu