A company that is committed to the research and development of LFP batteries and applications of BESS.

Scan the QR Code to Check Our Website

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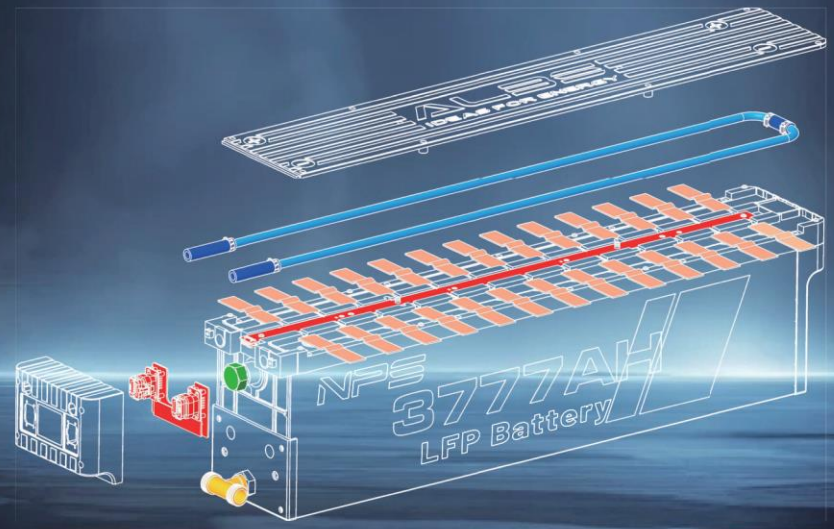
PRODUCT MANUAL



Australia National Power Storage Holding Pty Ltd

ABOUT NPS

NPS is headquartered in Sydney, Australia. The branch office in Xi'an, China has three laboratories for cycle life. safety&temperature control, BMS circuit, and a production center of 5,000 square meters.

The goal of NPs is to provide LFP battery and system solutions that are specially designed for energy storage with low cost and a high level of safety for worldwide clients.

RANKED NO.1 IN FOUR ASPECTS

Maximum Capacity
Battery Capacity: 3777Ah
Largest capacity in the world

Highest Level of Safety
Collect and process the thermal runaway smoke in an orderly and controllable way

Longest Cycle Life
Up to 12000 times

Lowest Cost
0.1USD/Wh

TESTING&CERTIFICATION

TUV SOD IEC EMC CE UL ROHS UN38.3 GB

INNOVATION IN FIVE DIMENSIONS

Lithium-ion battery energy storage applications are composed of energy storage batteries and other com ponents, which involve ten technical points. Six points(cathodes, anodes, separators, electrolytes, shell com ponents, manufacturing techniques) derive from the battery, and four(fire protection system, temperature control system, BMS, container shell components) derive from energy storage application. Except for cath odes, anodes, and separators, NPS alters sevenl technology points, among which five are first introduced in the world, two are leading domestically. NPS is the only R&D company that could achieve the best on cost, safety, and cycle life simultaneously.

COMPREHENSIVE PATENT PROTECTION

- 1000+ Chinese patents, 30+ international patents based on PCT. Currently, the number of patents is growing rapidly at an annual average rate of over 300 pieces.
- Five patent-protection groups have been formed, which mainly focus on electrolvte additive, shell compo nents, manufacturing techniques, fire protection system, and temperature control system.
- Comnrehensively cover 1500Ah+ large-capacity batteries and the BESS that is composed of such batteries. Strong competitive power on patent monopoly has been formed, which guarantees that R&D accomplish ments are systematically protected by patents.

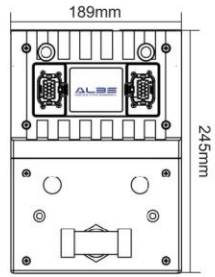
NPS

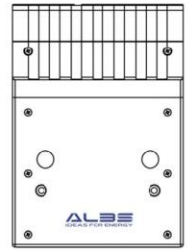
PRODUCT INTRODUCTION

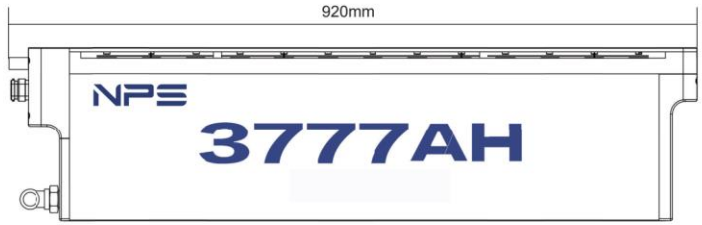
NPS-3777Ah

SPECIFICATIONS&PARAMETERS

Name	Specifications/Parameters
Cell Type	LFP
Nominal Capacity	3777Ah
Nominal Voltage	3.2V
Voltage Range	2.5~3.65V
Battery Internal Resistance	<0.2mΩ
Continuous Charge/Discharge Rate	0.5C
Cell Energy	12.086kWh
Cycle Life	≥12000 times
Dimensions (L*W*H)	920*189*245mm







PRODUCT INTRODUCTION

NPS -1.5MW/3MWh

SPECIFICATIONS&PARAMETERS

Name	Specifications/Parameters
Cell Type	LFP
Nominal Voltage(V)	3.2
Voltage Range(V)	2.5~3.65
Cell Capacity(Ah)	3777
Cell Energy(Wh)	12086.4
Cycle Life	≥12000
System Configuration	IP256S
Continuous Charge/Discharge Current(A)	1888.5（0.5C）
Maximum Charge/Discharge Current(A)	3777（1C）
Nominal Voltage(V)	819.2
Voltage Range(V)	640~934.4
System Energy(kWh)	3094
Nominal Power(kW)	1500
Continuous Charge/Discharge Power	0.5P
Rated AC Power	1500kVA
Connection Method	Three-Phase Three-Wire
Permitted Grid Voltage	380(-15%~15%)Vac
Permitted Grid Frequency	50/60(-2.5~2.5)Hz
Total Harmonic Distortion Rate	≤3%
Power Factor	0.99/-1~1
Communication Interface	RS 485,Ethemet,CAN
Communication Protocol	ModbusTCP/RTU,IEC104,IEC61850
Container Type	Prefabricated Container
Dimensions(Width*Depth*Height)	6058*2438*2591mm
Maximum Operating Altitude	≤3000m
Weight	<35T
Thermal Management	Liquid Cooling
IP Rating	IP55
Operating Temperature Range	-30~+55℃
Relative Humidity	5%~100%
Noise	≤55dBA
Fire Protection	Self-developed Safe and Reliable Fire Protection System
Standard Color	RAL7035
Insulation Resistance	>1000Ω/V
Standards	UL1973,GB/T36276

PRODUCT INTRODUCTION

NPS -5MWh

SPECIFICATIONS&PARAMETERS

Name	Specifications/Parameters
Cell Type	LFP
Nominal Voltage(V)	3.2
Voltage Range(V)	2.5~3.65
Cell Capacity(Ah)	3777
Cell Energy(Wh)	12086.4
Cycle Life	≥12000
System Configuration	IP416S
Continuous Charge/Discharge Current(A)	1888.5（0.5C）
Maximum Charge/Discharge Current(A)	3777（1C）
Nominal Voltage(V)	1331.2
Voltage Range(V)	1040~1500
System Energy(kWh)	5027.94
Nominal Power(kW)	2500
Continuous Charge/Discharge Power	0.5P
Container Type	Prefabricated Container
Dimensions(Width*Depth*Height)	6058*2438*2896mm
Weight	<45T
IP Rating	IP55
Operating Temperature Range	-30~+55℃
Relative Humidity	5%~100%
Maximum Operating Altitude	≤3000m
Thermal Management	Liquid Cooling
Noise	≤55dBA
Fire Protection	Self-developed Safe and Reliable Fire Protection System
Standard Color	RAL7035
Insulation Resistance	>1000Ω/V
Standards	UL1973,GB/T36276

PRODUCT INTRODUCTION

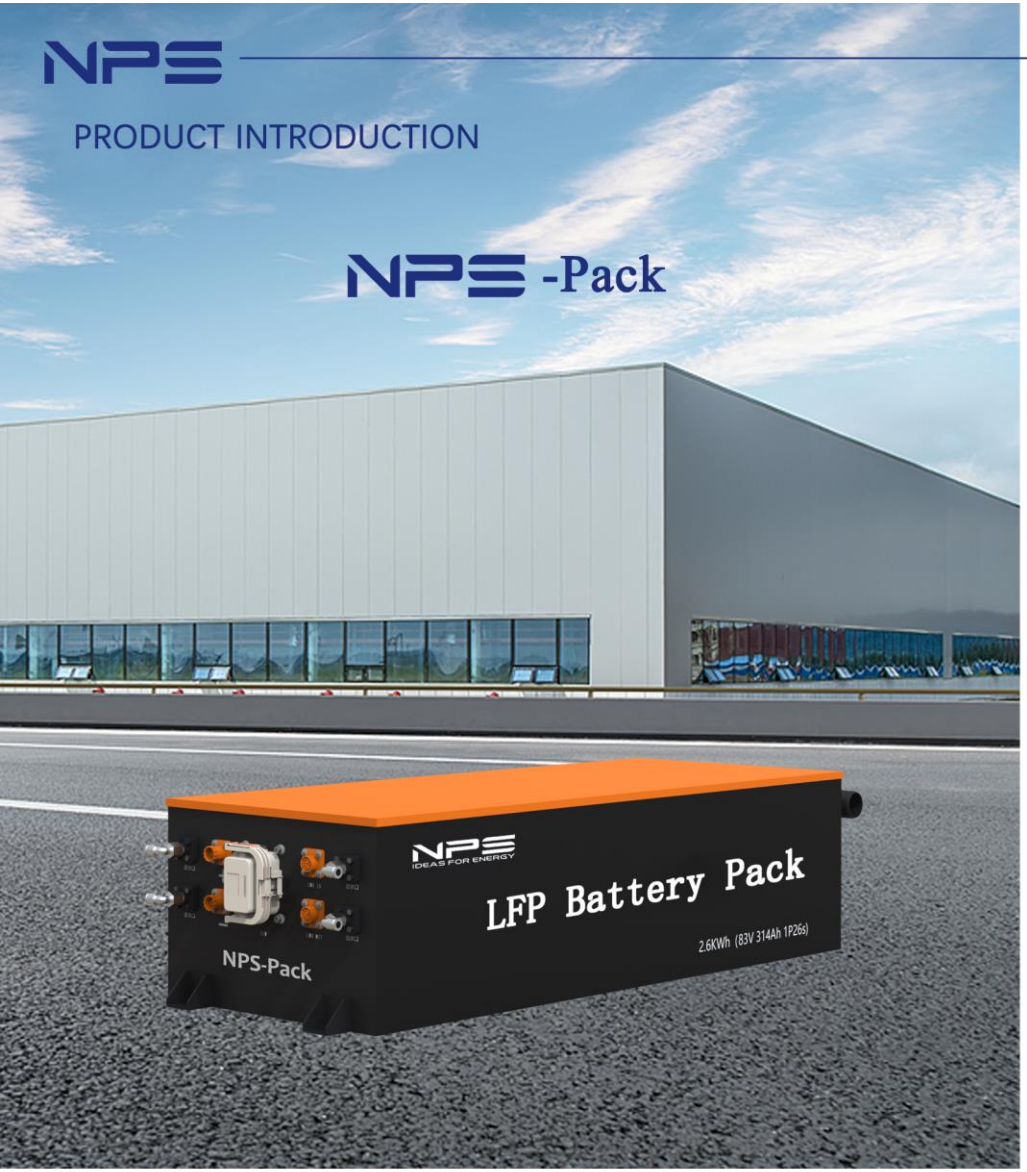
NPS-Supercharging Vehicle

SPECIFICATIONS&PARAMETERS

Parameters on the Input and Output Sides	
Charging Port Rated Power(KW)	4*360
Discharge Pile Rated Power(KW)	2*750
Charging Port Input Voltage Range(V)	640-934.4
Discharge Pile Input Voltage Range(VDC)	600-1000
Discharge Pile Output Voltage Range(VDC)	200-1000
Number of Charging Ports	4 DC Ports
Number of Charging Piles	Each with 4×375 kWh GB/T Guns
Battery Input-Side Parameters	
Cell Capacity(Ah)	3777
Battery Cluster Rated Voltage(V)	819.2V
Battery Stack Configuration	1P256S
Battery Stack Voltage Range(V)	640-934.4
Total Battery Stack Capacity(MWh)	3094
Energy Storage System Parameters	
Cooling Method	Liquid Cooling of Battery Pole
Charge/Discharge Rate	0.5P
Optimal Charging Temperature Range(℃)	10-35
Maximum Charging Temperature Range(℃)	0-60
Optimal Discharging Temperature Range(℃)	10-35
Maximum Discharging Temperature Range(℃)	-20-60
Recommended Storage Temperature Range	15-35
Fire Protection Method	Ordered Smoke Exhaust and Ignition Treatment
Container Weight(T)	32T
Container Dimensions(m)	6.1*2.4*2.6(20ft Standard Container)
Protection Level	IP55
Installation Method	Hoisting
Maximum Operating Altitude(m)	2000m
Application Scenarios	Remote Areas or Locations Without Nearby Power Supply

PRODUCT INTRODUCTION

NPS -Pack



SPECIFICATIONS&PARAMETERS

Name	Specifications/Parameters
Cell Type	314Ah
Nominal Capacity	26kWh
System Configuration	1P26S
Nominal Voltage	83V
Voltage Range	60V-95V
Continuous Charge/Discharge Current	157Ah(0.5C)
Maximum Charge/Discharge Current	314Ah(1C)
Protection Level	IP67
Insulation Resistance	DC1500V >1GΩ
Dimensions (L*W*H)	1034*378*240mm
Weight	157KG

Safety
Ordered smoke exhaust &ignition control,ensuring complete safety.

Best Cooling
Liquid cooling design of battery pole ,battery temp difference within 2°C.

PRODUCT INTRODUCTION

NPS -ICES

Safety
Ordered smoke exhaust &ignition control,ensuring complete safety.

Best Cooling
Liquid cooling design of battery pole ,battery temp difference within 2°C.

SPECIFICATIONS&PARAMETERS

Battery Parameters	
Battery Model	NB+ES-26S/280
Cell Type	LFP
Cell Capacity	314Ah
Battery Configuration	260S1P
Battery Voltage Range	600-949V
System Storage Capacity	261kWh
Cooling Method	Liquid Cooling of Battery Pole
AC Parameters (Built-in PCS)	
Rated Power	120KW
Rated Voltage	380Vac(Three-phase, five-wire)
Grid Range	±15%
Grid Frequency Range	50/60Hz±5Hz
Current Total Harmonic Distortion	⩽3%
System Parameters	
Dimensions	1300(L)*1300(D)*1950(H)mm
Weight	2.8T
Protection Level	IP55
Operating Temperature	-20-60℃
Operating Humidity	0-100%
Altitude	3000m(> 3000m derating)
Display	NB+6.8 capacitive touch LCD
Fire Protection	Smoke orderly discharge ignition handling
Communication	RS485, Etherent, CAN
Conform to the standard	GB/T36276

PRODUCT INTRODUCTION

NPS -Household ESS

Safety
Ordered smoke exhaust &ignition control,ensuring complete safety.

SPECIFICATIONS&PARAMETERS

AC Input/Output		
Rated AC Power	5000W	
Rated AC Voltage	220/230V	
AC Grid Frequency	50/60Hz	
Rated Current	21.7A	
Power Factor	0.8leading ~ 0.8lagging	
Harmonics	< 3%	
PV Input		
Max. PV Input Power	6000W	
Max. PV Input Power	580V	
Max. PV Input Power	12.5A	
Short-circuit Current	15A	
MPPT Operation Voltage Range	125 ~ 550V	
Number of MPPT	2	
MPPT Efficiency	0.999	
Load Port Output		
Rated Output Power(On-grid)	5000W	
Rated Output Power(Battery Output when Off-grid)	4600W	
Rated Output Voltage	220/230V	
Rated Output Frequency	50/60Hz	
Rated Output Current	21.7A	
Battery Pack		
Number of battery packs	5.04kWh*2	5.04kWh*3
Nominal Capacity	10.08kWh	15.12kWh
Nominal Voltage	48V	48V
Operation Voltage Range	37.5 ~ 54.75V	37.5 ~ 54.75V
Max. Discharge Current	100A	100A
Max. Charging Current	70A	70A
Dimension (L)*(W)*(H)mm	680*178*460	680*178*690
Weight	82KG	123KG
General Data		
UI	7.8 寸 LCD Touch Display Screen、APP	
Communication	WIFI、Bluetooth 4.0、CAN2.0	
Cooling	Natural convection	
Ingress Rating	IP65	
Protection	Insolation Monitoring, Overcharge, Lighting protection, Over discharge,Failure protection	
Dimension of Inverter (L)*(W)*(H)	680mm*178mm*525mm	
Weight of Inverter	40KG	
Operating Temperature	-15 ~ 58℃	
Altitude	≤2000m	
Fire Protection	Ordered Smoke Exhaust and Ignition Treatment	

MONITORING PLATFORM INTRODUCTION

- NPS independently developed monitoring platform for BESS, which allows real-time access to BESS operational information.
- The platform allows real-time access to operational information of energy storage products from any location. Also, it monitors detailed information about individual large capacity battery.
- As shown in the figure above, the monitoring platform supports remote upgrade of each control module; when encounters a fault or disconnection, it's convenient for developers to analyze and solve.
- All the information is shared on the CAN bus. Once an emergency occurs, the corresponding system willl immediately calculate and output the solution instruction. At the same time, other systems will also recog nize the emergency and respond immediately.
- In addition, when a distributed functional module fails, others will still run normally, which will not cause systemic failure and thus ensuring the reliability of battery management.

Home Page Interface　　Master Control Interface

Battery Pack Interface　　Battery Interface

Historical Data Analysis Interface　　Hardware Topography Upgrade Interface