

DATASHEET



AMPIFARM | AF-C10-CY-425-NCPB-200

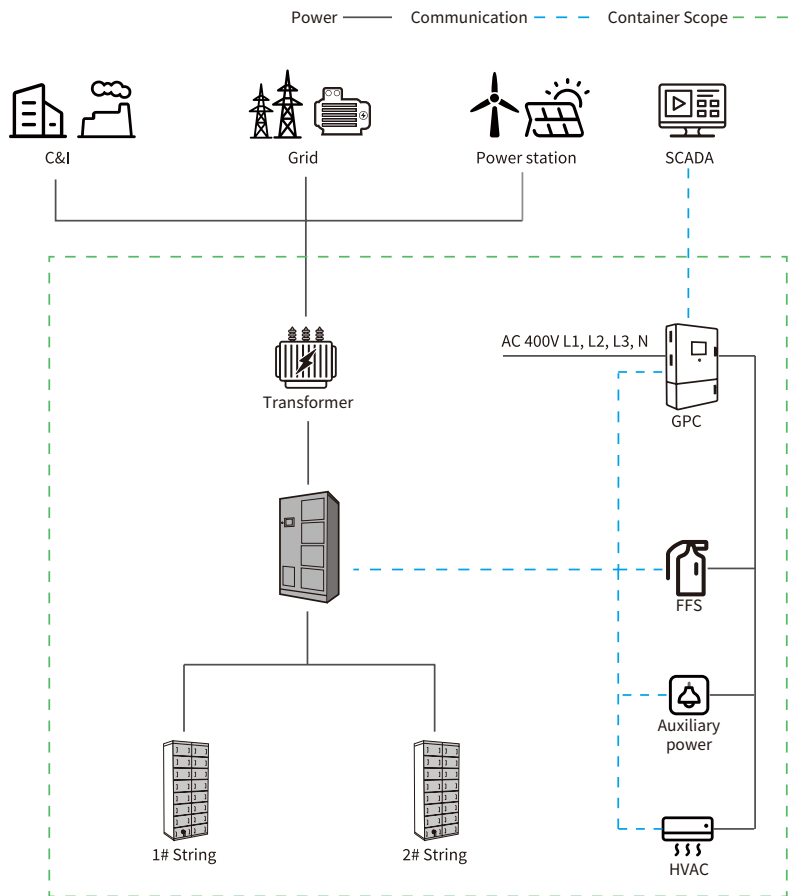
Battery Energy Storage System, 425kWh Battery Capacity, 200kW Power Conditioning System (PCS)

AmpiFARM Energy Storage Solution: Safety, Efficiency, and Profitability Combined. Our system is specifically designed to meet the unique needs of industrial and commercial customers. AmpiFARM seamlessly integrates cutting-edge technology, offering unmatched safety and reliability while maximizing financial returns.

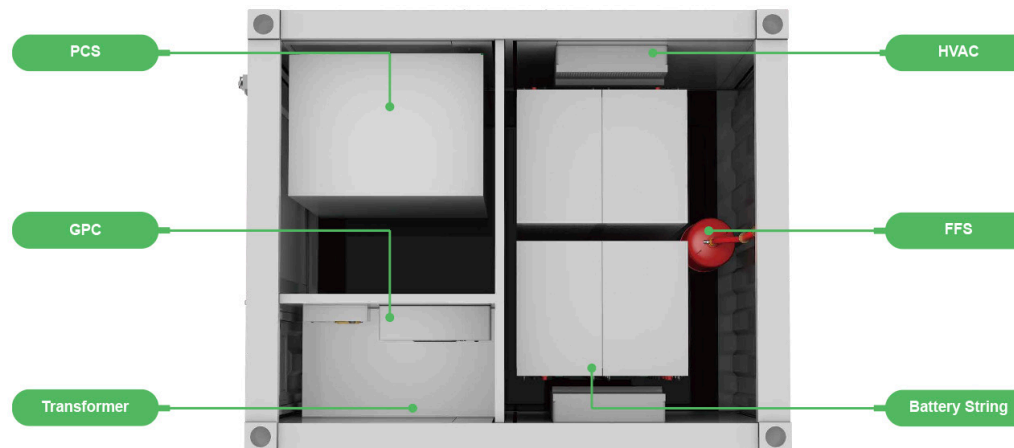
AmpiFARM systems utilize the most recent advancements in battery technology (Nano-Crystal™ Phosphate), ensuring fire safety, reliability, and longevity. AmpiFARM is an adaptable and scalable energy solution that can be expanded when needed. The System connects to Ampowr Cosmos™ (EMS): Our state-of-the-art EMS, which ensures the highest level of data safety while enabling efficient energy consumption monitoring and optimization.

DATASHEET

SYSTEM TOPOLOGY



PRODUCT LAYOUT

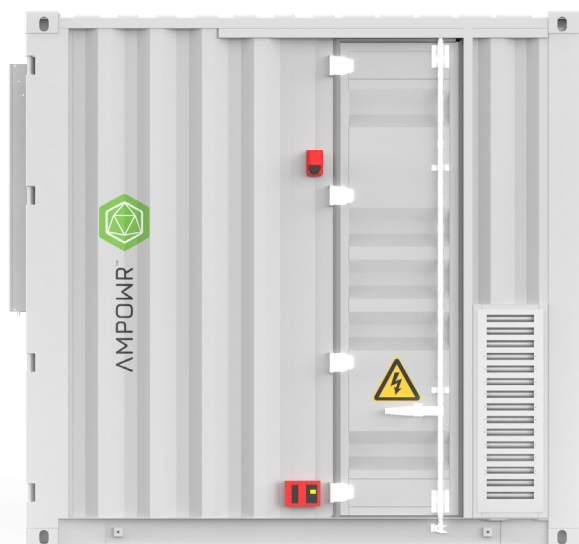


SYSTEM CONFIGURATION

Battery string type	Nominal capacity	AC connection	Isolation	Grid-connected voltage options	Dimensions (WDH mm)
NCPB-41P51373S	425kWh	3-Phase 4-Wire+PE	Built-in Transformer	480V 400V	2,991x 2,438x2,591mm

More Energy	All-in-one Design	Simple O&M	Safe & Reliable
Pack-level Optimization String-level Optimization	AC/DC All-in-one Design Reducing Initial Investment	No periodic balancing No experts site visit	Modular Design High Availability

DATASHEET



DC DATA

BATTERY CHEMISTRY	Nano Crystal Batteries Lithium Iron Phosphate (LFP)
CELL LIFE CYCLE	80% Retention with 5,000 Cycles @ 0.5C 25 °C
CELL SPEC	3.2V/280Ah
STRING CONFIGURATION	1P240S
NUMBER OF STRINGS	2
RATED ENERGY CAPACITY	425kWh
DC RATED ENERGY CAPACITY	430.08kWh
RATED VOLTAGE	768V
VOLTAGE RANGE	672V~852V
BMS COMMUNICATION INTERFACE	RS485, Ethernet
BMS COMMUNICATION PROTOCOL	Modbus RTU, Modbus TCP

AC DATA

SYSTEM	AF-C10-CY-425-NCPB-200-N	AF-C10-CY-425-NCPB-200-E
RATED AC POWER	200kW	
MAXIMUM AC POWER	250kW	
RATED VOLTAGE	480V	400V
GRID VOLTAGE RANGE	423~528V (Configurable)	340~460V (Configurable)
AC RATE OF CURRENT	240.5A	288.6A
OUTPUT THDI	< 3%	
AC PF	0.1~1 leading or lagging (Controllable)	
AC OUTPUT	3-Phase 4-Wire+PE	

GENERAL DATA

DIMENSION W/O CLEARANCES (L*W*H)	10ft container - 2,991 x 2,591 x 2,438mm
WEIGHT OF THE WHOLE SYSTEM	11t
DEGREE OF PROTECTION	IP54
OPERATING TEMPERATURE RANGE	-20~40 °C
RELATIVE HUMIDITY	0~95% (non-condensing)
MAX WORKING ALTITUDE	3,000m / 10,000feet (> 2000m / 6500ft derating)
COOLING CONCEPT OF DC HATCH	HVAC
FIRE FIGHTING SYSTEM	NOVEC1230 / FM-200
COMMUNICATION INTERFACES	RS485, Ethernet, GPRS
CERTIFICATES	UL9540, IEC62933, UN3536

DATASHEET



- 0.5C Charge/Discharge;
- Power supply can be single battery string or parallel battery strings;
- Easy configuration and maintenance

Battery String

BATTERY MODULE	NCPB37315P14
PACK QTY	15
NOMINAL CAPACITY	215.04kWh
RATED VOLTAGE	768V
DC VOLTAGE RANGE	672V~852V
PACK	25.6V/280Ah@1P16S
COMMUNICATION	Ethernet, CAN, RS485
LIFESPAN	>5,000 cycles@0.5C, 25°C
DIMENSIONS (W×D×H)	960 × 750 × 2,150mm
WEIGHT	1,872kg
CERTIFICATIONS	UL1973, UL9540A, IEC62619, CE , UN38.3



- Single-stage three-level modularization;
- Multi-branch input to reduce battery series and parallels connection;

Power Conversion System

	AP-AN-K002-1SWP	AP-XE-K002-1SWP
BATTERY VOLTAGE RANGE	500~850V	
DC MAX CURRENT	4400A	
RATED AC POWER	200kW	
MAXIMUM AC POWER	250kW	
RATED VOLTAGE	480V	400V
GRID VOLTAGE RANGE	432~528V	340~460V
AC RATE OF CURRENT	240.5A	288.6A
OUTPUT THDI	≤3%	
ADJUSTABLE PF	1(leading) ~ 1(lagging)	
GRID FREQUENCY RANGE	60Hz (59.5~60.5Hz)	50 / 60±2.5Hz
ISOLATION METHOD	Built-in Transformer	
DIMENSIONS (W×D×H)-PCS	1,200 x 800 x 2,160mm	
WEIGHT	1,280kg	



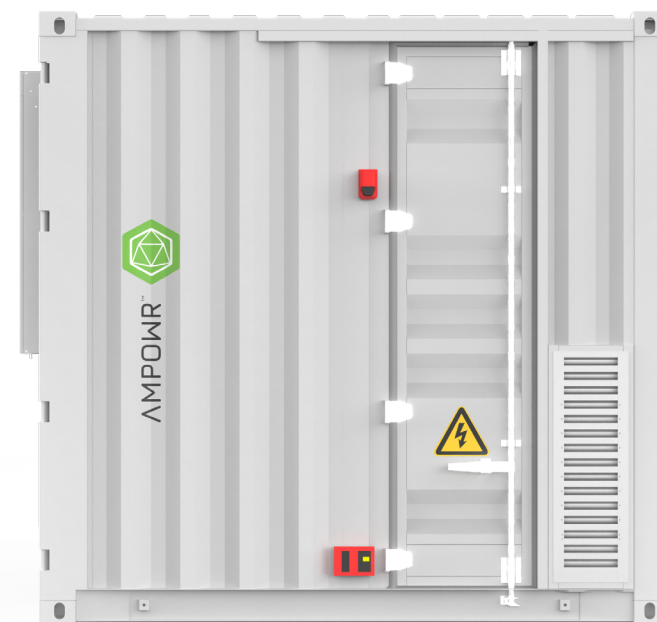
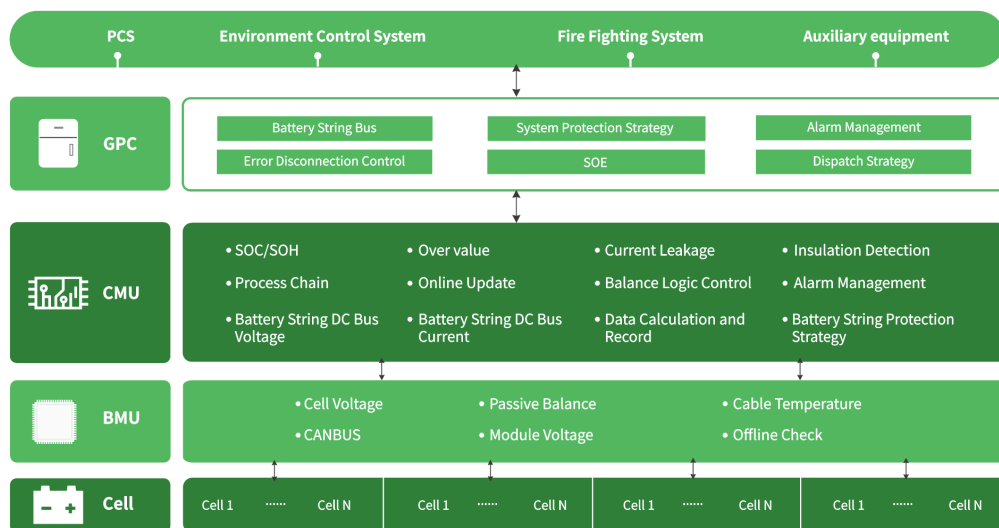
- All-round signal collection;
- Comprehensive logical control;
- Multilevel electric & control protection;
- Intelligente Communication management;
- Simple Configuration.

GridPoint Controller (GPC)

POWER INTERFACE	AC220V/DC24V
COMMUNICATION	Modbus RTU, Modbus TCP
RELAY	24 stem node input / output
NETWORK CONTROL APPLICATION	Peak shifting and valley filling, peak cutting, smooth renewable energy output curve
OFFLINE CONTROL APPLICATION	Backup power supply, PV/DG/EV/ ESS integrated micro-grid control

DATASHEET

BMS with Real-time Passive Balance

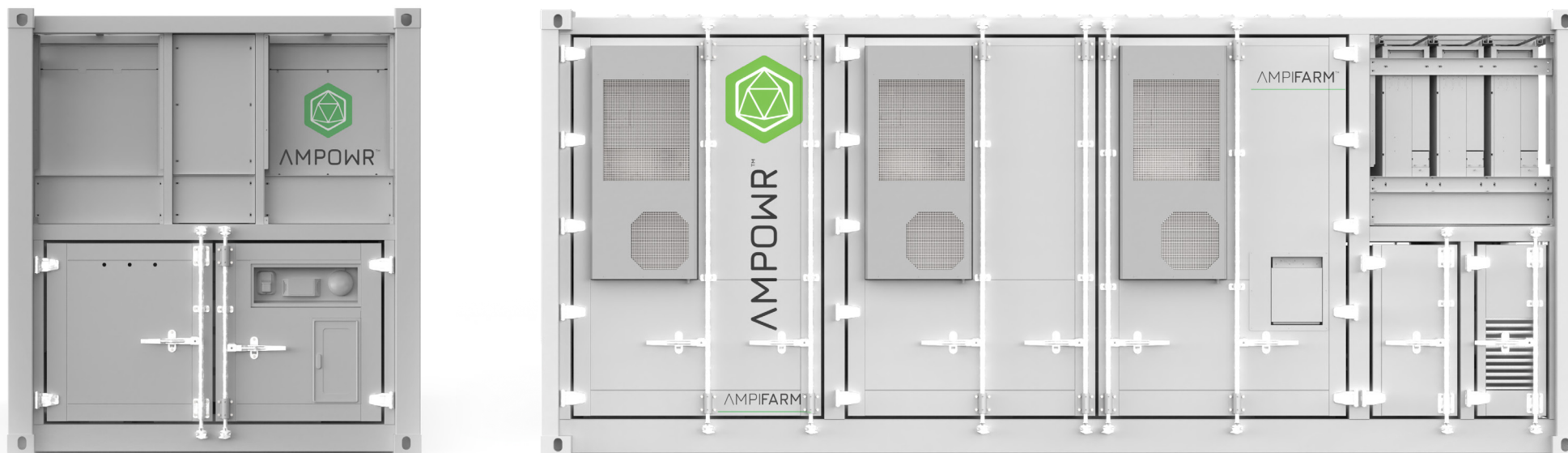


BMU		CMU	
Cell Voltage Measurement Accuracy	±5 mV	Battery String Voltage Measurement Range	100~1,000V
Cell Voltage Monitoring Interval	≤200ms	Battery String Voltage Measurement Accuracy	±1%
Cell Temperature Measurement Accuracy	±2℃	Battery String Voltage Monitoring Interval	≤100ms
Cell Temperature Measurement Interval	≤3s	Battery String Current Measurement Range	±300A
Cell Current Balance	Passive Balance, 150mA MAX	Battery String Current Measurement Accuracy	≤1%
Cell Voltage Measurement Range	1~5 V	Battery String Current Monitoring Interval	≤50ms
Over-current Protection	250A/1s	SOC Calculation Accuracy	≤8%
Short-Circuit Protection	500A/10ms	Input Insulation Resistance	≥10MΩ, 1,000VDC

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AMPIFARM | AF-C20-CY-1100-NCPB-500

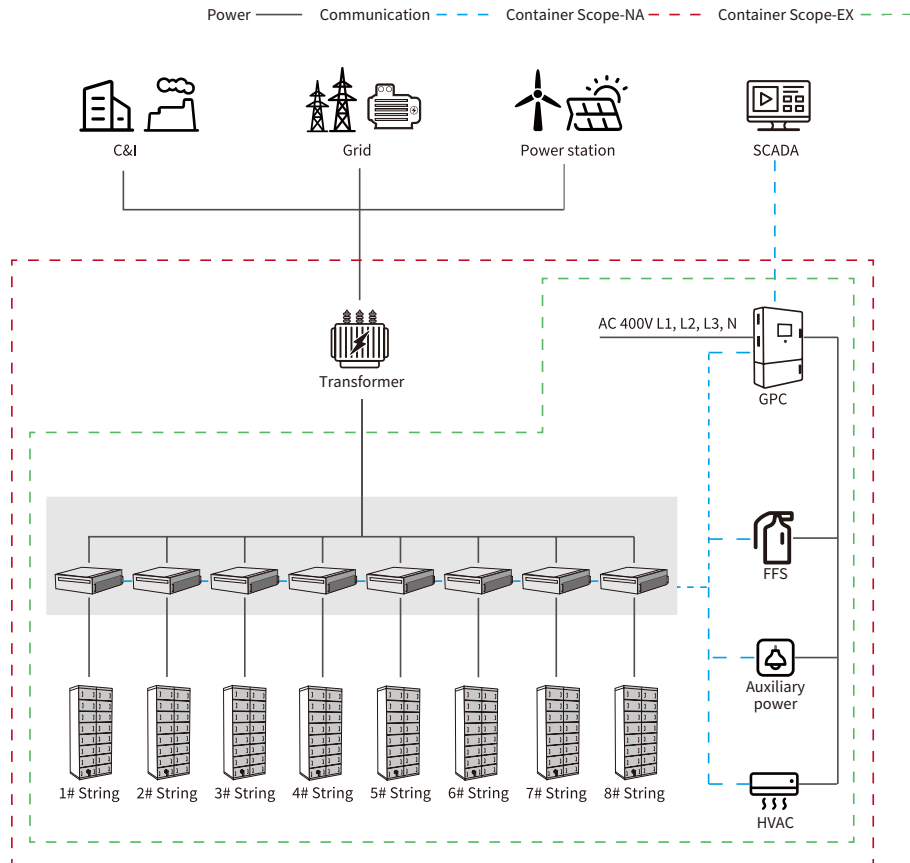
Battery Energy Storage System, 1100kWh Battery Capacity, 500kW Power Conditioning System (PCS)

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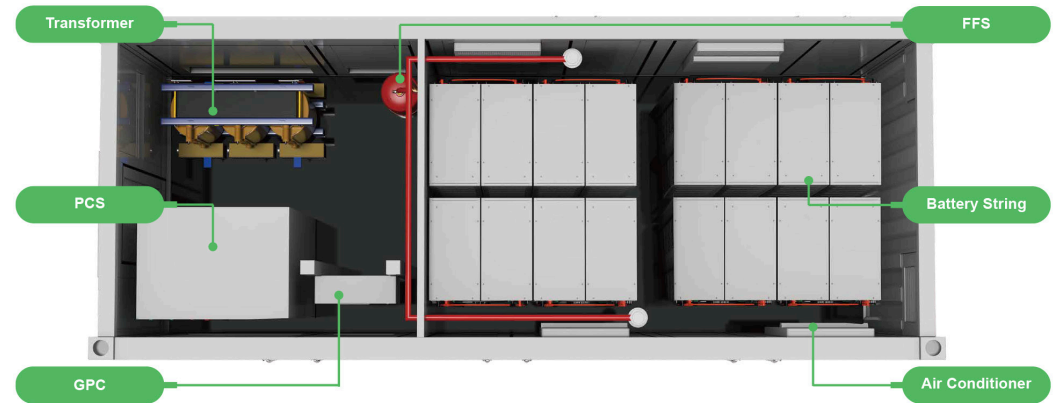
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DATASHEET

SYSTEM TOPOLOGY



PRODUCT LAYOUT

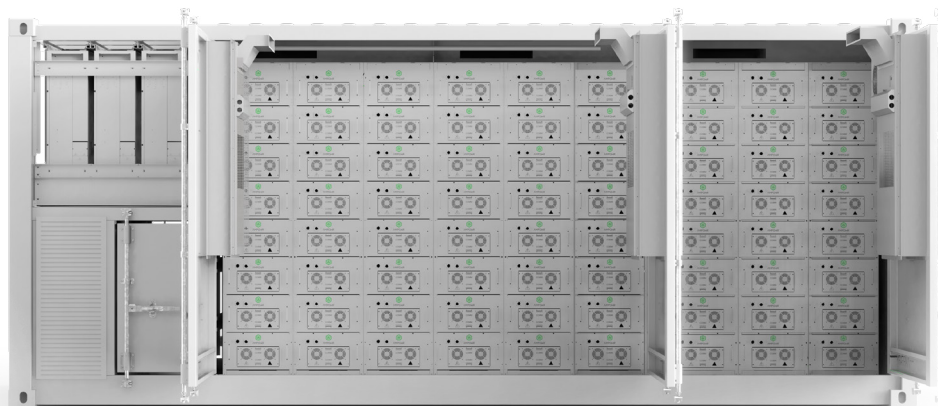


SYSTEM CONFIGURATION

Product Model	Battery string type	Nominal capacity	AC Connection	Isolation	Grid-connected voltage	Dimensions (WxDxH)
AF-C20-CY-1100-NCPB-500-N	NCPB 1389P51	1,100kWh	3-Phase 4-Wire+PE	Built-in Transformer	480V	6,058 x 2,438 x 2,591mm
AF-C20-CY-1100-NCPB-500-E			3-Phase+PE	Non-isolation	400V	

Powerful System	All-in-one Design	Simple O&M	Safe & Reliable
Pack-level Optimization String-level Optimization	AC/DC. All-in-one Compact Design. (Batteries, PCS)	No periodic balancing. No frequent expert site visits.	Modular Design, Safe Battery tech, High Availability

DATASHEET



DC DATA

BATTERY CHEMISTRY	Nano Crystal Batteries Lithium Iron Phosphate (LFP)
CELL LIFE CYCLE	80% Retention with 5,000 Cycles @ 0.5C 25 °C
CELL SPEC	3.2V/90Ah
STRING CONFIGURATION	2P240S
NUMBER OF STRINGS	8
RATED ENERGY CAPACITY	1,100kWh
DC RATED ENERGY CAPACITY	1,105.92kWh
RATED VOLTAGE	768V
VOLTAGE RANGE	672V~852V
BMS COMMUNICATION INTERFACE	RS485, Ethernet
BMS COMMUNICATION PROTOCOL	Modbus RTU, Modbus TCP

AC DATA

SYSTEM	AF-C20-CY-1100-NCPB-500-N	AF-C20-CY-1100-NCPB-500-E
RATED AC POWER	500kW	
MAXIMUM AC POWER	550kW	
RATED VOLTAGE	480V	400V
GRID VOLTAGE RANGE	432~528V (Configurable)	342~418V (Configurable)
AC RATE OF CURRENT	601.4A	721.7A
OUTPUT THDI	< 3%	
AC PF	0.1~1 leading or lagging (Controllable)	
AC OUTPUT	3-Phase 4-Wire+PE	3-Phase+PE

GENERAL DATA

	AF-C20-CY-1100-NCPB-500-N	AF-C20-CY-1100-NCPB-500-E
DIMENSION W/D CLEARANCES (L*W*H)	6,058 x 2,438 x 2,591mm	
WEIGHT OF THE WHOLE SYSTEM	20t	18.7t
DEGREE OF PROTECTION	IP54	
OPERATING TEMPERATURE RANGE	-20~40 °C	
RELATIVE HUMIDITY	0~95% (non-condensing)	
MAX WORKING ALTITUDE	3,000m / 10,000feet (> 2000m / 6500ft derating)	
COOLING CONCEPT OF DC HATCH	HVAC	
FIRE FIGHTING SYSTEM	NOVEC1230 / FM-200	
COMMUNICATION INTERFACES	RS485, Ethernet, GPRS	
CERTIFICATES	UL9540, IEC62933, UN3536	

DATASHEET



- 0.5C Charge/Discharge;
- Power supply can be single battery string or parallel battery strings;
- Easy configuration and maintenance;



- Single-stage three-level modularization;
- Multi-branch input to reduce battery series and parallels connection;



- All-round signal collection;
- Comprehensive logical control;
- Multilevel electric & control protection;
- Intelligentize Communication management;
- Simple Configuration.

Battery String

BATTERY MODULE	NCPB1389P51
PACK QTY	15
NOMINAL CAPACITY	138.24kWh
RATED VOLTAGE	768V
DC VOLTAGE RANGE	672V~852V
PACK	25.6V / 180Ah @2P16S
COMMUNICATION	Ethernet, CAN, RS485
LIFESPAN	>5,000 cycles @0.5C, 25℃
DIMENSIONS (W*D*H)	800 × 750 × 2,050mm
WEIGHT	1,467kg
CERTIFICATIONS	UL1973, UL9540A, IEC62619, CE , UN38.3

Power Conversion System

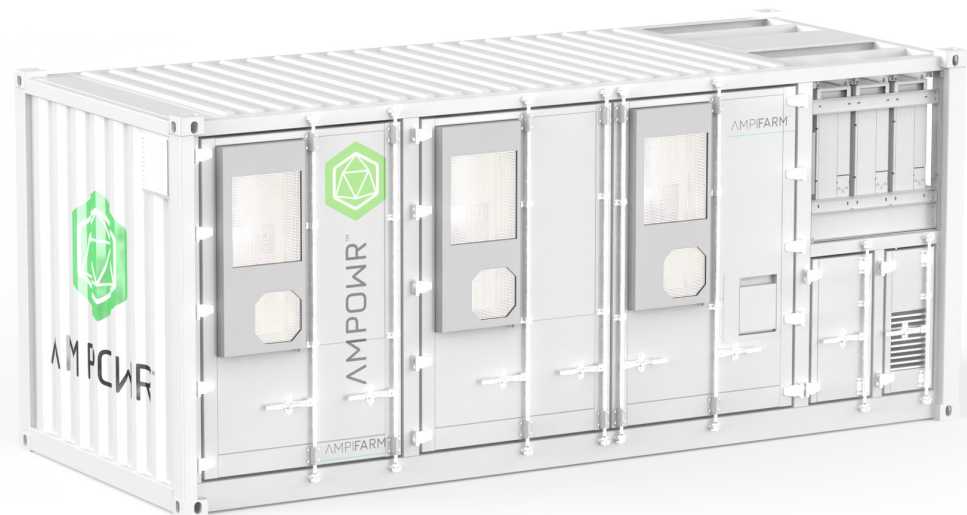
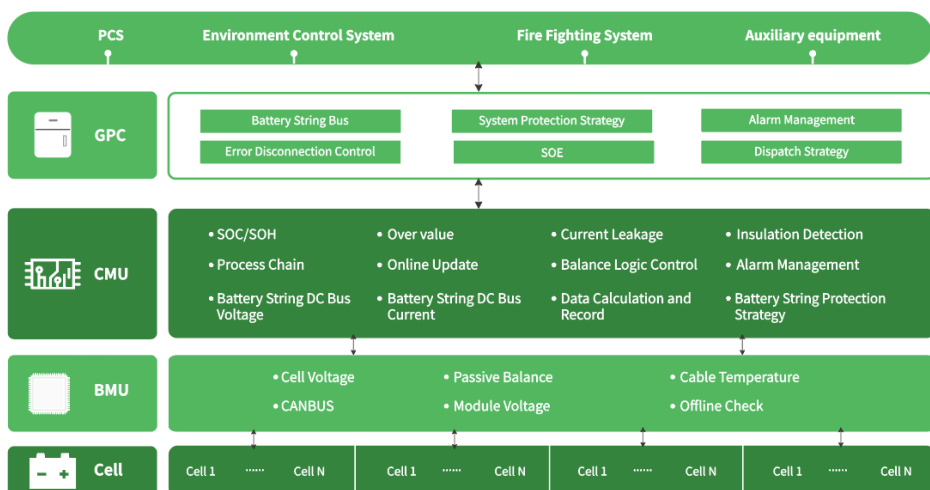
	AP-AN-LTK005-1SWP	AP-XE-LTK005-1SWP
BATTERY VOLTAGE RANGE	630~900V	600~900V
DC MAX CURRENT	873A	
RATED AC POWER	500kW	
MAXIMUM AC POWER	550kW	
RATED VOLTAGE	480V	400V
GRID VOLTAGE RANGE	432~528V	342~418V
AC RATE OF CURRENT	601.4A	721.7A
OUTPUT THDI	≤3%	
ADJUSTABLE PF	1(leading) ~ 1(lagging)	
GRID FREQUENCY RANGE	60Hz (59.5~60.5Hz)	50 / 60±2.5Hz
ISOLATION METHOD	Built-in Transformer	Non-isolation
DIMENSIONS (W*D*H)-PCS	2,200 × 800 × 2,160mm	1,100 × 800 × 2,160mm
WEIGHT	2,000kg	600kg

GridPoint Controller (GPC)

POWER INTERFACE	AC220V / DC24V
COMMUNICATION	Modbus RTU, Modbus TCP
RELAY	24 stem node input / output
NETWORK CONTROL APPLICATION	Peak shifting and valley filling, peak cutting, smooth renewable energy output curve
OFFLINE CONTROL APPLICATION	Backup power supply, PV/DG/EV/ESS integrated micro-grid control

DATASHEET

BMS with Real-time Passive Balance

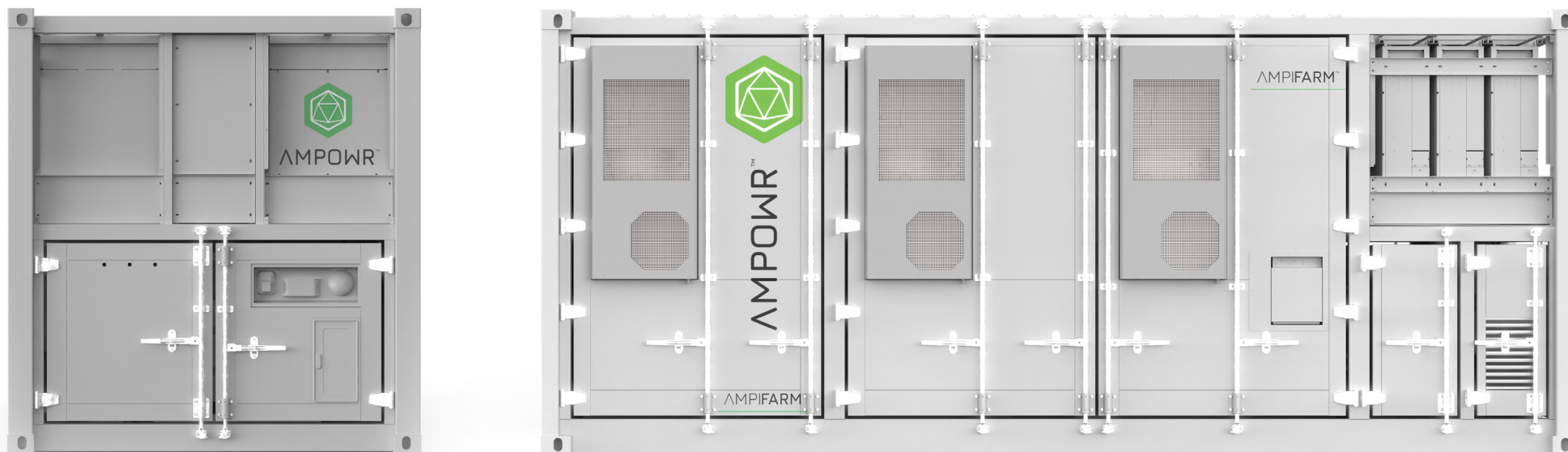


BMU		CMU	
Cell Voltage Measurement Accuracy	±5 mV	Battery String Voltage Measurement Range	100~1,000Vv
Cell Voltage Monitoring Interval	≤200ms	Battery String Voltage Measurement Accuracy	±1%
Cell Temperature Measurement Accuracy	±2 °C	Battery String Voltage Monitoring Interval	≤100ms
Cell Temperature Measurement Interval	≤3s	Battery String Current Measurement Range	±300A
Cell Current Balance	Passive Balance, 150mA MAX	Battery String Current Measurement Accuracy	≤1%
Cell Voltage Measurement Range	1~5 V	Battery String Current Monitoring Interval	≤50ms
Over-current Protection	250A/1s	SOC Calculation Accuracy	≤8%
Short-Circuit Protection	500A/10ms	Input Insulation Resistance	≥10MΩ, 1,000VDC

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AMPIFARM | AF-C20-CY-1100-NCPB-1000

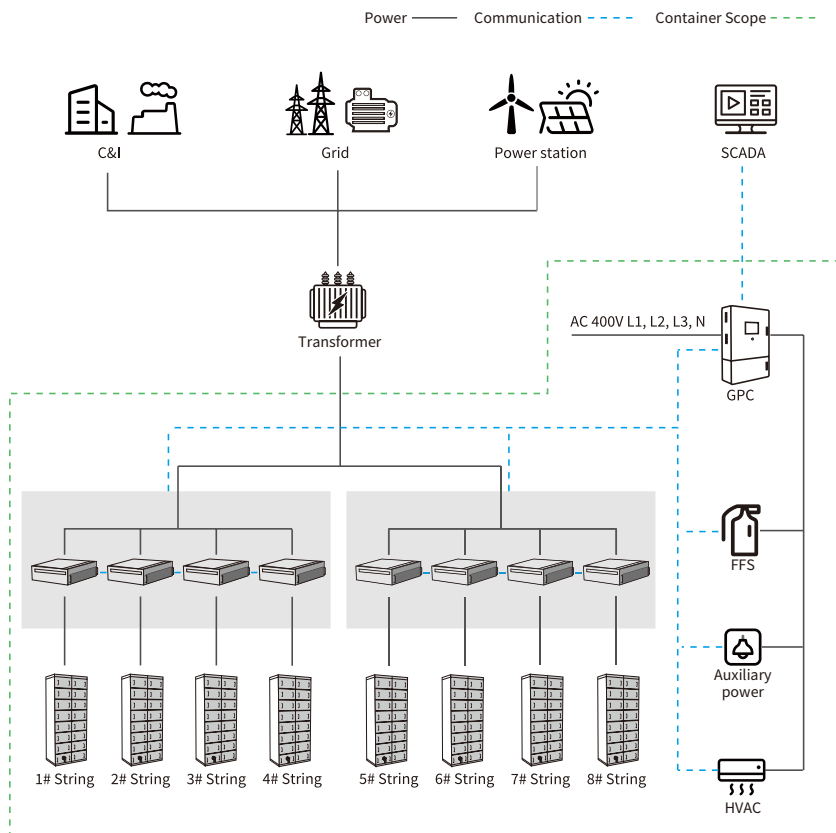
Battery Energy Storage System, 1100kWh Battery Capacity, 1000kW Power Conditioning System (PCS)

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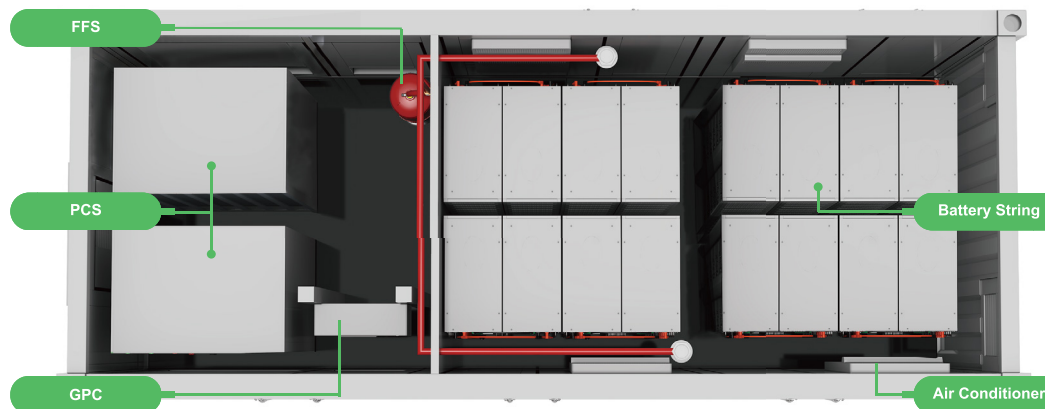
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DATASHEET

SYSTEM TOPOLOGY



PRODUCT LAYOUT

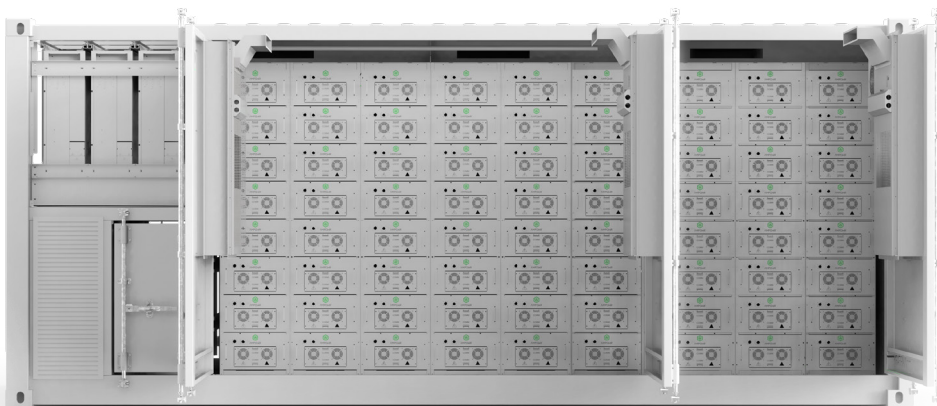


SYSTEM CONFIGURATION

Product Model	Battery string type	Nominal Capacity	AC Connection	Isolation	Grid-connected voltage	Dimensions (WxDxH)
AF-C20-CY-1100-NCPB-1000	S138-15P9	1,100kWh	3-Phase+PE	Non-isolation	400V	6,058 x 2,438 x 2,591mm

More Energy	All-in-one Design	Simple O&M	Safe & Reliable
Pack-level Optimization	AC/DC All-in-one Design Reducing Initial Investment	No periodic balancing No experts site visit	Modular Design High Availability

DATASHEET



DC DATA

BATTERY CHEMISTRY	Lithium Iron Phosphate (LFP)
CELL LIFE CYCLE	80% Retention with 5,000 Cycles @ 1C 25 °C
CELL SPEC	3.2V/90Ah
STRING CONFIGURATION	2P240S
NUMBER OF STRINGS	8
RATED ENERGY CAPACITY	1,100kWh
DC RATED ENERGY CAPACITY	1,105.92kWh
RATED VOLTAGE	768V
VOLTAGE RANGE	672V~852V
BMS COMMUNICATION INTERFACE	RS485, Ethernet
BMS COMMUNICATION PROTOCOL	Modbus RTU, Modbus TCP

AC DATA

SYSTEM	AF-C20-CY-1100-NCPB-1000-N	AF-C20-CY-1100-NCPB-1000-E
RATED AC POWER	1000kW	
MAXIMUM AC POWER	1100kW	
RATED VOLTAGE	400V	
GRID VOLTAGE RANGE	360~440V (Configurable)	342~418V (Configurable)
AC RATE OF CURRENT	2 * 721.7A	
OUTPUT THDI	< 3%	
AC PF	0.1-1 leading or lagging (Controllable)	
AC OUTPUT	3-Phase+PE	

GENERAL DATA

DIMENSION W/D CLEARANCES (L*W*H)	6,058 x 2,438 x 2,591mm
WEIGHT OF THE WHOLE SYSTEM	20t
DEGREE OF PROTECTION	IP54
OPERATING TEMPERATURE RANGE	-20~40 °C
RELATIVE HUMIDITY	0-95% (non-condensing)
MAX WORKING ALTITUDE	3,000m / 10,000feet (> 2000m/6500feet derating)
COOLING CONCEPT OF DC HATCH	HVAC
FIRE FIGHTING SYSTEM	NOVEC1230 / FM-200
COMMUNICATION INTERFACES	RS485, Ethernet, GPRS
CERTIFICATES	UL9540, IEC62933, UN3536

DATASHEET



- 1C Charge/Discharge;
- Power supply can be single battery string or parallel battery strings;
- Easy configuration and maintenance.

Battery String - S138

BATTERY MODULE	S138-15P9
PACK QTY	15
NOMINAL CAPACITY	138.24kWh
RATED VOLTAGE	768V
DC VOLTAGE RANGE	672V~852V
PACK	25.6V/180Ah@2P16S
COMMUNICATION	Ethernet, CAN, RS485
LIFESPAN	>5,000 cycles @1C, 25 °C
DIMENSIONS (W×D×H)	800 × 750 × 2,050mm
WEIGHT	1,467kg
CERTIFICATIONS	UL1973, UL9540A, IEC62619, CE , UN38.3



- Single-stage three-level modularization;
- Multi-branch input to reduce battery series and parallels connection;

Power Conversion System

	AP-AN-LTK005-1SWP	AP-XE-LTK005-1SWP
BATTERY VOLTAGE RANGE	630~900V	600~900V
DC MAX CURRENT	873A	
RATED AC POWER	500kW	
MAXIMUM AC POWER	550kW	
RATED VOLTAGE	400V	
GRID VOLTAGE RANGE	360~440V	342V~418V
AC RATE OF CURRENT	721.7A	
OUTPUT THDI	≤3%	
ADJUSTABLE PF	1(leading)~1(lagging)	
GRID FREQUENCY RANGE	60Hz (59.5~60.5Hz)	50/60±2.5Hz
ISOLATION METHOD	Non-isolation	
DIMENSIONS (W×D×H)	1,100 × 800 × 2,160mm	
WEIGHT	600kg	



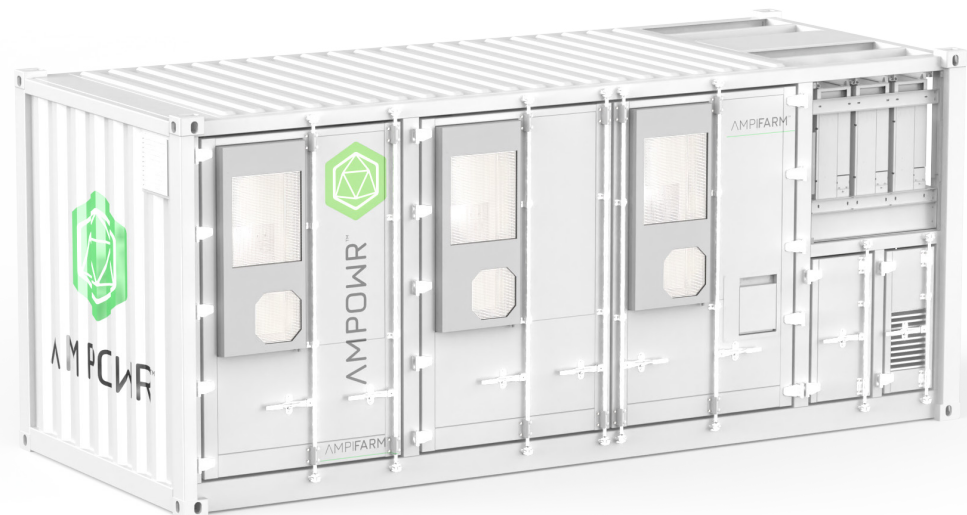
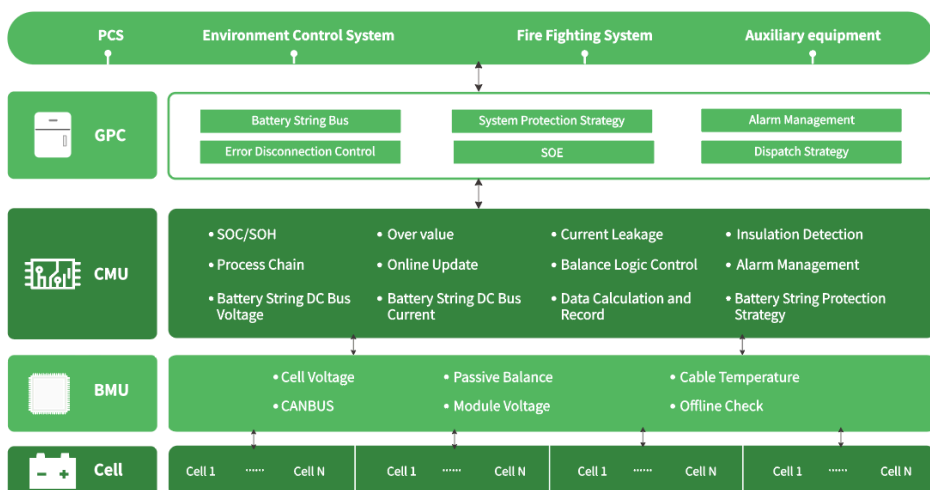
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BMS with Real-time Passive Balance

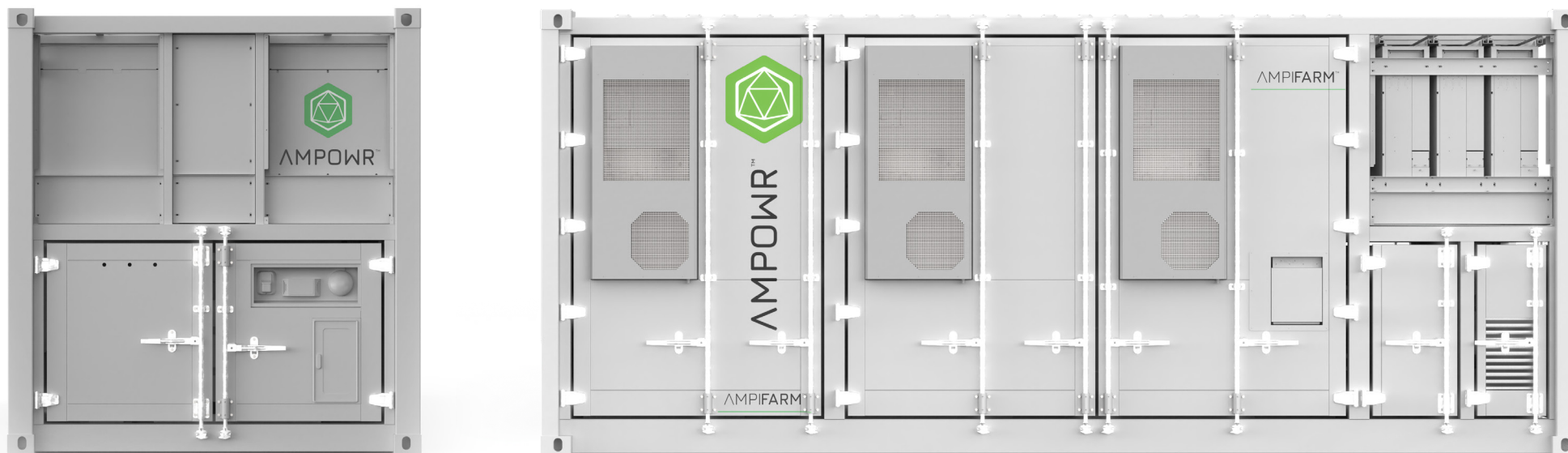


BMU		CMU	
Cell Voltage Measurement Accuracy	±5 mV	Battery String Voltage Measurement Range	100~1,000Vv
Cell Voltage Monitoring Interval	≤200ms	Battery String Voltage Measurement Accuracy	±1%
Cell Temperature Measurement Accuracy	±2 °C	Battery String Voltage Monitoring Interval	≤100ms
Cell Temperature Measurement Interval	≤3s	Battery String Current Measurement Range	±300A
Cell Current Balance	Passive Balance, 150mA MAX	Battery String Current Measurement Accuracy	≤1%
Cell Voltage Measurement Range	1~5 V	Battery String Current Monitoring Interval	≤50ms
Over-current Protection	250A/1s	SOC Calculation Accuracy	≤8%
Short-Circuit Protection	500A/10ms	Input Insulation Resistance	≥10MΩ, 1,000VDC

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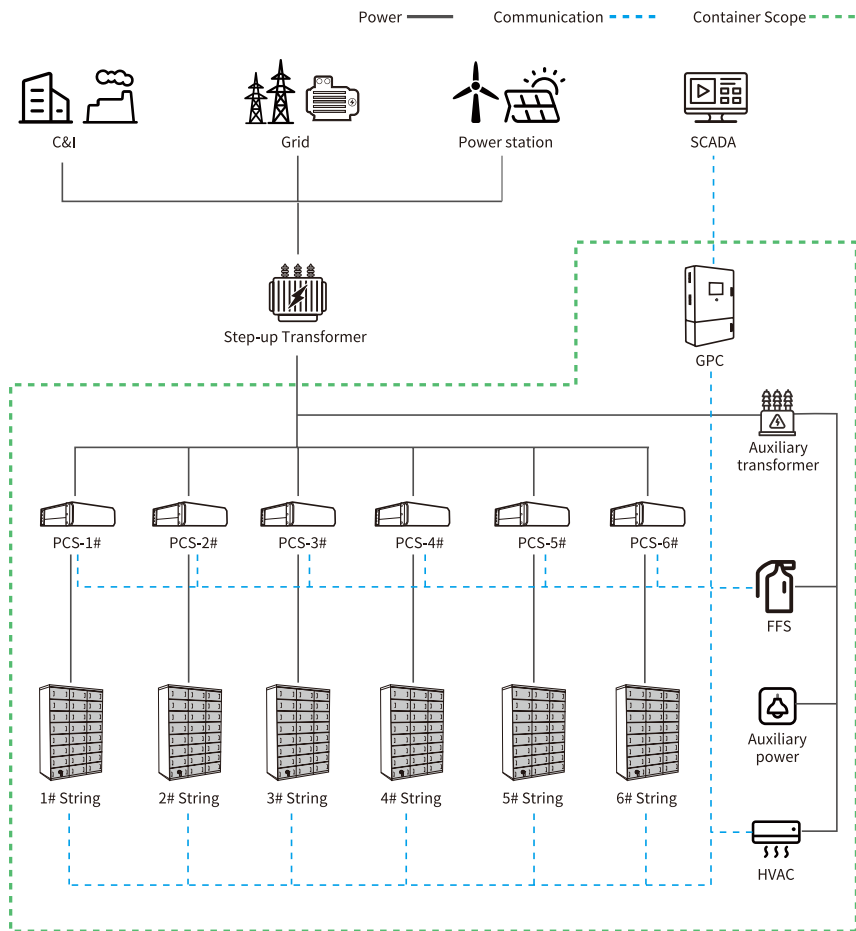
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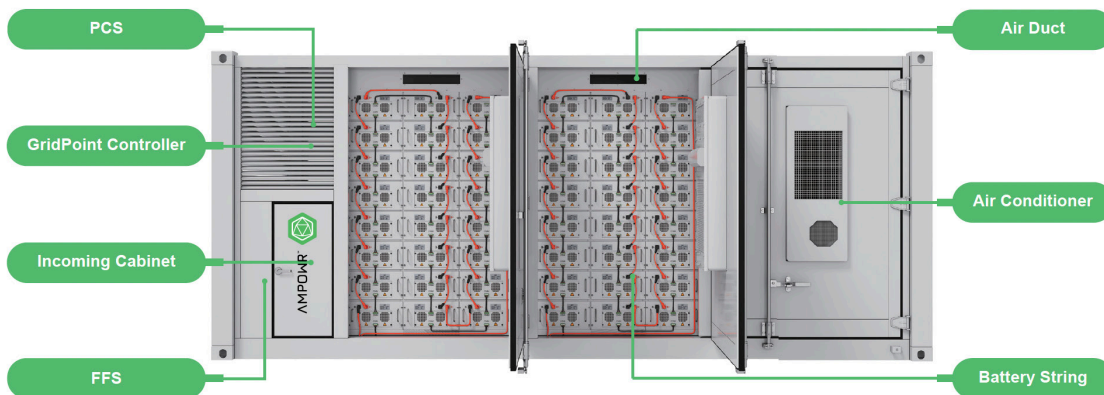
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SYSTEM TOPOLOGY



PRODUCT LAYOUT

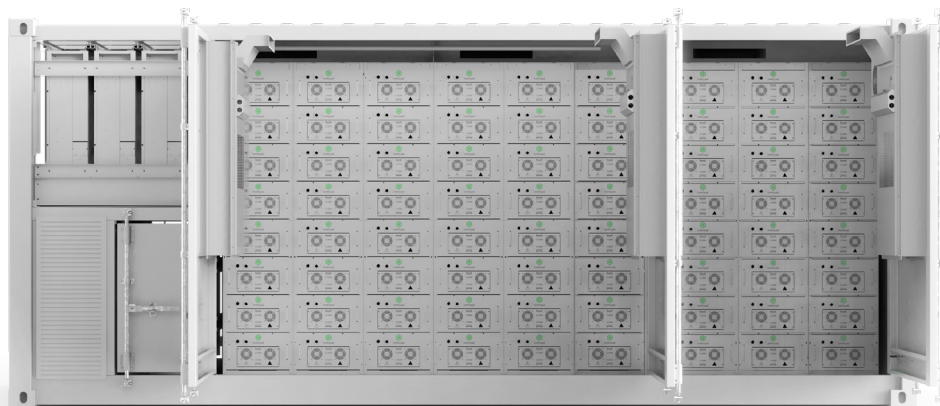


SYSTEM CONFIGURATION

Product Model	Battery string type	String Quantity	Nominal Capacity	DC Voltage Range	Grid-connected voltage	Dimensions (WDH mm)
AF-C20-CY-2060-NCPB-1000	NCPB-41P42373S	6	2,060kWh	1,075.2V ~ 1,363.2V	690V	6,058x 2,438x 2,591mm

More Energy	All-in-one Design	Simple O&M	Safe & Reliable
Pack-level Optimization String-level Optimization	AC/DC All-in-one Design Reducing Initial Investment	No periodic balancing No expert site visits	Modular Design High Availability

DATASHEET



DC DATA

BATTERY CHEMISTRY	Nano Crystal Batteries Lithium Iron Phosphate (LFP)
CELL LIFE CYCLE	80% Retention with 5,000 Cycles @ 0.5C 25 °C
CELL SPEC	3.2V/280Ah
STRING CONFIGURATION	1P384S
NUMBER OF STRINGS	6
DC RATED ENERGY CAPACITY	2,060kWh
RATED ENERGY CAPACITY	1,228.8V
RATED VOLTAGE	1,075.2V ~ 1,363.2V
BMS COMMUNICATION INTERFACE	RS485, Ethernet
BMS COMMUNICATION PROTOCOL	Modbus RTU, Modbus TCP

AC DATA

NOMINAL AC POWER	1,000kW
RATED AC POWER	1,200kW
MAXIMUM AC POWER	1,320kW
RATED VOLTAGE	690V
GRID VOLTAGE RANG	586.5~759V (Optional)
AC RATE OF CURRENT	836.8A
OUTPUT THDI	< 3%
AC PF	0.1-1 leading or lagging (Controllable)
AC OUTPUT	3P+PE

GENERAL DATA

DIMENSION W/O CLEARANCES (L*W*H)	6,058x2,438x2,591mm
WEIGHT OF THE WHOLE SYSTEM	24t
DEGREE OF PROTECTION	IP65
DEGREE OF PROTECTION - PCS ROOM	IP66
DEGREE OF PROTECTION - CONTROL AND DISTRIBUTION ROOM	IP54
OPERATING TEMPERATURE RANGE	-20~40 °C
RELATIVE HUMIDITY	0~95% (non-condensing)
MAX WORKING ALTITUDE	4,000m / 13,123ft
COOLING CONCEPT OF DC HATCH	HVAC
FIRE FIGHTING SYSTEM	NOVEC1230 / FM-200
COMMUNICATION INTERFACES	RS485, Ethernet, GPRS
CERTIFICATES	UL9540, IEC62619, IEC62109, IEC62933, UN3536

DATASHEET



- 0.5C Charge/Discharge;
- Power supply can be single battery string or parallel battery strings;
- Easy configuration and maintenance.



- Single-stage three-level modularization;
- Multi-branch input to reduce battery series and parallels connection;
- One-to-one Management of Battery string and PCS.



- All-round signal collection;
- Comprehensive logical control;
- Multilevel electric & control protection;
- Intelligentize Communication management;
- Simple Configuration.

Battery String

BATTERY MODULE	NCPB41P42-373S
PACK QTY	24(Max 26)
NOMINAL CAPACITY	344.06kWh(Max 372.736kWh)
RATED VOLTAGE	1,228.8V
DC VOLTAGE RANGE	1,075.2V ~ 1,363.2V
PACK	51.2V/280Ah@1P16S
COMMUNICATION	Ethernet, CAN, RS485
LIFESPAN	>5,000 cycles @0.5C, 25 °C
DIMENSIONS (W×D×H)	1,440 × 750 × 2,150mm
WEIGHT	2,922kg
CERTIFICATIONS	UL1973, UL9540A, IEC62619, CE , UN38.3

Power Conversion System

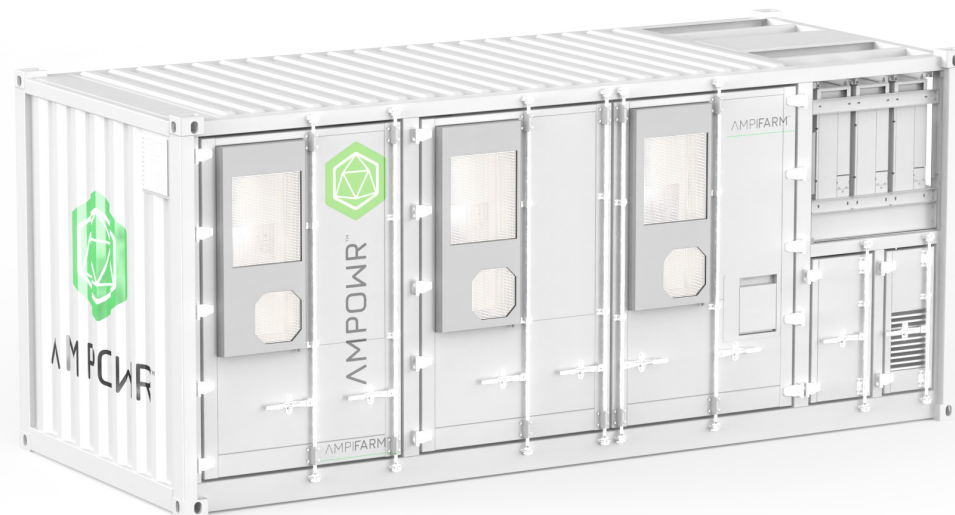
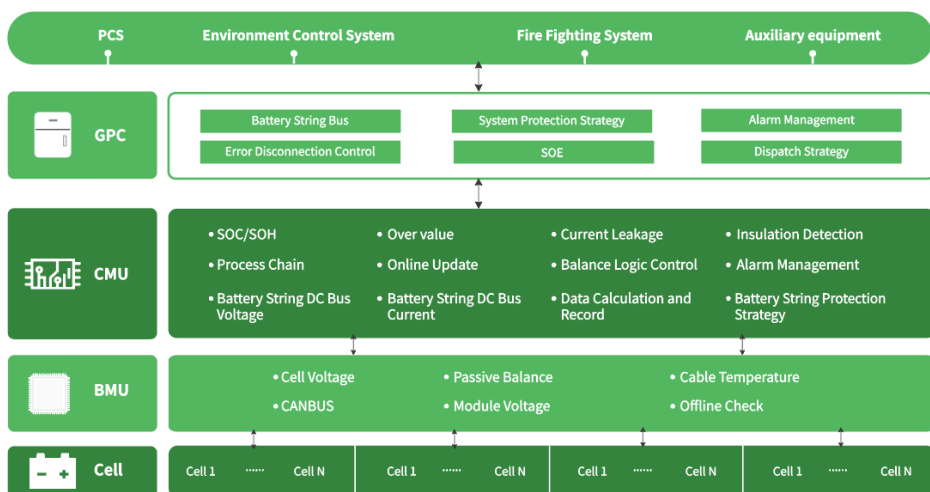
DC VOLTAGE RANGE	1000~1,500V
DC MAX CURRENT	224.5A * 6
RATED AC POWER	200kW * 6
RATED VOLTAGE	690V
GRID VOLTAGE RANGE	-15%~+10%
GRID FREQUENCY	50Hz/60Hz
MAX AC CURRENT	184.1A * 6
AC PF	0.1-1 leading or lagging (controllable)
WEIGHT	100kg * 6
CERTIFICATIONS	UL 1741, IEEE 1547, IEC62477-1, IEC 61000

GridPoint Controller (GPC)

POWER INTERFACE	AC220V/DC24V
COMMUNICATION	Modbus RTU, Modbus TCP
RELAY	24 stem node input / output
NETWORK CONTROL APPLICATION	Peak shifting and valley filling, peak cutting, smooth renewable energy output curve
OFFLINE CONTROL APPLICATION	Backup power supply, PV/DG/EV/ESS integrated micro-grid control

DATASHEET

BMS with Real-time Passive Balance



BMU		CMU	
Cell Voltage Measurement Accuracy	±2.5 mV	Battery String Voltage Measurement Range	100~1,500V
Cell Voltage Monitoring Interval	≤500ms	Battery String Voltage Measurement Accuracy	±1%
Cell Temperature Measurement Accuracy	±2 °C	Battery String Voltage Monitoring Interval	≤200ms
Cell Temperature Measurement Interval	≤3s	Battery String Current Measurement Range	±300A
Cell Current Balance	Passive Balance, 150mA MAX	Battery String Current Measurement Accuracy	≤1%
Cell Voltage Measurement Range	1~5 V	Battery String Current Monitoring Interval	≤50ms
Over-current Protection	250A/1s	SOC Calculation Accuracy	≤8%
Short-Circuit Protection	500A/10ms	Input Insulation Resistance	≥10MΩ, 1,000VDC

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