



## AMPIFARM | AF-C20-CY-2060-NCPB-1000

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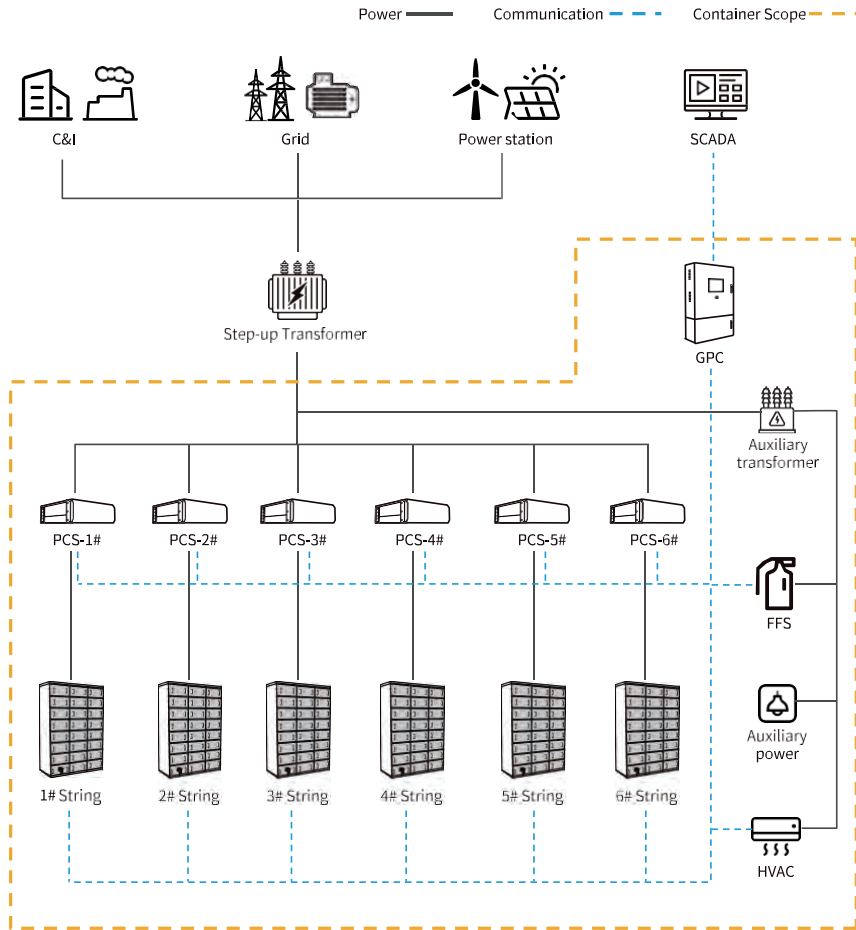
Battery Energy Storage System, 2060kWh Battery Capacity, 1000kW Power Conditioning System (PCS)

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.

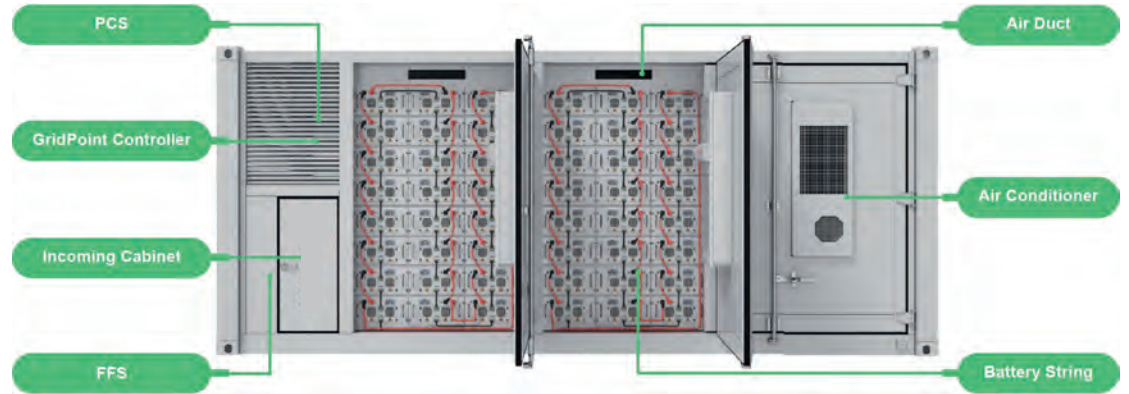
Ampifarm systems utilize the most recent advancements in battery technology (Nano-Crystal™ Phosphate), ensuring fire safety, reliability, and longevity. Ampifarm is an adaptable and scalable energy solution that can be expanded when needed. The System connects to Ampowr Cosmos™ (EMS): Our state-of-the-art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

# DATASHEET

## SYSTEM TOPOLOGY



## PRODUCT LAYOUT



## SYSTEM CONFIGURATION

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



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

## 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 (WxDxH)	1,440 × 750 × 2,150mm
WEIGHT	2,922kg
CERTIFICATIONS	UL1973, UL9540A, IEC62619, CE, UN38.3



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

## 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



- All-round signal collection;
- Comprehensive logical control;
- Multilevel electric & control protection;
- Intelligentize 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



## 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

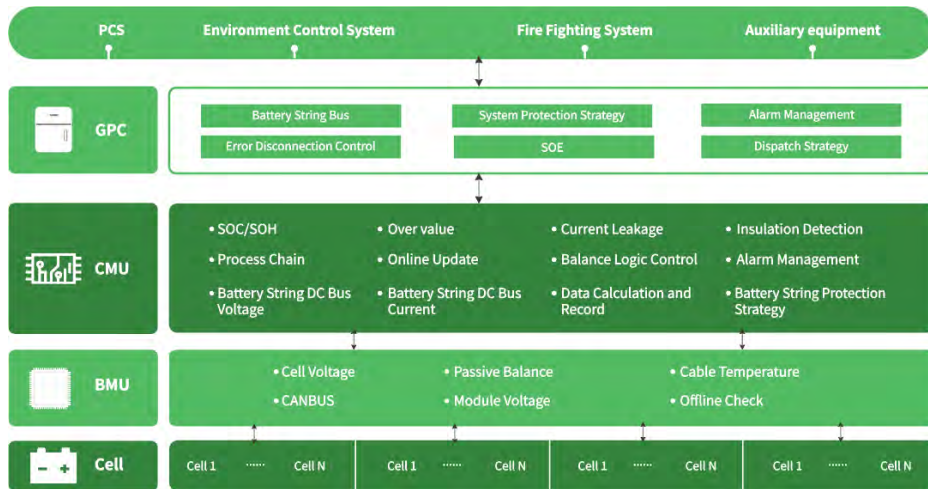
NOMINAL AC POWER	1,000kW
RATED AC POWER	1,200kW
MAXIMUM AC POWER	1,320kW
RATED VOLTAGE	690V
GRID VOLTAGE RANG	586.5-759V (Optional)
AC RATE OF CURRENT	836.8A
OUTPUT THDI	< 3%
AC PF	0.1-1 leading or lagging (Controllable)
AC OUTPUT	3P+PE

## 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

## 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