









# Residential ESS Solution

SUN-3K-SG04LP1-24-EU-SM1 / SUN-6K-SG04LP1-EU-SM2 / SUN-12K-SG05LP3-EU-SM2

RW-L2.5A / RW-L5.1 / RW-L10.2

SUN-3K-SG04LP1-24-EU-SM1 / SUN-6K-SG04LP1-EU-SM2 / SUN-12K-SG05LP3-EU-SM2

-  **Interactive Display**  
Colorful touch LCD, IP65 protection degree
-  **Ultimate Flexibility**  
AC couple to retrofit existing solar system
-  **Parallel Scalability**  
Supports 16/10 pcs parallel (on grid & off-grid)
-  **High Efficiency**  
Max. efficiency of 97.6%
-  **Smart Electricity Strategy**  
6 time periods for battery charging/discharging
-  **Generator Integration**  
Support storing energy from diesel generator

RW-L2.5A / RW-L5.1 / RW-L10.2

-  **Automatic Recovery Function**  
Minimum cold-start capability of 9V
-  **Smart Fuse, Safe Power**  
Prevents thermal runaway in key circuits for ultimate safety
-  **Flexible Expansion**  
Max. 32 units in parallel, ideal for backup power
-  **1C Charge, 1.2C Discharge**  
Compared to traditional products, performance improve by 20%
-  **Reverse Polarity Protection**  
Prevents battery and BMS damage from incorrect wiring
-  **Seamless Convenience**  
Automatic battery networking and remote monitoring/upgrade support

# Residential Energy Storage Solution

Model	SUN-3K-SG04LP1 -24-EU-SM1	SUN-3K-SG04LP1 -EU-SM1	SUN-3.6K-SG04LP1 -EU-SM2	SUN-5K-SG04LP1 -EU-SM2	SUN-6K-SG04LP1 -EU-SM2
Battery Input Data					
Battery Type	Lead-acid or Lithium-ion				
Battery Voltage Range (V)	20-30	40-60	40-60	40-60	40-60
Max. Charging Current (A)	140	70	90	120	135
Max. Discharging Current (A)	140	70	90	120	135
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
Number of Battery Input	1				
PV String Input Data					
Max. PV Access Power (W)	6000	6000	7200	10000	12000
Max. PV Input Power (W)	4800	4800	5760	8000	9600
Max. PV Input Voltage (V)	500				
Start-up Voltage (V)	125				
MPPT Voltage Range (V)	150-425				
Rated PV Input Voltage (V)	370				
Max. Operating PV Input Current (A)	18		18+18		
Max. Input Short-Circuit Current (A)	27		27+27		
No. of MPP Trackers/ No. of Strings MPP Tracker	1/1		2/1+1		
AC Input/Output Data					
Rated AC Input/Output Active Power (W)	3000		3600	5000	6000
Max. AC Input/Output Apparent Power (VA)	3300		3960	5500	6600
Rated AC Input/Output Current (A)	13.7/13.1		16.4/15.7	22.8/21.8	27.3/26.1
Max. AC Input/Output Current (A)	15/14.4		18/17.3	25/24	30/28.7
Max. Continuous AC Passthrough (grid to load) (A)	35				40
Peak Power (off-grid) (W)	2 times of rated power, 10s				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage/Range (V)	220/230 0.85Un-1.1Un				
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65				
Grid Connection Form	L+N+PE				
Total Current Harmonic Distortion THDi	<3% (of nominal power)				
DC Injection Current	<0.5% In				
Efficiency					
Max. Efficiency	97.6%				
Euro Efficiency	96.5%				
MPPT Efficiency	>99%				
Equipment Protection					
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level				
Surge Protection Level	TYPE II(DC), TYPE II(AC)				
Interface					
Communication Interface	RS485/RS232/CAN				
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)				
General Data					
Operating Temperature Range (°C)	-40 to +60°C, >45°C Derating				
Permissible Ambient Humidity	0-100%				
Permissible Altitude	2000m				
Noise (dB)	<30				
Ingress Protection(IP) Rating	IP 65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC II(DC), OVC III(AC)				
Cabinet Size (WxHxD mm)	376×470×241.5 (Excluding Connectors and Brackets)				
Weight (kg)	17.6			19	
Type of Cooling	Natural Cooling				
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy				
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G98, G99, VDE-AR-N 4105				
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				

Model	SUN-3K-SG05 LP3-EU-SM2	SUN-4K-SG05 LP3-EU-SM2	SUN-5K-SG05 LP3-EU-SM2	SUN-6K-SG05 LP3-EU-SM2	SUN-8K-SG05 LP3-EU-SM2	SUN-10K-SG05 LP3-EU-SM2	SUN-12K-SG05 LP3-EU-SM2
Battery Input Data							
Battery Type	Lead-acid or Lithium-ion						
Battery Voltage Range (V)	40-60						
Max. Charging Current (A)	70	95	120	135	190	210	240
Max. Discharging Current (A)	70	95	120	135	190	210	240
Charging Strategy for Li-ion Battery	Self-adaption to BMS						
Number of Battery Input	1						
PV String Input Data							
Max. PV Access Power (W)	6000	8000	10000	12000	16000	20000	24000
Max. PV Input Power (W)	4500	6000	7500	9000	12000	15000	18000
Max. PV Input Voltage (V)	800						
Start-up Voltage (V)	160						
MPPT Voltage Range (V)	200-650						
Rated PV Input Voltage (V)	550						
Max. Operating PV Input Current (A)	20+20					26+26	
Max. Input Short-Circuit Current (A)	30+30					39+39	
No. of MPP Trackers/ No. of Strings MPP Tracker	2/1+1					2/2+2	
AC Input/Output Data							
Rated AC Input/Output Active Power (W)	3000	4000	5000	6000	8000	10000	12000
Max. AC Input/Output Apparent Power (VA)	3300	4400	5500	6600	8800	11000	13200
Rated AC Input/Output Current (A)	4.6/4.4	6.1/5.8	7.6/7.3	9.1/8.7	12.2/11.6	15.2/14.5	18.2/17.4
Max. AC Input/Output Current (A)	5/4.8	6.7/6.4	8.4/8	10/9.6	13.4/12.8	16.7/16	20/19.2
Max. Continuous AC Passthrough (grid to load) (A)	45						
Peak Power (off-grid) (W)	2 times of rated power, 10s						
Power Factor Adjustment Range	0.8 leading to 0.8 lagging						
Rated Input/Output Voltage/Range (V)	220/380V, 230/400V 0.85Un-1.1Un						
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55,60/55-65						
Grid Connection Form	3L+N+PE						
Total Current Harmonic Distortion THDi	<3% (of nominal power)						
DC Injection Current	<0.5% In						
Efficiency							
Max. Efficiency	97.6%						
Euro Efficiency	97.0%						
MPPT Efficiency	>99%						
Equipment Protection							
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level						
Surge Protection Level	TYPE II(DC), TYPE II(AC)						
Interface							
Communication Interface	RS485/RS232/CAN						
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)						
General Data							
Operating Temperature Range (°C)	-40 to +60°C, >45°C Derating						
Permissible Ambient Humidity	0-100%						
Permissible Altitude	3000m						
Noise (dB)	≤55						
Ingress Protection(IP) Rating	IP 65						
Inverter Topology	Non-Isolated						
Over Voltage Category	OVC II(DC), OVC III(AC)						
Cabinet Size (WxHxD mm)	386×660×250 (Excluding Connectors and Brackets)						
Weight (kg)	35.2						
Type of Cooling	Intelligent Air Cooling						
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy						
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G98, G99, VDE-AR-N 4105						
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2						



# Residential Energy Storage Solution



Model	RW-L2.5A	RW-L5.1	RW-L10.2
Main Parameter			
Battery Chemistry	LiFePO <sub>4</sub>		
Built-in Circuit Breaker	125A 1P, 60Vdc	125A 2P, 60Vdc	
Capacity ( Ah ) <sup>[1]</sup>	100	200	
Scalability	Max. 32 pcs in parallel		
Nominal Voltage ( V )	25.6	51.2	
Operating Voltage ( V )	22.4 ~ 28.8	44.8 ~ 57.6	
Nominal Energy ( kWh ) <sup>[1]</sup>	2.56	5.12	10.24
Usable Energy (kWh@90%DoD) <sup>[1]</sup>	2.3	4.61	9.22
Charge / Discharge	Max. Continuous	100 / 120	
Current ( A ) <sup>[2]</sup>	Peak	200 / 200 (10 sec )	
Main Parameter			
Recommend Depth of Discharge	90%		
Dimension ( W × H × D, mm ) ( Without hanging board )	350 × 680 × 160	420 × 680 × 160	745 × 745 × 170
Weight Approximate ( kg )	32	50	100
Master LED Indicator	LED ( SOC and working state )		
IP Rating of Enclosure	IP65		
Operating Temperature	Charge : 0 ~ 55°C / Discharge : -20°C ~ 55°C		
Recommend Operating Temperature	15°C ~ 35°C		
Storage Temperature	0 ~ 35°C		
Relative Humidity	95%		
Altitude	≤2000m		
Cycle Life	≥6000 ( 25°C±2°C, 0.5C / 0.5C, 90%DOD, 70%EOL )		
Installation	Wall-Mounted, Floor-Mounted		
Communication Port	CAN2.0, RS485		
Warranty Period <sup>[3]</sup>	10 years		
Energy Throughput <sup>[3]</sup>	4MWh	8MWh	16MWh
Certification	UN38.3, MSDS		

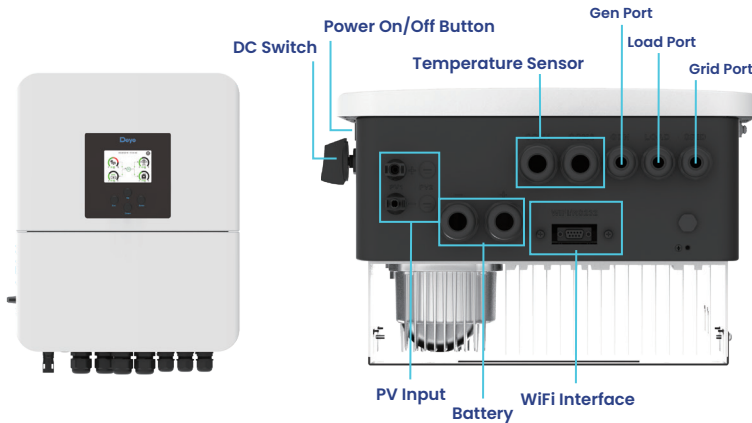
[1] Test conditions : 25°C±2°C, at beginning of life and calibration mode, 0.5C charge & 0.5C discharge,100% DOD.

[2] The current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.

## Model

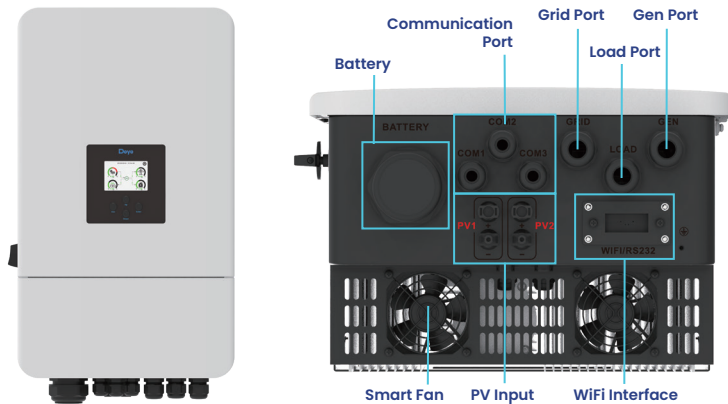
## SUN-3.6/5/6K-SG04LP1-EU-SM2



- ⊙ Battery Port: Connects to the battery for energy storage, enabling max.135A charging and discharging current to ensure stable power supply.
- ⊙ Temperature Sensor: Monitors real-time temperature data to optimize inverter performance and ensure system safety.
- ⊙ WiFi Interface: Connects to a WiFi data logger, enabling wireless communication and remote monitoring of the inverter's performance.
- ⊙ Load Port: Offer AC power to connected loads.
- ⊙ Grid Port: Connect to utility grid, for bidirectional power transfer: importing from and exporting to the grid.
- ⊙ Generator Port: Connect to diesel generator for backup power supply during outages, also can connect with existing solar inverter for AC Coupling.
- ⊙ PV Input: Connect to PV panels with 2 MPPTs.

## Model

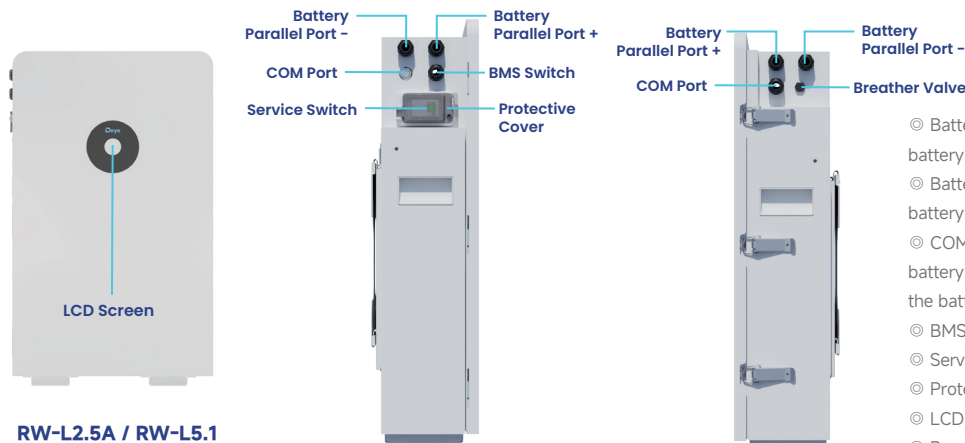
## SUN-12K-SG05LP3-EU-SM2



- ⊙ Battery Port: Connects to the battery for energy storage, enabling max.240A charging and discharging current to ensure stable power supply.
- ⊙ Communication Port: Serve as communicate with battery and data exchange between inverter and extra devices.
- ⊙ WiFi Interface: Connects to a WiFi data logger, enabling wireless communication and remote monitoring of the inverter's performance.
- ⊙ Smart Fan: Cools the heatsink to ensure optimal inverter temperature and performance.
- ⊙ Load Port: Offer AC power to connected loads.
- ⊙ Grid Port: Connect to utility grid, for bidirectional power transfer: importing from and exporting to the grid.
- ⊙ Generator Port: Connect to diesel generator for backup power supply during outages, also can connect with existing solar inverter for AC Coupling.
- ⊙ PV Input: Connect to PV panels with 2 MPPTs.

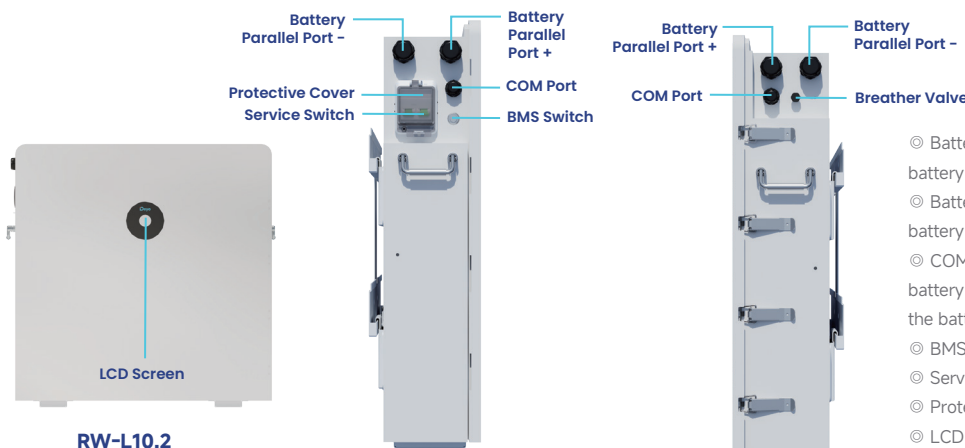
## Model

## RW-L2.5A / RW-L5.1 / RW-L10.2



RW-L2.5A / RW-L5.1

- ⊙ Battery Parallel Port + : Connect "+" port of inverter or previous/next battery among multiple parallel batteries.
- ⊙ Battery Parallel Port - : Connect "-" port of inverter or previous/next battery among multiple parallel batteries.
- ⊙ COM Port: Follow the CAN protocol (baud rate: 500K), used to output battery information to the PCS through connection between COM port of the battery and BMS1 port of the PCS.
- ⊙ BMS Switch: To turn ON/OFF the BMS of the battery.
- ⊙ Service Switch: To power ON/OFF the battery.
- ⊙ Protective Cover: To protect against extreme weather.
- ⊙ LCD Screen: To indicate the state of the battery system.
- ⊙ Breather Valve: To regulates internal pressure.



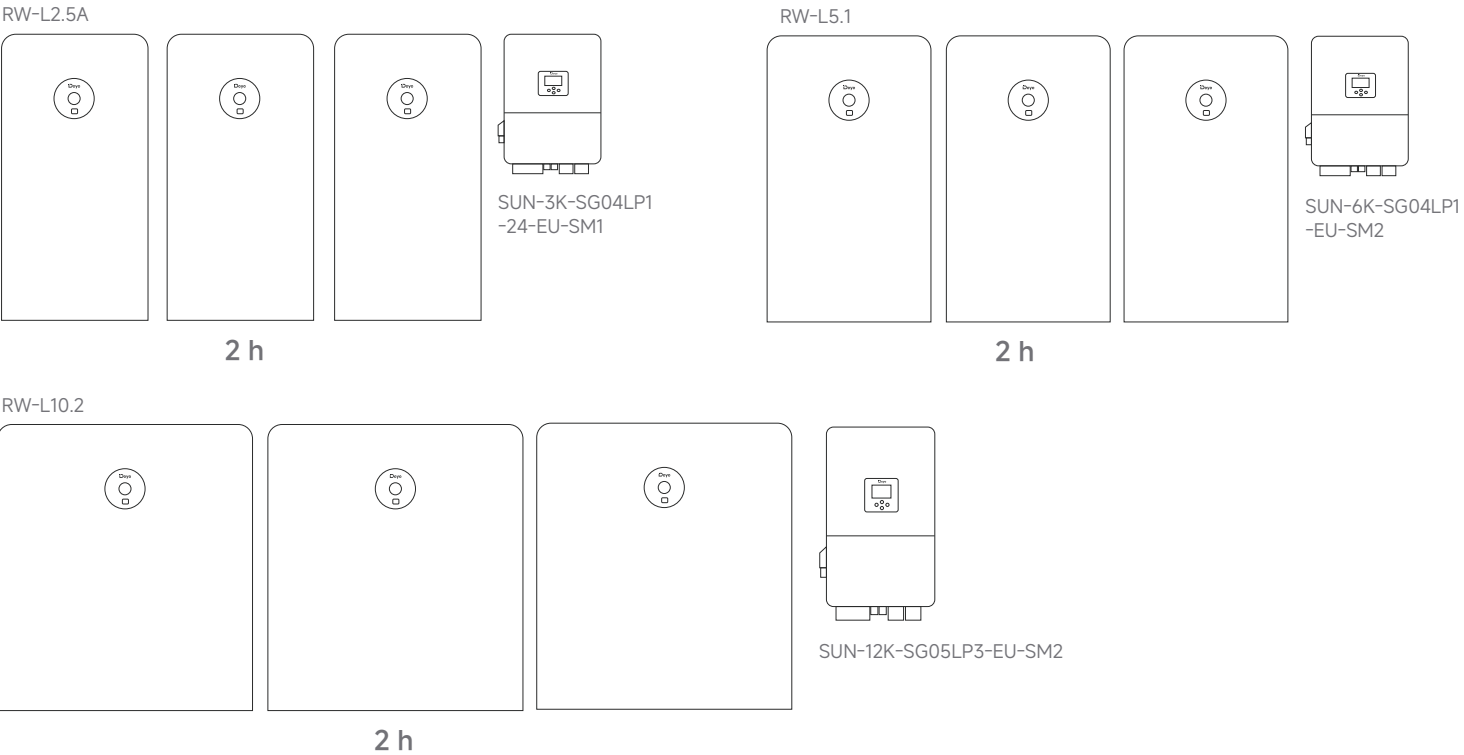
RW-L10.2

- ⊙ Battery Parallel Port + : Connect "+" port of inverter or previous/next battery among multiple parallel batteries.
- ⊙ Battery Parallel Port - : Connect "-" port of inverter or previous/next battery among multiple parallel batteries.
- ⊙ COM Port: Follow the CAN protocol (baud rate: 500K), used to output battery information to the PCS through connection between COM port of the battery and BMS1 port of the PCS.
- ⊙ BMS Switch: To turn ON/OFF the BMS of the battery.
- ⊙ Service Switch: To power ON/OFF the battery.
- ⊙ Protective Cover: To protect against extreme weather.
- ⊙ LCD Screen: To indicate the state of the battery system.
- ⊙ Breather Valve: To regulates internal pressure.

# Product Expansion

RW-L2.5A				
Battery backup time	1h	2h	3h	4h
SUN 3K SG04LP1 24 EU	2 units	3 units	4 units	5 units
SUN 3.6K SG04LP1 EU	2 units	3 units	4 units	5 units
RW-L5.1				
Battery backup time	1h	2h	3h	4h
SUN 5KW SG 04LP1	1 units	2 units	3 units	4 units
SUN 5KW SG 03LP1				
SUN 5KW SG 04LP3				
SUN 6KW SG 04LP1	2 units	3 units	4 units	5 units
SUN 6KW SG 03LP1				
SUN 6KW SG 05LP1				
SUN 8KW SG 02LP1	2 units	4 units	5 units	7 units
SUN 8KW SG 05LP3				
SUN 8KW SG 04LP3				
RW-L10.2				
Battery backup time	1h	2h	3h	4h
SUN 8KW SG 02LP1	1 units	2 units	3 units	4 units
SUN 8KW SG 05LP3				
SUN 8KW SG 04LP3				
SUN 10KW SG 04LP3	1 units	2 units	3 units	4 units
SUN 10KW SG 02LP1				
SUN 12KW SG 04LP3	2 units	3 units	4 units	5 units
SUN 12KW SG 02LP1				
SUN 12KW SG 05LP3				
SUN 16KW SG 01LP1	2 units	4 units	5 units	7 units
SUN-15KSG05LP3	2 units	3 units	5 units	6 units
SUN-18KSG05LP3	2 units	4 units	6 units	8 units
SUN-20KSG05LP3	2 units	4 units	6 units	8 units

# Typical Application Scenarios



# Deye Cloud

## All-in-one Energy & Device Management Platform

-  Unlock Significant Savings
-  Individual Add-On for Dynamic Tariff
-  Intelligent Charging/Discharging Strategies
-  Tailored Solution to Deye Devices
-  Real-time Equipment Monitoring



## Smarten Up Your Home Energy

Download Deye Cloud APP to join us!

Embrace a seamless, effortless energy experience that's both eco-friendly and budget-friendly with our intelligent assistant



### All in One

Smarter home energy and device management



### Cloud-edge Collaboration

Faster and more efficient data processing



### Accelerated Connectivity

Optimized for speed and performance



### Advanced Smart Energy

A smarter way to manage your electricity bills



**POWERING YOUR LIFE**



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