

C&I ESS SOLUTION

DEYE WINTER MS SERIES



Scalable

- Support up to 5 units off-grid backup, maximum 500kW/1MWh
- Support up to 20 units on-grid in parallel, maximum 2MW/4.3MWh
- Support up to 10 units off-grid in parallel, maximum 1MW/2.15MWh



Intelligent Control

- Thermal management keeps battery < 35°C
- Peak-valley mgmt, anti-backflow, overload protection
- Load tracking, demand control, backup power, phase separation



Reliable

- Operating temp : -20°C to 50°C
- IP54 & C5 protection rating
- Operate up to 3000m altitude
- 1.1x overload capacity
- Balancing solutions extend battery life
- Triple auxiliary power design for stable supply



Safer

- LFP batteries
- System supports aerosol fire extinguishing
- Battery compartment with auto venting & explosion-proof



Multi-Fusion

- Integrated EMS, PCS, and BMS
- Support expansion of MPPT module
- Support off-grid backup

≥6000

Cycles

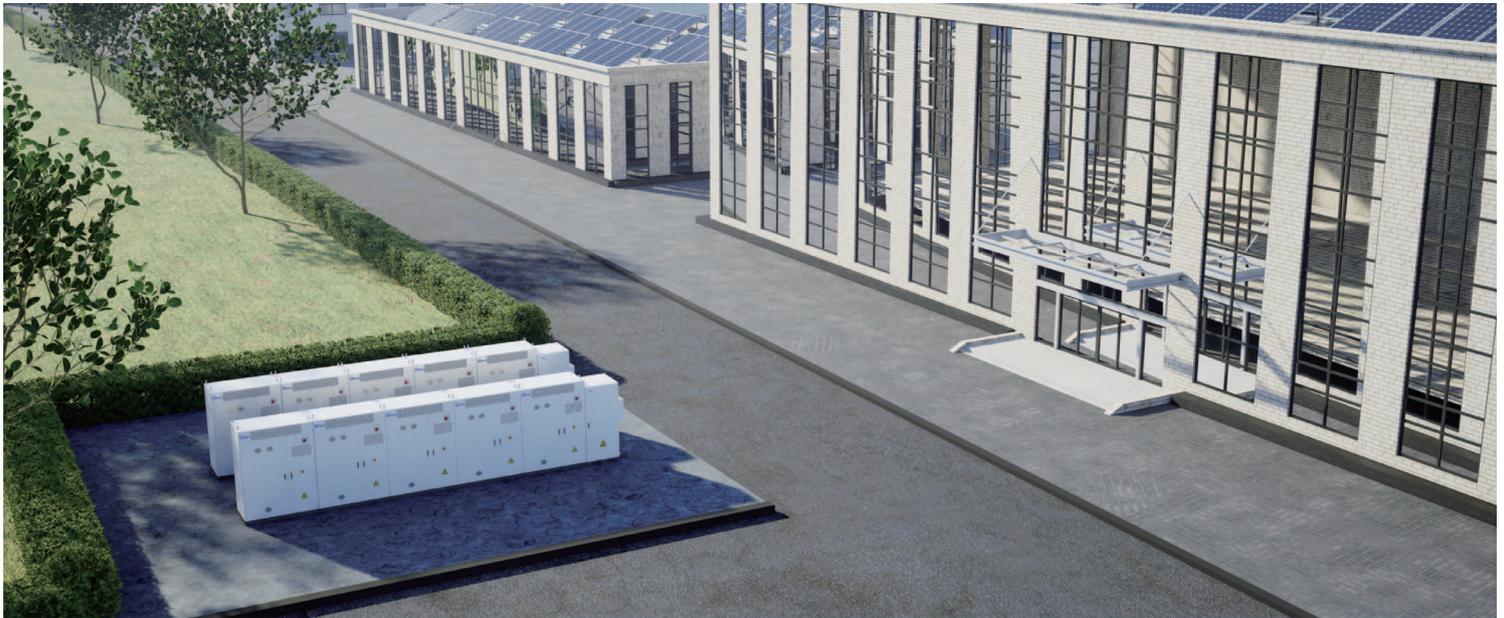
C5

Protection Rating

70%

EOL

PCS Model	SUN-100K-PCS01HP3
Battery Data	
Battery Type	Lithium-ion
Battery Voltage Range (V)	630-1000
Max. Charging Current (A)	175
Max. Discharging Current (A)	175
Charging Strategy for Li-ion Battery	Self-adaption to BMS
Number of Battery Input	1
DC Input Data	
DC Input Voltage Range(V)	630-1000
Max. DC Input Current(A)	200
AC Input/Output Data	
Rated AC Input/Output Active Power (kW)	100
Max. AC Input/Output Apparent Power (kVA)	110
Rated AC Input/Output Current (A)	151.6/145
Max. AC Input/Output Current (A)	166.7/159.5
Rated Input/Output Voltage/Range(V)	220/380, 230/400 0.85Un-1.1Un
Grid Connection Form	3L+N+PE
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/55Hz-65Hz
Power Factor Adjustment Range	-1~1
Total Current Harmonic Distortion THDi	<3% (of nominal power)
DC Injection Current	<0.5% In
Efficiency	
Max. Efficiency	98.5%
Euro Efficiency	97.8%
MPPT Efficiency	>99%
Equipment Protection	
Integrated	AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection, Anti-islanding Protection, Insulation Impedance Detection, Residual Current Detection
Surge Protection Level	TYPE II(DC), TYPE II(AC)
Interface	
LCD/LED display	LCD
Communication Interface	WIFI, RS485, CAN, Meter
General Data	
Operating Temperature Range(°C)	-40°C-60°C, >45°C Derating
Permissible Ambient Humidity	0-95%
Permissible Altitude	4000m
Noise	<75dB
Ingress Protection(IP) Rating	IP 65(PCS Module)
Cabinet Size[W×H×D] (mm)	543x310x775
Weight (kg)	70.35
Inverter Topology	Non-Isolated
Over Voltage Category	OVC II(DC), OVC III(AC)
Type of Cooling	Intelligent Air Cooling
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105
Safety/EMC Standard	IEC/EN 62477-1

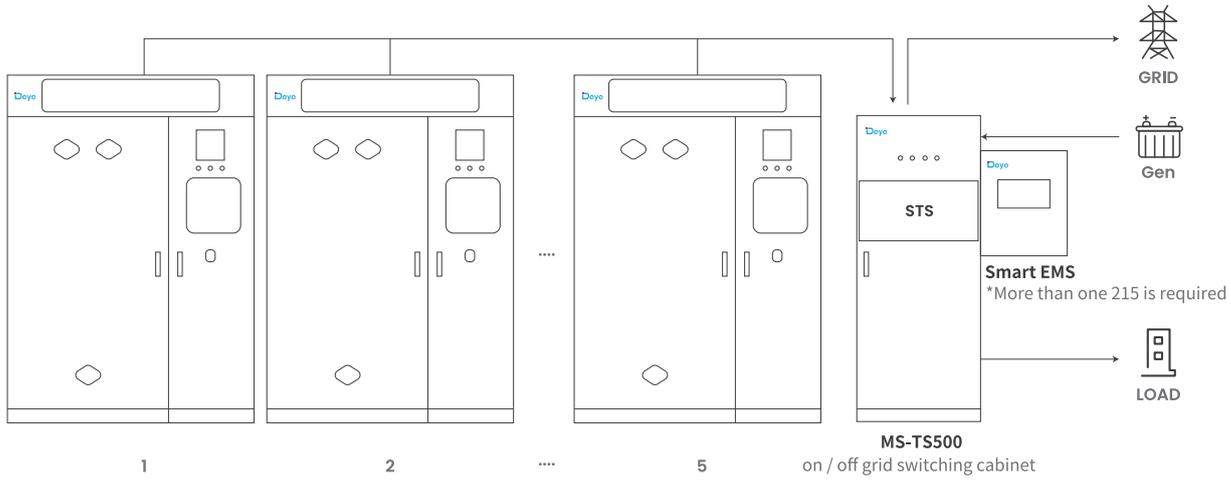

Model : MS-G215-2H3 | Battery energy storage system, supporting on and off grid operation
Main Parameter

AC Output Power (kW)	100
AC Output Frequency and Voltage	50 / 60Hz; 380 / 400Vac
Grid Type	3L / N / PE
Battery Operating Voltage (Vd.c.)	660 ~ 864
Energy (kWh)	215
Dimension (W × D × H, mm)	1865 × 1000 × 2500
Weight Appr. (kg)	2900
Battery Operating Voltage (Vd.c.)	DC : 600 ~ 935 (grid on) / DC : 700 ~ 935 (grid off)
Max. RTE	88%
System Communication	ETH / 4G
System Operating Temperature Range (°C)	-20 ~ 50 (>45 Derating)
Max. Working Altitude (m)	≤3000
IP Rating of Enclosure	IP54
Anti-Corrosion Grade	≤C5
System Certification	UN3536,IEC61000,IEC62477,IEC60730

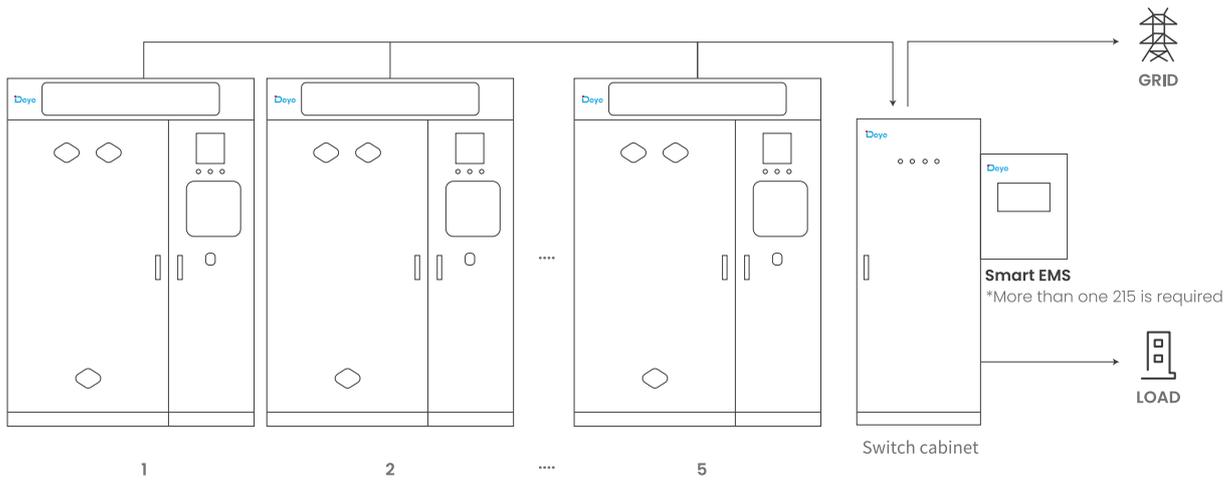
Converter Specification

AC Output Rated Current (A)	152
Max. AC Output Current (A)	167
Max.Number of Parallel (off-grid)	10 pcs (off-grid)
Peak Power	1.1 times of rated power
Power Factor	-1 ~ 1
THD	<3%
DC Injection Current	<0.5In
Display	LCD
Relative Humidity	15% ~ 85% (No Condensing)
Dimension (W × D × H, mm)	506 × 772 × 310
Communication	CAN, RS485, ETH
Overvoltage Protection	DC Type II / AC Type II
Protection Level	Class 1
Grid Regulation	EN50549, AS4777.2, CEI 0-21, CEI-016, NRS097
Max. Efficiency	97.6%

MS-G215-2H3 | Battery storage on-grid back up solution



MS-G215-2H3 | Battery storage on-grid solution



Model : MS-GS215-2H3 | Solar & Battery energy storage system, supporting on and off grid operation

Main Parameter

AC Output Power (kW)	100
AC Output Frequency and Voltage	50 / 60Hz; 380 / 400Vac
PV Input Power (kWp)	200
Grid Type	3L / N / PE
Battery Operating Voltage (Vd.c.)	660 ~ 864
Energy (kWh)	215
Dimension (W × D × H, mm)	1865 × 1000 × 2500
Weight Appr. (kg)	3030
Battery Operating Voltage (Vd.c.)	DC : 600 ~ 935 (grid on) / DC : 700 ~ 935 (grid off)
Max. RTE	88%
System Communication	ETH / 4G
System Operating Temperature Range (°C)	-20 ~ 50 (>45 Derating)
Max. Working Altitude (m)	≤3000
IP Rating of Enclosure	IP54
Anti-Corrosion Grade	≤C5
System Certification	UN3536,IEC61000,IEC62477,IEC60730

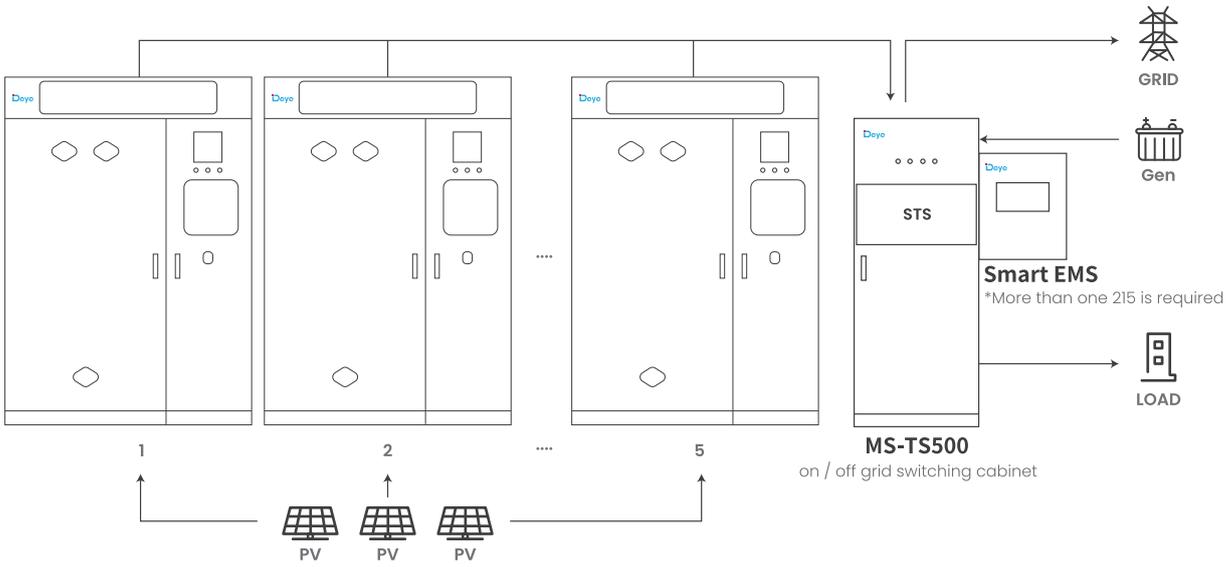
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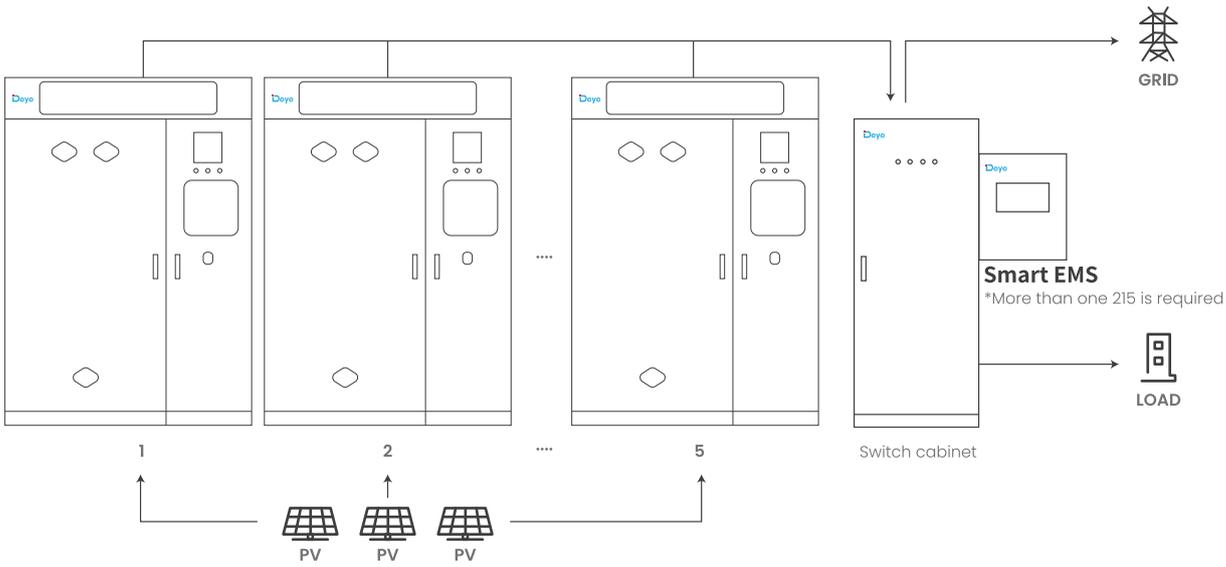
PV Specification

Max.PV Access Power(kW)	200
Max.PV Input Power(kW)	160
Max. Input Voltage (V)	800
Start Voltage (V)	200
MPPT Voltage Range (V)	180 ~ 750
Full Load Voltage Range (V)	450 ~ 750
Number of MPPT	8 pcs
MPPT Max.Current / Short Current (A)	40 / 60

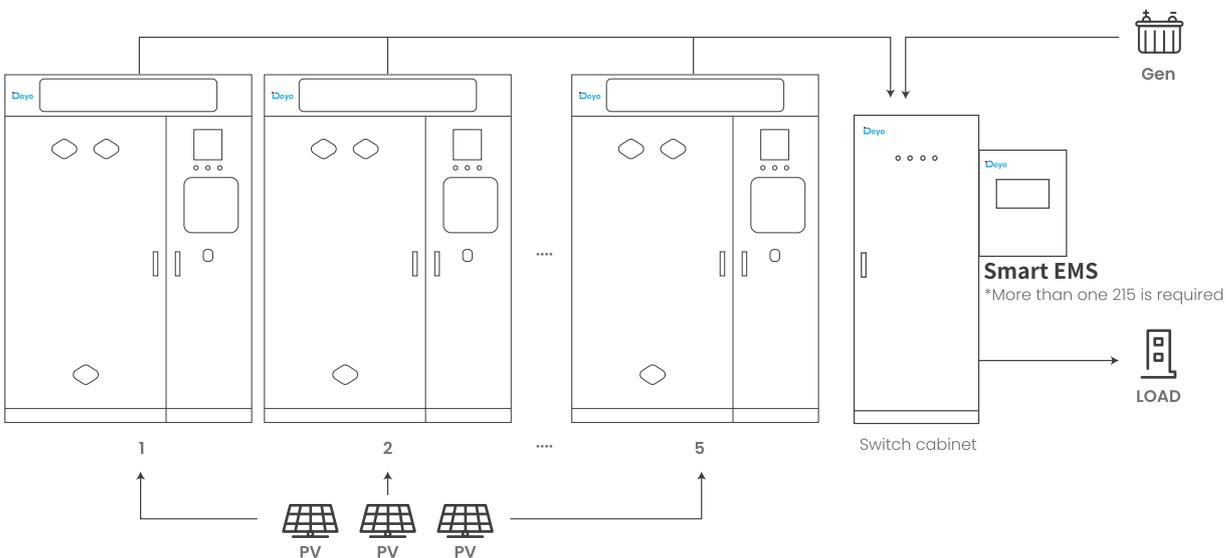
MS-GS215-2H3 | Solar & battery energy storage on-grid back up solution



MS-GS215-2H3 | Solar & battery energy storage on-grid solution



MS-GS215-2H3 | Solar & battery energy storage off-grid solution





Model : MS-TS500-2 | <20ms off-grid switching and diesel generator & backup load access

Basic Parameters

Rated Current (A)	721A/0.4kV
Rated Insulation Voltage (V)	DC1000
Rated Working Voltage (V)	AC400
Auxiliary Equipment Operating Voltage (V)	AC220, DC24
Rated Current of Busbar (A)	1000
Frequency	50Hz
Load Rated Power (kW)	500
Grid Rated Power (kW)	500
Rated Power of Oil Engine (kW)	500
Switching Time	20ms
Dimension (W × D × H, mm)	1000 × 1000 × 2250
Weight Appr. (kg)	≤700kg
System Operating Temperature Range	-20°C ~ 55°C
Max. Working Altitude (m)	≤3000m
IP Rating of Enclosure	IP54

Model : MS-BCP500-2 | 5 units of 100kw/215kWh access

Basic Parameters

Rated Current (A)	721A/0.4kV
Rated Insulation Voltage (V)	DC1000
Rated Working Voltage (V)	AC400
Auxiliary Equipment Operating Voltage (V)	AC220, DC24
Rated Current of Busbar (A)	1000
Frequency	50Hz
Load Rated Power (kW)	500
Grid Rated Power (kW)	500
Dimension (W × D × H, mm)	1000 × 1000 × 2250
Weight Appr. (kg)	≤650kg
System Operating Temperature Range	-20°C ~ 55°C
Max. Working Altitude (m)	≤3000m
IP Rating of Enclosure	IP54



AI Intelligence

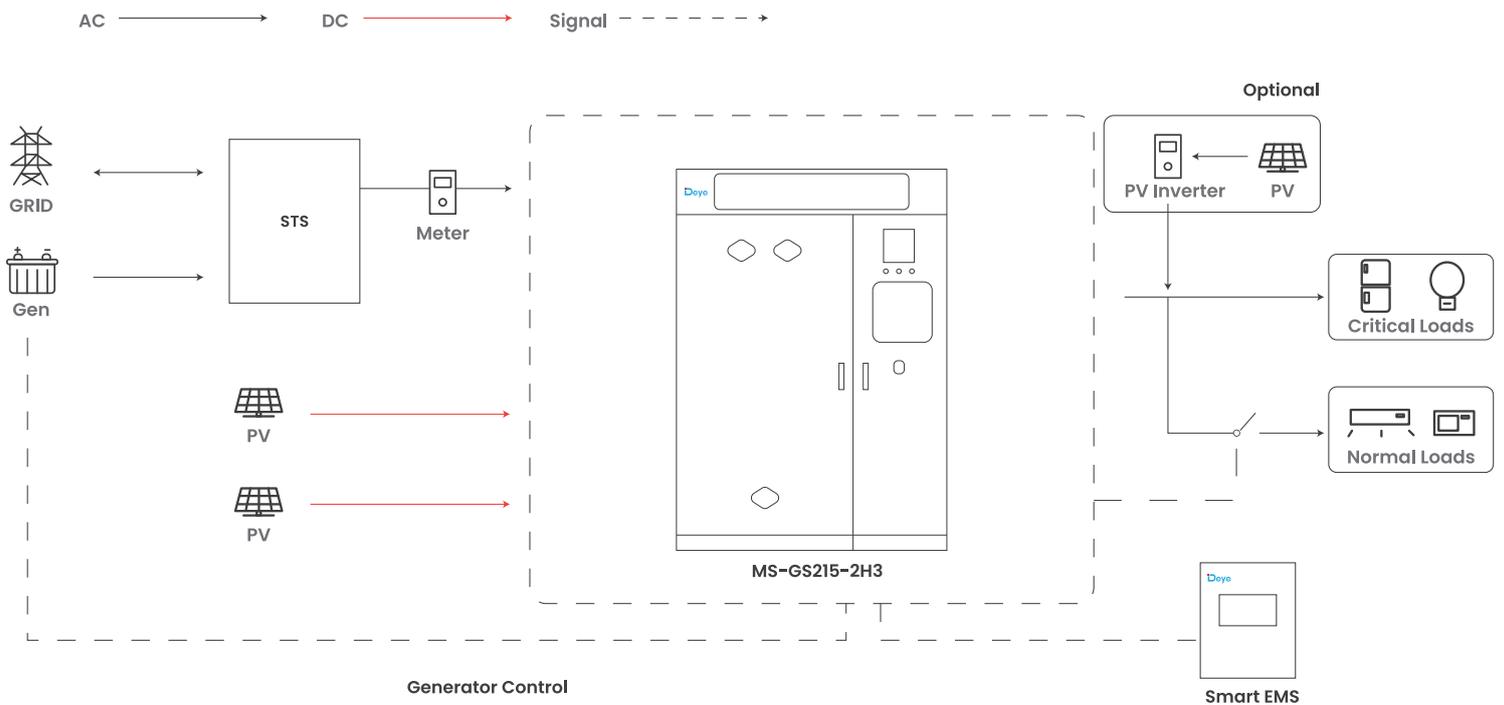
- Large capacity energy aggregation
- Real-time electricity price revenue calculation
- One click generation of statistical charts
- Maximum profit charging and discharging strategy

Efficient Operation and Maintenance

- Provide local / cloud operation and maintenance to ensure stable device operation
- Combination of multiple operation and maintenance methods for WEB / APP

Safe and Reliable

- Real-time alarm for equipment malfunction
- Support SOC balance management



Model	MS-EMS
System	
Configuration	EMS controller, lightning protection module, switch power supply, UPS module, switch
Single Point Access Capacity	Energy storage : $\leq 3.44\text{MWh}$ Photovoltaic : $\leq 1.6\text{MWp}$
Function	Basic functions : peak valley arbitrage, anti backflow, main transformer overload protection, load tracking, demand control, backup power function, phase separation control, SOC balancing, Deye Cloud monitoring Advanced features : load forecasting, production planning, electricity price planning, optimal economic curv
Communicate	
Ethernet (5 channels)	10 / 100 / 1000 Mbps
Fiber Optic Port (2 channels)	1Gbps
USB (2 channels)	Host
CAN (3 channels)	Isolation, with 2 channels supporting CAN-FD
RS485 (8 channels)	Isolation
RS232 (3 channels)	2 isolated channels, 1 non isolated debugging channel (DB9 socket)
TF Card (1 channel)	Standard TF card holder
LVDS (1 channel)	The physical interface is DVI (including 1 USB for touch)
M. 2 Interfaces (1 channel)	PCIe2.0 X1, Scalable SSD (standard 1TB)
DI (17 channels)	Optocoupler isolation
DO (8 channels)	Relay isolation
WLAN	802.11 b / AC g n, HT 20 / 40, 2.4 GHz 5 Ghz
Power Supply	
Communication Input	220Vac
DC IN	24Vdc
UPS Backup Power	24Vdc
Consumption	Max 25W
Environmental parameters	
Operation Temperature	-15°C ~ +50°C
Storage Temperature	-15°C ~ +50°C
Working Humidity	5% ~ 95%
Max. Working Altitude (m)	$\leq 3000\text{m}$
IP Rating of Enclosure	IP54
Anti-Corrosion Grade	$\geq \text{C4}$
Mechanical parameters	
Dimension (W × D × H, mm)	488 × 188 × 588
Weight Appr. (kg)	$\leq 24.5\text{kg}$
Installation Location	Indoor or outdoor, wall-mounted
Box Material	Metal
Incoming Specifications	AC power cord : Recommended wire diameter 1.5mm ² DC power cord : Recommended wire diameter of 1.5mm ² Eight core Ethernet cable: Recommended CAT5e Ethernet cable RS485 : Recommended 0.75mm ² ~1.5mm ² outdoor UV protection with shielding layer twisted pair cable length<1000m (baud rate 9600)