# **NEO-Modula**



### Modular ESS for EU Commercial Application



**SEB-M PRO** 

Quick installation standard of 19-inch embedded designed module is comfortable for

Cathode material is made from LiFePO4 with safety performance and long cycle life, The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

The whole module is non-toxic, non-polluting and environmentally friendly.

Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, wifi upgrade(optional), remote up grade(Compatible with Deye inverter).

#### Wide temperature

Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.



Model		SEB-M PRO				
Main Parameter						
Cell Chemistry			LiFe	PO <sub>4</sub>		
Module Energy (kWh	)	5.12				
Module Nominal Vol	tage (V)	51.2				
Module Capacity (Ah	)	100				
Battery Module Num	ber	SEB-M25 PRO	SEB-M40 PRO	SEB-M60 PRO	SEB-M85 PRO	
Battery Module Qty I	In Series (Optional)	5 (Min)	8	12	17 (Max)	
System Nominal Volt	age (V)	256	409.6	614.4	870.4	
System Operating Vo	oltage (V)	220~292	352~467.2	528~700.8	748~992.8	
System Energy (kWh)		25.6	40.96	61.44	87.04	
System Usable Energy (kWh) <sup>1</sup>		23.04	36.86	55.3	78.33	
Rated DC Power		25.6	40.96	55.3	87.04	
	Recommend	50				
Charge/Discharge <sup>2</sup>	Nominal	100				
Current (A)	Peak Discharge (2 mins, 25°C)	125				
Working Temperatur	re (°C)		Charge: 0~55/Dis	charge: -20~55		
Status Indicator		Yellow: Battery High Voltage Power On Red: Battery System Alarm				
Communication Port		CAN2.0/ RS485				
Humidity		5%~85%RH				
Altitude		≤3500m				
IP Rating of Enclosure	2	IP20				
Dimension (W/D/H,n	nm)	530*602*1629 530*602*2219 1060*6			1060*602*1629	
Weight Approximate	e (kg)	285	420	610	866	
Installation Location		Rack Mounting				
Storage Temperature (°C)		0~35				
Recommend Depth of Discharge		90%				
Cycle Life		25±2°C,0.5C/0.5C, EOL70%≥6000				
Warranty <sup>3</sup>		Up to 15 years				
Certification		CE/IEC62619 /VDE2510-50/ UN38.3				
			61,12612015,17012510 307 01100.5			

<sup>1.</sup> DC Usable Energy, test conditions: 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

<sup>2.</sup> The current is affected by temperature and SOC.

<sup>3.</sup> The warranty is due whichever reached first of warranty period or life cycle power.

<sup>4.</sup> Made in China.

### System Components



Model	Description

SEB-M-PDU-2 High Voltage Battery cluster control box conforming to European or British Standards

Operating Voltage 200~1000Vdc Nominal Charge/Discharge Current 100A Max.Charge/Discharge Current 120A DC Input Rating 12±2%V/4.15A Operating Temperature Range -20~65°C Ingress Protection IP20 Dimension (W/D/H) 440\*570\*150mm Weight Approximate 19kg



#### High voltage box Standard configuration:

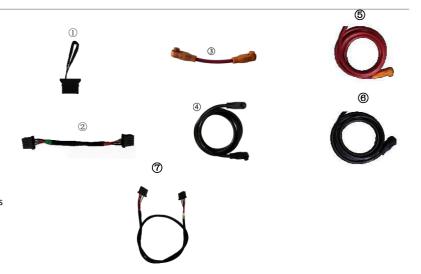
- 120 ohm terminal resistance
- 2 250mm communication cable
- 3 200mm power cable
- 42.1m power cable
- ⑤EPCable2.0

(Standard 2-meter power cable connected

to the positive pole of the external PCS)

⑥ENCable2.0

- (Standard 2-meter power cable connected
- to the negative pole of the external PCS)
- 71000mm communication cable between two battery racks
- ® 1000mm power cable between the two battery racks



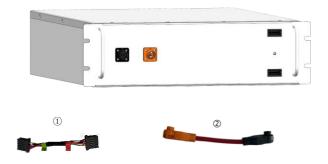
#### SEB-M-PACK5.1

#### 5.12 kwh battery module

Battery Type	LiFePO4(LFP)
Nominal Voltage	51.2Vdc
Rated Capacity	100Ah
Rated Energy	5.12kWh
Nominal Charge/Discharge Current	100A
Peak.Discharge Current	120A
Charge Temperature	0~55°C
Discharge Temperature	-20°C∼55°C
Storage Temperature	0°C∼35°C
Ingress Protection	IP20
Dimension (W/D/H)	440*570*133mm
Weight Approximate	45kg

Battery module Standard configuration:

- ① **160**mm
- 2 200mm power cable





Model	Description
ECOM Cable2.0(Optional)	Standard 2-meter communication cable connected to the external device



3U-HRACK(Optional) Standard 19inch rack, caninstall 12 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W/D/H) 530\*602\*2219mm Weight Approximate 51kg



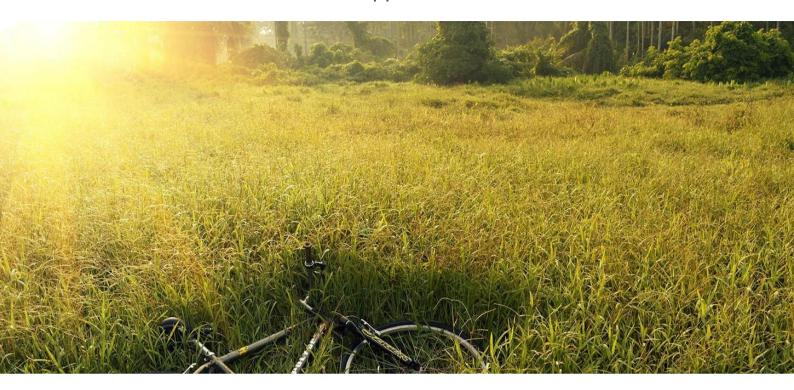
3U-LRACK(Optional) Standard 19inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box

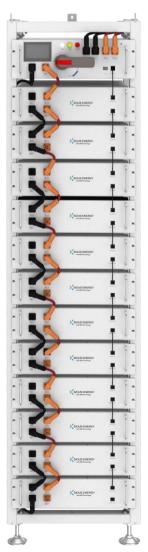
Dimension (W/D/H) 530\*602\*1629mm Weight Approximate 41kg



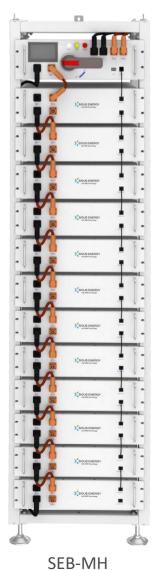
# **NEO-Modula**

### Modular ESS for US Commercial Application





SEB-ML



Convenient

Quick installation standard of 19-inch embedded designed module is comfortable for installation and maintenance. Support USB upgrade, wifi upgrade(optional), remote up grade(Compatible with Sol-Ark inverter).

#### • Safe and reliable

Cathode material is made from LiFePO4 with safety performance and long cycle life, The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

#### ◆ Intelligent BMS

It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

#### ◆ Eco-friendly

The whole module is non-toxic, non-polluting and environmentally friendly.

#### Flexible configuration

Multiple battery modules can be in parallel for expanding capacity and power.

#### Wide temperature

Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.

## Technical Data\_\_\_\_\_

Model		SEB-ML	
Main Parameter		LiFePO4	
Cell Chemistry			
Module Energy (kWh)		5.12	
Module Nominal Voltage	(V)	51.2	
Module Capacity (Ah)		100	
Battery Module Qty In Se		6	
System Nominal Voltage	(V)	307.2	
System Operating Voltag	e (V)	240~350.4	
System Energy (kWh)		61.44	
System Usable Energy (kWh) <sup>1</sup>		55.29	
	Recommend	100	
Charge/Discharge <sup>2</sup> Current (A)	Nominal	100	
Current (A)	Peak Discharge (2 mins, 25°C)	125	
Working Temperature (°C)		Charge: 0~55/Discharge: -20~55	
Status Indicator		Yellow: Battery High Voltage Power On Red: Battery System Alarm	
Communication Port		CAN2.0/ RS485	
Humidity		5%~85%RH	
Altitude		≤2000m	
IP Rating of Enclosure		IP20	
Dimension (W/D/H,mm)		589*590*2240	
Weight Approximate (kg)		628	
Installation Location		Rack Mounting	
Storage Temperature (°C)		0~35	
Recommend Depth of Discharge		90%	
Cycle Life		25±2°C,0.5C/0.5C, EOL70%≥6000	
Warranty <sup>3</sup>		Up to 15 years	
Certification		UL1973 /UL9540A/UN38.3	

DC Usable Energy, test conditions: 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
 The current is affected by temperature and SOC.
 The warranty is due to whichever it reached first of warranty period or life cycle power.

### **Technical Data**

Model		SEB-MH	
Main Parameter			
Cell Chemistry		LiFePO4	
Module Energy (kWh)		5.12	
Module Nominal Voltage	e (V)	51.2	
Module Capacity (Ah)		100	
Battery Module Qty In Se	eries (Optional)	12	
System Nominal Voltage	(V)	614.4	
System Operating Voltag	ge (V)	499.2~700.8	
System Energy (kWh)		61.44	
System Usable Energy (k	Wh) 1	55.29	
	Recommend	50	
Charge/Discharge <sup>2</sup> Current (A)	Nominal	100	
Current (A)	Peak Discharge (2 mins, 25°C)	125	
Working Temperature (°C		Charge: 0~55/Discharge: -20~55	
Status Indicator		Yellow: Battery High Voltage Power On Red: Battery System Alarm	
Communication Port		CAN2.0/ RS485	
Humidity		5%~85%RH	
Altitude		≤2000m	
IP Rating of Enclosure		IP20	
Dimension (W/D/H,mm)		589*590*2240	
Weight Approximate (kg	)	628	
Installation Location			
Installation Location		Rack Mounting	
Storage Temperature (°C)	)	Rack Mounting 0~35	
Storage Temperature (°C)		0~35	
Storage Temperature (°C) Recommend Depth of Dis		0~35 90%	

DC Usable Energy, test conditions: 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
 The current is affected by temperature and SOC.
 The warranty is due whichever reached first of warranty period or life cycle power.

### System Components

## Model Description

#### SEB-M-PDU-NA High Voltage Battery cluster control box conforming to North American Standard

Operating Voltage 120 ~ 750Vdc Nominal Charge/Discharge Current 100A Max.Charge/Discharge Current 125A DC Input Rating 12±2%V/4.15A Operating Temperature Range -20~65°C **Ingress Protection** IP20 Dimension (W/D/H) 440\*570\*150mm Weight Approximate 17kg



#### SEB-MM5.1-D 5.12 kwh battery module

Battery Type	LiFePO4(LFP)
Nominal Voltage	51.2Vdc
Rated Capacity	100Ah
Rated Energy	5.12kWh
Nominal Charge/Discharge Current	100A
Peak.Discharge Current	125A
Charge Temperature	0~55°C
Discharge Temperature	-20°C ~ 55°C
Storage Temperature	0°C ~ 35°C
Ingress Protection	IP20
Dimension (W/D/H)	440*570*133mm
Weight Approximate	44kg



3U-HCabinet(Optional) Dimension (W/D/H) Weight Approximate Standard 19inch rack can install 12 pcs batteries and 1 pcs High Voltage Battery cluster control box 530\*660\*2286mm

80kg





Model	Description
ECOM Cable2.0(Optional)	Standard 2-meter commumication cable connected to the external device



3U-HRACK(Optional) Standard 19inch rack, caninstall 12 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W/D/H) 530\*602\*2219mm Weight Approximate 51kg



3U-LRACK(Optional) Standard 19inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W/D/H)
Weight Approximate

530\*602\*1629mm 41kg

