

PRODUCT BOOK
: Essential Information for

RESU
RESU LV / HV

About this product book

This product book includes essential information for RESU Low Voltage (LV) and High Voltage (HV) battery products. The information included in this product book is accurate at the time of publication. However, the product specifications are subject to change without prior notice. If changes occur, LG Chem will share the updated product book to our RESU Partners.

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1. Compatible Inverter List








1.1 Compatible storage Inverters with RESU LV (v7.8)

All RESU installations require a compatible inverter.

Using a non-approved inverter will void the warranty provided by LG Chem.

See below important instructions when installing and using RESU LV.

- 1) Battery inverters should operate in **On-Grid only. (Not in Off-Grid)**
- 2) For On-Grid applications where Back-up mode may be sometimes utilized the backed up circuits and inverters AC draw must not exceed the battery current limit specifications.

Inverter			Battery				Remark
Manufacturer	Model	Software Version*	RESU3.3 (3kW)	RESU6.5 (4.2kW)	RESU10 (5kW)	RESU13 (5kW)	
	Sunny Island 3.0M	3.110	○	○	○		*Cannot use in Back-up Mode
	Sunny Island 4.4M	1.02.10.R	○	○	○	○	*Cannot use in Back-up Mode
	Sunny Island 6.0H		○	○	○	○	*Exclusively, RESU13 can be used in Back-up Mode
	SH5K	SH5K_V11_V1_A	○	○	○		*Can use in Back-up Mode under the condition 2) above
	SH5K+	SH5K-V13_FW_V13	○	○	○		
	SH3K6	SH3K6-V11_FW_V28	○	○	○	○	
	SH4K6	SH4K6-V11_FW_V28	○	○	○	○	
	SH5K-20	SH5K-20_FW_V57					
	SK-SU5000E	Inverter_M V2.15 Charger_28035_M_2.23	○	○	○	○	*Can use in Back-up Mode under the condition 2) above
	SK-SU3700E						
	SK-SU3000E						
	SK-TL5000E						
	SK-TL3700E						
	SK-TL3000E						
	ISS1Play 3TL	FW : ABH1002_F1	○	○	○		*Can use in Back-up Mode under the condition 2) above
	ISS1Play 3 with Transformer	DFW : ABH1003_H D.BOOT : ABH100					
	MultiPlus 48/3000/35	CCGX S-v1.72-recover	○	○	○		*Can use in Back-up Mode under the condition 2) above
	GW3048D-ES	Inverter_M V2.15 Charger_28035_M_2.23	○	○	○		*Can use in Back-up Mode under the condition 2) above
	GW3648D-ES		○	○	○		
GW5048D-ES	○		○	○			
	GW3048-EM	FW : 03034	○	○	○		*Can use in Back-up Mode under the condition 2) above
	GW3648-EM	App : V2.1.6					
	GW5048-EM						
	GW3600S-BP	FW : 02203		○	○		*Exclusively, can use in Off-Grid
	GW5000S-BP	App : V2.1.6					
	SPMC481	SP Link : 9.4.6220	○	○	○		*Exclusively, can use in Off-Grid
	SPMC482	SW :PF0004.X					

※ More compatible inverters will be added.

* Only compatible with the software versions which are mentioned above.

1. Compatible Inverter List





1.2 Compatible storage Inverters with RESU HV (v1.2)

All RESU installations require a compatible inverter.

Using a non-approved inverter will void the warranty provided by LG Chem.

See below important instructions when installing and using RESU HV.

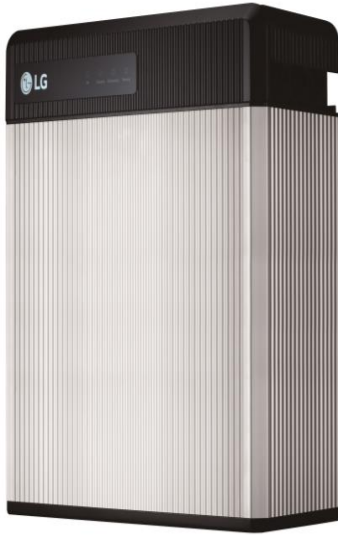
- 1) Battery/Hybrid inverters should operate in **On-Grid only. (Not in Off-Grid)**
- 2) For On-Grid applications where Back-up mode may be sometimes utilized, the backed up circuits and inverters AC draw must not exceed the battery current limit specifications.

Inverter			Battery				Remark
Brand	Model	Software Version*	RESU7H		RESU10H		
			Type C	Type R	Type C	Type R	
	Sunny Boy Storage 2.5	2.4.19.R or above	○		○		- Cannot use in Back-up Mode
	Sunny Boy Storage 3.7*	1.0.73.R or above	○		○		- SPS(Secure Power Supply) mode is supported
	Sunny Boy Storage 5.0*						
	Sunny Boy Storage 6.0*						
Sunny Boy Storage 3.8 – US*	1.0.66.R or above	○		○		- SPS(Secure Power Supply) mode is supported	
Sunny Boy Storage 5.0 – US*							
Sunny Boy Storage 6.0 – US*							
*Inverter S/W(Backup function Included) will be available from Feb.							
	SE5000-RWS / SE6000-RWS (EU)	3.2150 or above			○		- Can use in Back-up Mode
	SE5000-RWS2 / SE6000-RWS2 (EU)						
	SE7600A-USS2 / SE3800A-USS2 (US)						
	SE5000-AUS2 / SE6000-AUS2 (AU)						
	SE2000H ~ SE10000H with SESTI-S4	3.2186 or above			○	○	- Cannot use in Back-up Mode
	Symo Hybrid 3.0-3-S	1.9.1 or above			○		- Cannot use in Back-up Mode
	Symo Hybrid 4.0-3-S						
	Symo Hybrid 5.0-3-S						
	SUN2000L- 2KTL (EU/AU)	V100R001C00SPC31 2 or above			○	○	- In case of RESU10H, Charge/Discharge Power is limited to 3.5kW
	SUN2000L- 3KTL (EU/AU)						
	SUN2000L- 3.68KTL (EU/AU)						
SUN2000L- 4KTL (EU/AU)							
SUN2000L- 4.6KTL (EU/AU)							
SUN2000L- 5KTL (EU/AU)							
SUN2000-3.8KTL-USL0 (NA)	V100R001C10SPC10 3B044 or above					○	- Can use in Back-up Mode only with PV in operation under rated power - In case of RESU10H, Charge/Discharge Power is limited to 3.5kW
SUN2000-5KTL-USL0 (NA)							
SUN2000-7.6KTL-USL0 (NA)							
SUN2000-9KTL-USL0 (NA)							- Can use in Back-up Mode only with PV in operation under rated power
SUN2000-10KTL-USL0 (NA)							
SUN2000-11.4KTL-USL0 (NA)							

※ More compatible inverters will be added.

※ Only compatible with the software versions which are mentioned above.

2.1 RESU13 Introduction



- ✓ **“Back-up” functionality** supported
- ✓ Compatible with **SMA (SI4.4M & SI6.0I), Sungrow (SH3K6 , SH4K6 & SH5K-20) and more brands to be added**
- ✓ **Wall mounted as well as stand type installation**
- ✓ Expandable up to 2 units in parallel for a total **capacity of 26kWh** with one inverter (by RESU Plus)

※ RESU13 is not allowed to be expanded with the other models(RESU3.3/6.5/10) by RESU Plus, but only with RESU13

RESU13	
P/N	EH048252P3S1
Width	452 mm
Height	626 mm
Depth	227 mm
Weight ¹⁾	98.5kg

1) A battery pack's weight may vary slightly.

Electrical Characteristics		
Nominal voltage	51.8 V	
Operating voltage range	42~58.8 V	
Nominal Capacity	252 Ah	
Total Energy	13.0kWh	
Usable Energy	12.4kWh(Depth of Discharge 95%)	
Maximum power	5kW	
Peak power for 3 seconds	7kW	
Peak current for 3 seconds	166.7 A	
Peak power for 3 seconds in backup mode	11kW for 3sec.	
Peak current for 3 seconds in backup mode	261.9 A	
Battery round-trip efficiency(0.3C, 25°C)	95%	
Expected lifetime at 25°C/77°F	More than 10 years	
Communication Interface	CAN 2.0 B	
Operating Conditions		
Installation Location	Indoor / Outdoor (Stand / Wall)	
Operating Temperature(Recommended)	-10 to 50°C(15 to 30°C)	
Humidity	5% to 95%	
Altitude	Max. 6,562ft (2,000m)	
Cooling Strategy	Natural Convection	
Certification		
Safety	Cell	UL1642
	Battery Pack	CE / RCM / TUV(IEC 62619) / FCC
EMC		IEC61000-6-1 , IEC61000-6-3
Hazardous Materials Classification		Class 9
Transportation		UN38.3
Ingress Rating		IP55

2.2 RESU7H(Type-C) Introduction



- ✓ Compatible with **SMA Sunny Boy Storage 2.5 and new Sunny Boy Storage 3.7/5.0/6.0**
- ✓ It can be installed with SMA Sunny Boy Storage inverter for the existing PV system.
- ✓ **Wall mounted, compact design**

RESU7H	
P/N	EH111063P3S3
Width	744 mm
Height	907 mm
Depth	206 mm
Weight ¹⁾	87.0kg

1) A battery pack's weight may vary slightly.

Electrical Characteristics		
Total Energy Capacity ¹⁾	7.0 kWh @25°C (77°F), Beginning of Life	
Usable Energy Capacity ¹⁾	6.6 kWh @25°C (77°F)	
Battery Capacity	63 Ah	
Voltage Range	Charge	468 to 550 V_{DC}
	Discharge	430 to 507 V_{DC}
Absolute Max. Voltage	570 V_{DC}	
Max. Charge/Discharge Current	7.5A@467V / 8.1A@427V	
Max. Charge/Discharge Power ²⁾	3.5kW	
Peak Power (only discharging) ³⁾	5kW for 10 sec.	
Peak Current (only discharging)	11.6A@430V for 10 sec.	
Communication Interface	CAN	
DC Disconnect	Circuit Breaker, 25A, 600V rating	
Connection Method	Spring Type Connector	
Operating Conditions		
Installation Location	Indoor / Outdoor (Stand / Wall)	
Operating Temperature(Recommended)	-10 to 45°C(15 to 30°C)	
Humidity	5% to 95%	
Altitude	Max. 6,562ft (2,000m)	
Cooling Strategy	Natural Convection	
Noise Emission	< 40 dBA	
Certification		
Safety	Cell	UL1642
	Battery Pack	CE / RCM / TUV(IEC 62619)
Emissions	FCC	
Hazardous Materials Classification	Class 9	
Transportation	UN38.3	
Ingress Rating	IP55	

3.1 RESU LV (48V)

3.1.1 RESU3.3 (v1.8)

Features

RESU3.3 battery pack, designed for photovoltaic systems, can be easily connected with other models to expand its energy capacity. With RESU Plus, RESU3.3/6.5/10 can be “cross-connected” with each other.

※ RESU Plus is an expansion kit specially designed for 48V models.
Number of expandable battery units : up to 2EA

- Compact and light weight
- Powerful Performance : World Best Energy Density
- Easy and Flexible installation
 - : Easy to wall mount or install on floor
 - : Wide range of inverters available



Mechanical Characteristics

Dimensions	Width	452 mm (17.8")
	Height	401 mm (15.8")
	Depth	120 mm (4.7")
Weight		31 kg (68.3lbs)

3.1 RESU LV (48V)

3.1.1 RESU3.3 (v1.8)

Electrical Characteristics

Total Energy Capacity	3.3 kWh
Usable Energy Capacity ¹⁾	2.9 kWh
Battery Capacity	63 Ah
Voltage Range	42.0 to 58.8 V _{DC}
Nominal Voltage	51.8 V _{DC}
Max. Charge/Discharge Current	71.4A
Peak Current ²⁾	78.6A for 3 sec.
Max. Charge/Discharge Power ³⁾	3.0kW
Peak Power ²⁾	3.3kW for 3 sec.
Battery Pack Round-Trip Efficiency	>95% (under specific condition)
Communication Interface	CAN 2.0B
DC Disconnect	Circuit Breaker, Contactor, Fuse

Operating Conditions

Installation Location	Indoor / Outdoor (Stand / Wall-Mounted)
Operating Temperature	-10 to 50°C
Operating Temperature (Recommended)	15 to 30°C
Storage Temperature	-30 to 60°C : ~7 days -20 to 45°C : ~ 6 months
Humidity	5% to 95%
Altitude	Max. 2,000m
Cooling Strategy	Natural Convection

Certification

Safety	Cell	UL1642
	Battery Pack	CE / RCM / FCC / TUV (IEC 62619) / UL1973
EMC		IEC61000-6-1, IEC61000-6-3
Hazardous Materials Classification		Class 9
Transportation		UN38.3
Ingress Rating		IP55

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

1) Value for Battery Cell Only (Depth of Discharge 90%). Actual usable energy at the AC output may vary by condition, such as the inverter efficiency and temperature.

2) Peak Current excludes repeated short duration (less than 3 sec.) of current pattern.

3) LG Chem recommends 1.1kW for maximum battery lifetime.

3.1 RESU LV (48V)

3.1.2 RESU6.5 (v2.5)

Features

RESU6.5 battery pack, designed for photovoltaic systems, can be easily connected with other models to expand its energy capacity. With RESU Plus, RESU3.3/6.5/10 can be “cross-connected” with each other.

※ RESU Plus is an expansion kit specially designed for 48V models.
Number of expandable battery units : up to 2EA

- Compact and light weight
- Powerful Performance : World Best Energy Density
- Easy and Flexible installation
 - : Easy to wall mount or install on floor
 - : Wide range of inverters available



Mechanical Characteristics

Dimensions	Width	452 mm (17.8")
	Height	656 mm (25.8")
	Depth	120 mm (4.7")
Weight		52 kg (114.6lbs)

3.1 RESU LV (48V)

3.1.2 RESU6.5 (v2.5)

Electrical Characteristics

Total Energy Capacity	6.5 kWh
Usable Energy Capacity ¹⁾	5.9 kWh
Battery Capacity	126 Ah
Voltage Range	42.0 to 58.8 V _{DC}
Nominal Voltage	51.8 V _{DC}
Max. Charge/Discharge Current	100A
Peak Current ²⁾	109.5A for 3 sec.
Max. Charge/Discharge Power ³⁾	4.2kW
Peak Power ²⁾	4.6kW for 3 sec.
Battery Pack Round-Trip Efficiency	>95% (under specific condition)
Communication Interface	CAN 2.0B
DC Disconnect	Circuit Breaker, Contactor, Fuse

Operating Conditions

Installation Location	Indoor / Outdoor (Stand / Wall-Mounted)
Operating Temperature	-10 to 50°C
Operating Temperature (Recommended)	15 to 30°C
Storage Temperature	-30 to 60°C : ~7 days -20 to 45°C : ~ 6 months
Humidity	5% to 95%
Altitude	Max. 2,000m
Cooling Strategy	Natural Convection

Certification

Safety	Cell	UL1642
	Battery Pack	CE / RCM / FCC / TUV (IEC 62619) / UL1973
Emissions	IEC61000-6-1, IEC61000-6-3	
Hazardous Materials Classification	Class 9	
Transportation	UN38.3	
Ingress Rating	IP55	

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

1) Value for Battery Cell Only (Depth of Discharge 90%). Actual usable energy at the AC output may vary by condition, such as the inverter efficiency and temperature.

2) Peak Current excludes repeated short duration (less than 3 sec.) of current pattern.

3) LG Chem recommends 2.2kW for maximum battery lifetime.

3.1 RESU LV (48V)

3.1.3 RESU10 (v1.4)

Features

RESU10 battery pack, designed for photovoltaic systems, can be easily connected with other models to expand its energy capacity. With RESU Plus, RESU3.3/6.5/10 can be “cross-connected” with each other.

※ RESU Plus is an expansion kit specially designed for 48V models.
Number of expandable battery units : up to 2EA

- Compact and light weight
- Powerful Performance : World Best Energy Density
- Easy and Flexible installation
 - : Easy to wall mount or install on floor
 - : Wide range of inverters available



Mechanical Characteristics

Dimensions	Width	452 mm (17.8")
	Height	484 mm (19.0")
	Depth	227 mm (8.9")
Weight		75 kg (165.3lbs)

3.1 RESU LV (48V)

3.1.3 RESU10 (v1.4)

Electrical Characteristics

Total Energy Capacity	9.8 kWh
Usable Energy Capacity ¹⁾	8.8 kWh
Battery Capacity	189 Ah
Voltage Range	42.0 to 58.8 V _{DC}
Nominal Voltage	51.8 V _{DC}
Max. Charge/Discharge Current	119A
Peak Current ²⁾	166.7A for 3 sec.
Max. Charge/Discharge Power ³⁾	5.0kW
Peak Power ²⁾	7.0kW for 3 sec.
Battery Pack Round-Trip Efficiency	>95% (under specific condition)
Communication Interface	CAN 2.0B
DC Disconnect	Circuit Breaker, Contactor, Fuse

Operating Conditions

Installation Location	Indoor / Outdoor (Stand / Wall-Mounted)
Operating Temperature	-10 to 50°C
Operating Temperature (Recommended)	15 to 30°C
Storage Temperature	-30 to 60°C : ~7 days -20 to 45°C : ~ 6 months
Humidity	5% to 95%
Altitude	Max. 2,000m
Cooling Strategy	Natural Convection

Certification

Safety	Cell	UL1642
	Battery Pack	CE / RCM / FCC / TUV (IEC 62619) / UL1973
Emissions	IEC61000-6-1, IEC61000-6-3	
Hazardous Materials Classification	Class 9	
Transportation	UN38.3	
Ingress Rating	IP55	

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

1) Value for Battery Cell Only (Depth of Discharge 90%). Actual usable energy at the AC output may vary by condition, such as the inverter efficiency and temperature.

2) Peak Current excludes repeated short duration (less than 3 sec.) of current pattern.

3) LG Chem recommends 3.3kW for maximum battery lifetime.

3.1 RESU LV (48V)

3.1.4 RESU13 (v1.0)

Features

RESU13 battery pack, designed for photovoltaic systems, can be easily connected with other models to expand its energy capacity. With RESU Plus, RESU13 can be connected only with another RESU13.

※ RESU Plus is an expansion kit specially designed for 48V models.
 Number of expandable battery units : up to 2EA

- Compact and light weight
- Powerful Performance : World Best Energy Density
- Easy and Flexible installation
 - : Easy to wall mount or install on floor
 - : Wide range of inverters available



Mechanical Characteristics

Dimensions	Width	452 mm (17.8")
	Height	626 mm (24.7")
	Depth	227 mm (8.9")
Weight		98.5 kg (217.2lbs)

3.1 RESU LV (48V)

3.1.4 RESU13 (v1.0)

Electrical Characteristics

Total Energy Capacity	13.0 kWh
Usable Energy Capacity ¹⁾	12.4 kWh
Battery Capacity	252 Ah
Voltage Range	42.0 to 58.8 V _{DC}
Nominal Voltage	51.8 V _{DC}
Max. Charge/Discharge Current	119A
Peak Current ²⁾	166.7A for 3 sec.
Max. Charge/Discharge Power	5.0kW
Peak Power ²⁾	7.0kW for 3 sec.
Peak Power for backup mode	11.0kW for 3 sec.
Battery Pack Round-Trip Efficiency	>95% (under specific condition)
Communication Interface	CAN 2.0B
DC Disconnect	Circuit Breaker, Contactor, Fuse

Operating Conditions

Installation Location	Indoor / Outdoor (Stand / Wall-Mounted)
Operating Temperature	-10 to 50°C
Operating Temperature (Recommended)	15 to 30°C
Storage Temperature	-30 to 60°C : ~7 days -20 to 45°C : ~ 6 months
Humidity	5% to 95%
Altitude	Max. 2,000m
Cooling Strategy	Natural Convection

Certification

Safety	Cell	UL1642
	Battery Pack	CE / RCM / TUV (IEC 62619) / FCC
EMC		IEC61000-6-1, IEC61000-6-3
Hazardous Materials Classification		Class 9
Transportation		UN38.3
Ingress Rating		IP55

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

1) Value for Battery Cell Only (Depth of Discharge 95%). Actual usable energy at the AC output may vary by condition, such as the inverter efficiency and temperature.

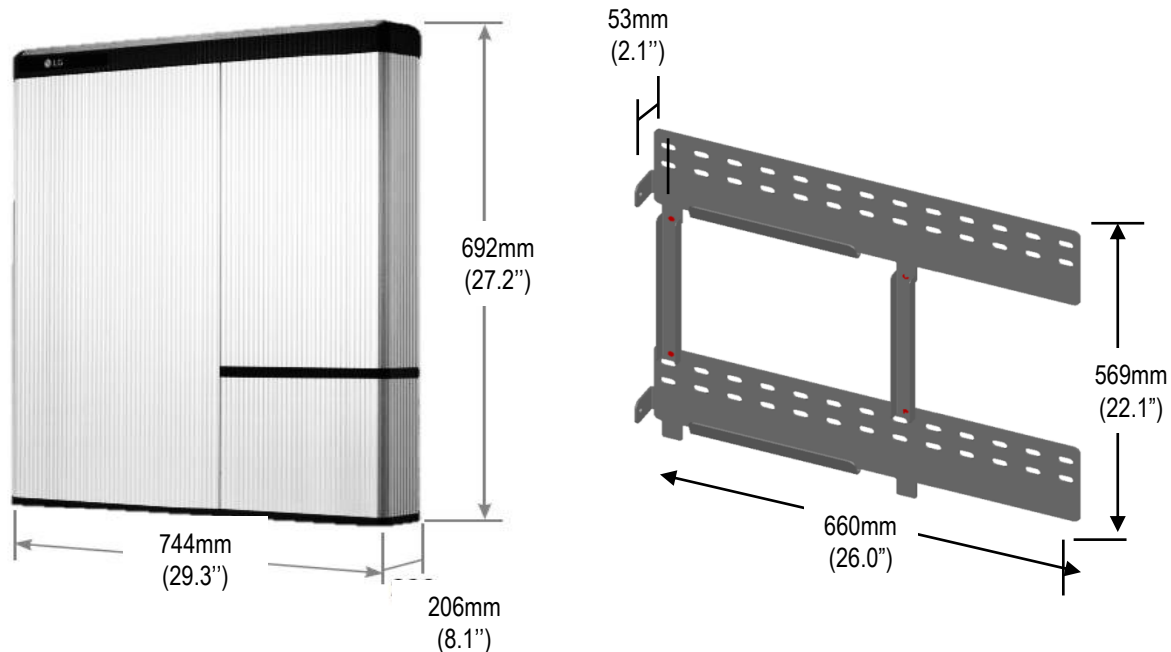
2) Peak Current excludes repeated short duration (less than 3 sec. of current pattern).

3.2 RESU HV (400V)

3.2.1 RESU7H _ Type-R (v4.1)

Features

- Compact design
- Powerful Performance : World Best Energy Density
- Wide range of inverters available for matching
- Wall mounting installation



Mechanical Characteristics

Dimensions	Width	744 mm (29.3")
	Height	692 mm (27.2")
	Depth	206 mm (8.1")
Weight		75kg (165.4lbs)

3.2 RESU HV (400V)

3.2.1 RESU7H _ Type-R (v4.1)

Electrical Characteristics

Total Energy Capacity ¹⁾	7.0 kWh @25°C (77°F), Beginning of Life	
Usable Energy Capacity ¹⁾	6.6 kWh @25°C (77°F)	
Battery Capacity	63 Ah	
Voltage Range	Charge	400 to 450 V _{DC}
	Discharge	350 to 430 V _{DC}
Absolute Max. Voltage	520 V _{DC}	
Max. Charge/Discharge Current	8.5A@420V / 10.0A@350V	
Max. Charge/Discharge Power ²⁾	3.5kW	
Peak Power (only discharging) ³⁾	5kW for 5 sec.	
Peak Current (only discharging)	13.5A@370V for 5 sec.	
Communication Interface	RS485	
DC Disconnect	Circuit Breaker, 25A, 600V rating	
Connection Method	Spring Type Connector	
User interface	LEDs for Normal and Fault operation	

Operating Conditions

Installation Location	Indoor / Outdoor (Wall-Mounted)	
Operating Temperature	14 to 113°F (-10 to 45°C)	
Operating Temperature (Recommended)	59 to 86°F (15 to 30°C)	
Storage Temperature	-22 to 131°F (-30 to 55°C)	
Humidity	5% to 95%	
Altitude	Max. 6,562ft (2,000m)	
Cooling Strategy	Natural Convection	
Noise Emission	< 40 dBA	

Certification

Safety	Cell	UL1642
	Battery Pack	CE / RCM / TUV (IEC 62619)
Emissions	FCC	
Hazardous Materials Classification	Class 9	
Transportation	UN38.3 (UNDOT)	
Ingress Rating	IP55	

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

※ DC/DC Discharge Efficiency 94.5% @ 2.3kW

1) Value for Battery Cell Only (Depth of Discharge 95%). Actual usable energy at the AC output may vary by condition, such as the battery converter, inverter efficiency and temperature.

2) LG Chem recommends 2.1kW for maximum battery lifetime

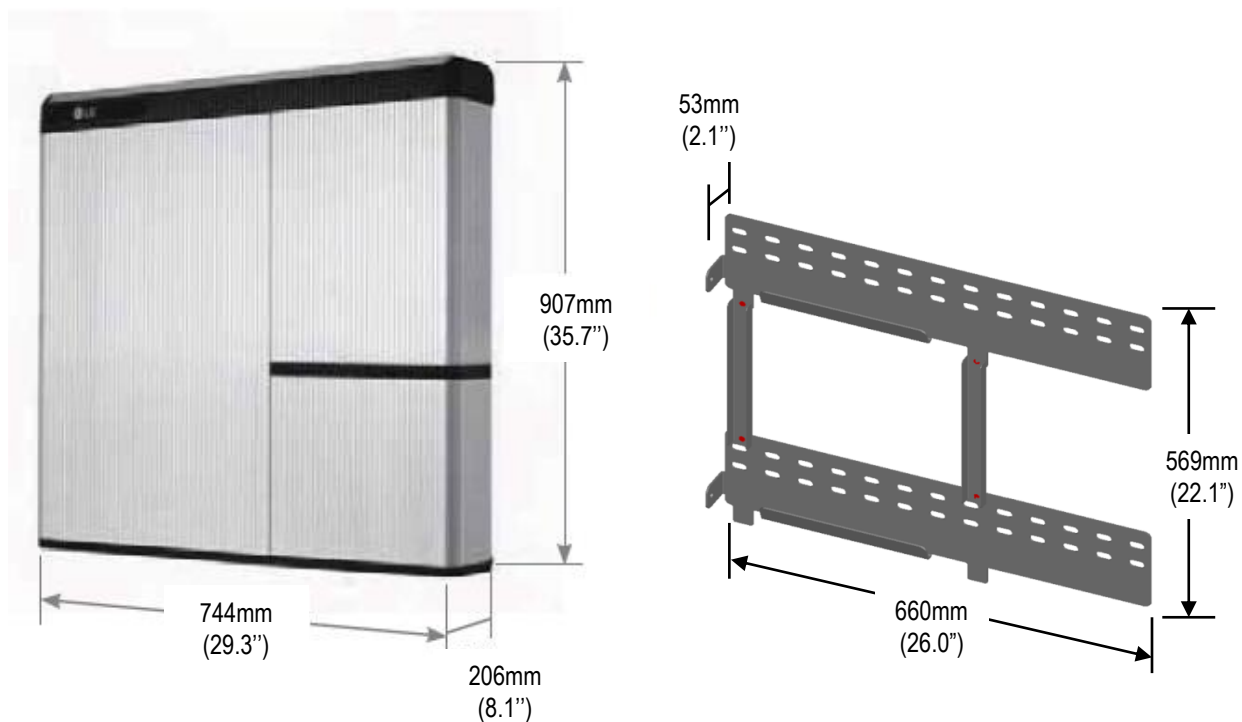
3) Peak Current excludes repeated short duration (less than 5 sec. of current pattern).

3.2 RESU HV (400V)

3.2.2 RESU7H_ Type-C (v4.1)

Features

- Compact design
- Powerful Performance : World Best Energy Density
- Matched with SMA Sunny Boy Storage models
- Wall mounting installation



Mechanical Characteristics

Dimensions	Width	744mm (29.3")
	Height	907mm (35.7")
	Depth	206mm (8.1")
Weight		87kg (191.8lbs)

3.2 RESU HV (400V)

3.2.2 RESU7H_ Type-C (v4.1)

Electrical Characteristics

Total Energy Capacity ¹⁾		7.0 kWh @25°C (77°F), Beginning of Life
Usable Energy Capacity ¹⁾		6.6 kWh @25°C (77°F)
Battery Capacity		63 Ah
Voltage Range	Charge	468 to 550 V _{DC}
	Discharge	430 to 507 V _{DC}
Absolute Max. Voltage		570 V _{DC}
Max. Charge/Discharge Current		7.5A@467V / 8.1A@427V
Max. Charge/Discharge Power ²⁾		3.5kW
Peak Power (only discharging) ³⁾		5kW for 10 sec.
Peak Current (only discharging)		11.6A@430V for 10 sec.
Communication Interface		CAN
DC Disconnect		Circuit Breaker, 25A, 600V rating
Connection Method		Spring Type Connector
User interface		LEDs for Normal and Fault operation

Operating Conditions

Installation Location		Indoor / Outdoor (Wall-Mounted)
Operating Temperature		14 to 113°F (-10 to 45°C)
Operating Temperature (Recommended)		59 to 86°F (15 to 30°C)
Storage Temperature		-22 to 131°F (-30 to 55°C)
Humidity		5% to 95%
Altitude		Max. 6,562ft (2,000m)
Cooling Strategy		Natural Convection
Noise Emission		< 40 dBA

Certification

Safety	Cell	UL1642
	Battery Pack	CE / RCM / TUV (IEC 62619)
Emissions		FCC
Hazardous Materials Classification		Class 9
Transportation		UN38.3 (UNDOT)
Ingress Rating		IP55

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

1) Value for Battery Cell Only (Depth of Discharge 95%). Actual usable energy at the AC output may vary by condition, such as the battery converter, inverter efficiency and temperature.

2) LG Chem recommends 2.1kW for maximum battery lifetime

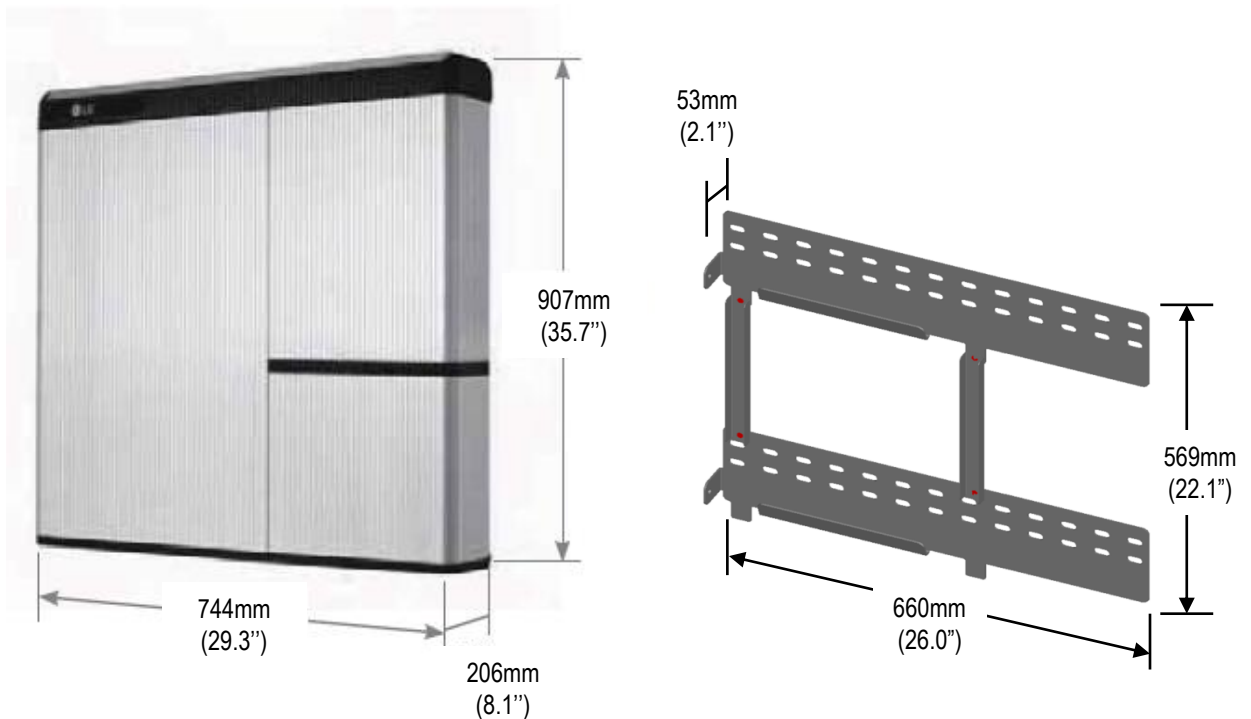
3) Peak Current excludes repeated short duration (less than 5 sec. of current pattern).

3.2 RESU HV (400V)

3.2.3 RESU10H_Type-R (v4.1)

Features

- Compact design
- Powerful Performance : World Best Energy Density
- Wide range of inverters available for matching
- Wall mounting installation



Mechanical Characteristics

Dimensions	Width	744 mm (29.3")
	Height	907 mm (35.7")
	Depth	206 mm (8.1")
Weight		97 kg (214lbs)

3.2 RESU HV (400V)

3.2.3 RESU10H_Type-R (v4.1)

Electrical Characteristics

Total Energy Capacity ¹⁾	9.8 kWh @25°C (77°F), Beginning of Life	
Usable Energy Capacity ¹⁾	9.3 kWh @25°C (77°F)	
Battery Capacity	63 Ah	
Voltage Range	Charge	400 to 450 V _{DC}
	Discharge	350 to 430 V _{DC}
Absolute Max. Voltage	520 V _{DC}	
Max. Charge/Discharge Current	11.9A@420V / 14.3A@350V	
Max. Charge/Discharge Power ²⁾	5kW	
Peak Power (only discharging) ³⁾	7kW for 10 sec.	
Peak Current (only discharging)	18.9A@370V for 10 sec.	
Communication Interface	RS485	
DC Disconnect	Circuit Breaker, 25A, 600V rating	
Connection Method	Spring Type Connector	
User interface	LEDs for Normal and Fault operation	

Operating Conditions

Installation Location	Indoor / Outdoor (Wall-Mounted)	
Operating Temperature	14 to 113°F (-10 to 45°C)	
Operating Temperature (Recommended)	59 to 86°F (15 to 30°C)	
Storage Temperature	-22 to 131°F (-30 to 55°C)	
Humidity	5% to 95%	
Altitude	Max. 6,562ft (2,000m)	
Cooling Strategy	Natural Convection	
Noise Emission	< 40 dBA	

Certification

Safety	Cell	UL1642
	Battery Pack	UL1973 / CE / RCM / TUV (IEC 62619)
Emissions	FCC	
Hazardous Materials Classification	Class 9	
Transportation	UN38.3 (UNDOT)	
Ingress Rating	IP55	

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

1) Value for Battery Cell Only (Depth of Discharge 95%). Actual usable energy at the AC output may vary by condition, such as the battery converter, inverter efficiency and temperature.

2) LG Chem recommends 3.3kW for maximum battery lifetime

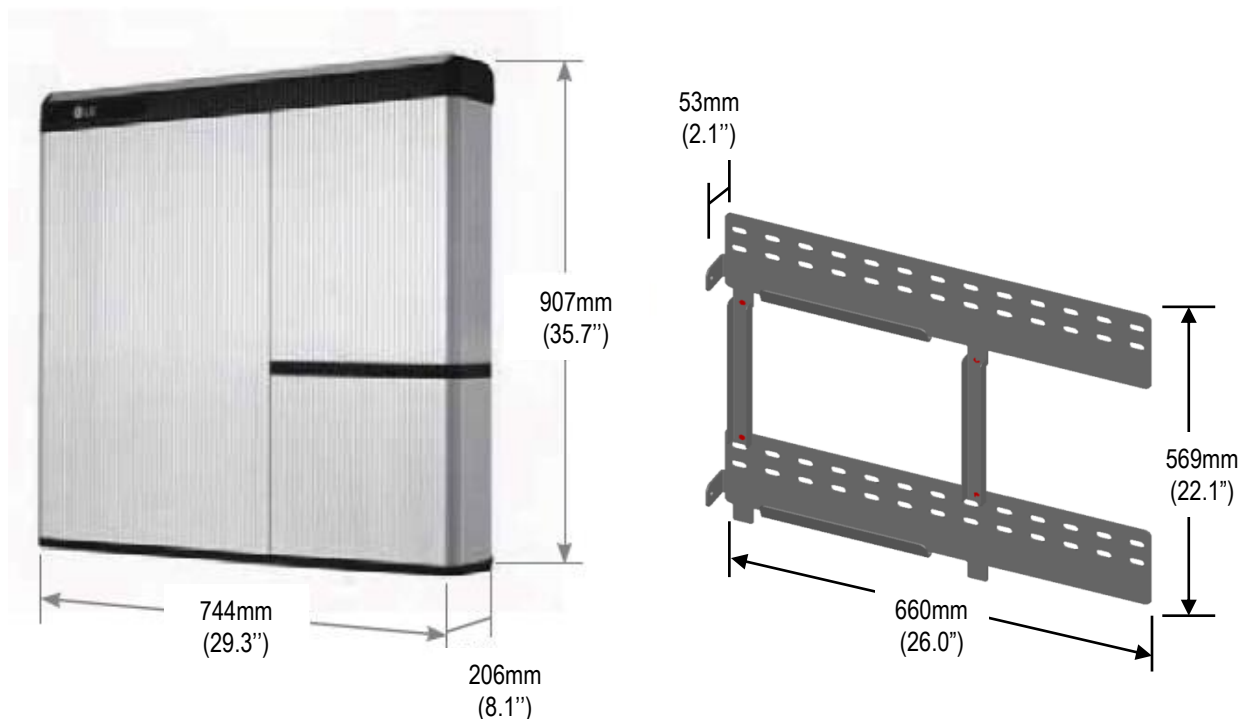
3) Peak Current excludes repeated short duration (less than 10 sec. of current pattern).

3.2 RESU HV (400V)

3.2.4 RESU10H_Type-C (v4.1)

Features

- Compact design
- Powerful Performance : World Best Energy Density
- Matched with SMA Sunny Boy Storage models
- Wall mounting installation



Mechanical Characteristics

Dimensions	Width	744 mm (29.3")
	Height	907 mm (35.7")
	Depth	206 mm (8.1")
Weight		99.8 kg (220lbs)

3.2 RESU HV (400V)

3.2.4 RESU10H_Type-C (v4.1)

Electrical Characteristics

Total Energy Capacity ¹⁾		9.8 kWh @25°C (77°F), Beginning of Life
Usable Energy Capacity ¹⁾		9.3 kWh @25°C (77°F)
Battery Capacity		63 Ah
Voltage Range	Charge	468 to 550 V _{DC}
	Discharge	430 to 507 V _{DC}
Absolute Max. Voltage		570 V _{DC}
Max. Charge/Discharge Current		10.7A@467V / 11.7A@427V
Max. Charge/Discharge Power ²⁾		5kW
Peak Power (only discharging) ³⁾		7kW for 10 sec.
Peak Current (only discharging)		16.3A@430V for 10 sec.
Communication Interface		CAN
DC Disconnect		Circuit Breaker, 25A, 600V rating
Connection Method		Spring Type Connector
User interface		LEDs for Normal and Fault operation

Operating Conditions

Installation Location		Indoor / Outdoor (Wall-Mounted)
Operating Temperature		14 to 113°F (-10 to 45°C)
Operating Temperature (Recommended)		59 to 86°F (15 to 30°C)
Storage Temperature		-22 to 131°F (-30 to 55°C)
Humidity		5% to 95%
Altitude		Max. 6,562ft (2,000m)
Cooling Strategy		Natural Convection
Noise Emission		< 40 dBA

Certification

Safety	Cell	UL1642
	Battery Pack	UL1973 / CE / RCM / TUV (IEC 62619)
Emissions		FCC
Hazardous Materials Classification		Class 9
Transportation		UN38.3 (UNDOT)
Ingress Rating		IP55

※ Test Conditions - Temperature 25°C, at the beginning of life

※ Total Energy is measured under specific condition from LGC(0.3CCCV/0.3CC)

1) Value for Battery Cell Only (Depth of Discharge 95%). Actual usable energy at the AC output may vary by condition, such as battery converter, inverter efficiency and temperature.

2) LG Chem recommends 3.3kW for maximum battery lifetime

3) Peak Current excludes repeated short duration (less than 10 sec. of current pattern).

Official Note about RESU HV Charging Caution

Dear Valued Customers,

We appreciate for your support of RESU and your confidence in LG Chem as your battery supplier. We remain committed to providing a safe, reliable and quality battery to the residential storage market. Safety is our first most priority, so we would like to help you use our product safely.

As RESU battery sales increase globally, we are seeing a growing number of installation and operational errors and that could potentially expose customers to safety hazards. Therefore, it is important to follow LG Chem's guidelines when handling the RESU.

Examples of misuse

- Prolonged overcharging:
For manual charging do not charge the battery overnight. Charge rate varies depending on the RESU model. Please refer to "RESU HV(Type-R) Forced Charging Manual" for instructions on how to properly manually charge the RESU.
- Incorrect charger settings:
Please check the charger settings before starting the manual charge process to prevent damage to the RESU.
- Using a charger that is not authorized by LG Chem:
Do not use a custom built or individually purchased charger. The charger must be verified by LG Chem.

LG Chem guideline for charging RESU

- Please contact LG Chem in advance before starting the manual charge process.
- Only chargers approved by LG Chem can be used. Please be aware that charger settings are different for RESU7H and RESU10H.

RESU7H	RESU10H
107V	152V

- LG Chem requires training prior to performing manual charging on RESUs.
Please contact LG Chem prior to manually charging a RESU.
- Product damage due to not following LG Chem guideline may void the warranty.

Direction to prevent over-discharge

If the RESU is installed but not in use first turn off the circuit breaker and then turn off the disconnect switch (or Aux Switch) Please refer to the installation manual for proper power down instructions.

4. RESU HV Charging Caution Letter

Regional contact point of LG Chem

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We thank you for your support while we continue to improve our RESU support service.

Sincerely yours,
Jeongjin Hong



Vice President
LG Chem Department Leader of Global Residential ESS Business
14th, January, 2019

LG CHEM, LTD. 2019.01.14. 14:00:00