

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 SH4K6 SH5K-20	SH3K6-V11_FW_V28 SH4K6-V11_FW_V28 SH5K-20_FW_V57	○	○	○	○	
	SK-SU5000E SK-SU3700E SK-SU3000E SK-TL5000E SK-TL3700E SK-TL3000E	Inverter_M V2.15 Charger_28035_M_2.23	○	○	○	○	*Can use in Back-up Mode under the condition 2) above
	ISS1Play 3TL ISS1Play 3 with Transformer	FW : ABH1002_F1 DFW : ABH1003_H D.BOOT : ABH100	○	○	○		*Can use in Back-up Mode under the condition 2) above
	MultiPlus 48/3000/35	CCGX S-v1.72-recover	○	○	○		*Can use in Back-up Mode under the condition 2) above
	GW3048D-ES GW3648D-ES GW5048D-ES	Inverter_M V2.15 Charger_28035_M_2.23	○	○	○		*Can use in Back-up Mode under the condition 2) above
	GW3048-EM GW3648-EM GW5048-EM	FW : 03034 App : V2.1.6	○	○	○		
	GW3600S-BP GW5000S-BP	FW : 02203 App : V2.1.6		○	○		
	SPMC481 SPMC482	SP Link : 9.4.6220 SW : PF0004.X	○	○	○		*Exclusively, can use in Off-Grid

※ 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.

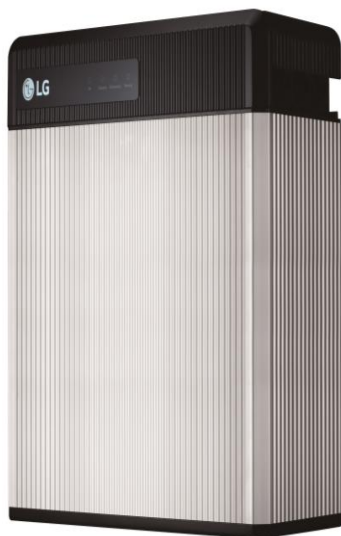
- 1) Battery/Hybrid inverters should operate in **On-Grid only. (Not in Off-Grid)**
- 2) For On-Grid applications where Back-up mode may be sometimes utilized, the backed up circuits and inverters AC draw must not exceed the battery current limit specifications.

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* Sunny Boy Storage 5.0* Sunny Boy Storage 6.0*	1.0.73.R or above	○		○		- SPS(Secure Power Supply) mode is supported
	Sunny Boy Storage 3.8 – US* Sunny Boy Storage 5.0 – US* Sunny Boy Storage 6.0 – US*	1.0.66.R or above	○		○		- SPS(Secure Power Supply) mode is supported
	*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)					○	- RESU10H can be expanded up to 2 units
	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 Symo Hybrid 4.0-3-S Symo Hybrid 5.0-3-S	1.9.1 or above		○		○	- Cannot use in Back-up Mode
	SUN2000L- 2KTL (EU/AU) SUN2000L- 3KTL (EU/AU) SUN2000L- 3.68KTL (EU/AU) SUN2000L- 4KTL (EU/AU) SUN2000L- 4.6KTL (EU/AU) SUN2000L- 5KTL (EU/AU)	V100R001C00SPC31 2 or above		○		○	- In case of RESU10H, Charge/Discharge Power is limited to 3.5kW
	SUN2000-3.8KTL-USL0 (NA) SUN2000-5KTL-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
	SUN2000-7.6KTL-USL0 (NA) SUN2000-9KTL-USL0 (NA) SUN2000-10KTL-USL0 (NA) SUN2000-11.4KTL-USL0 (NA)					○	- Can use in Back-up Mode only with PV in operation under rated power

✳ 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 Battery Pack	UL1642 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 Battery Pack	UL1642 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.

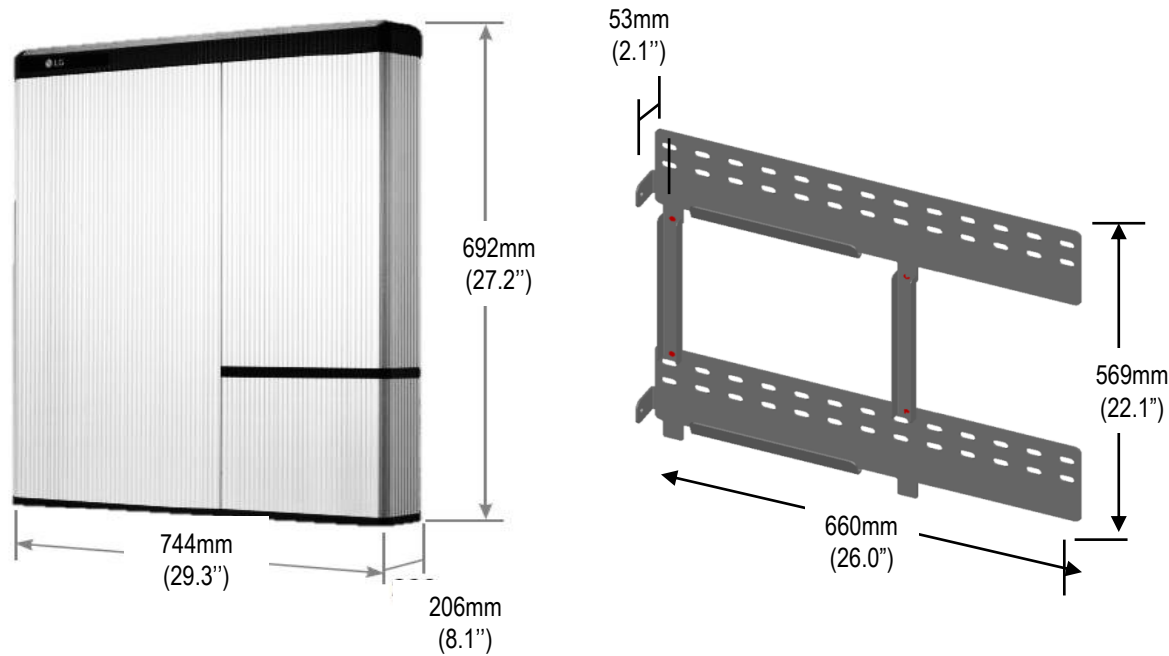
2) Peak Current excludes repeated short duration (less than 3 sec. of current pattern).

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

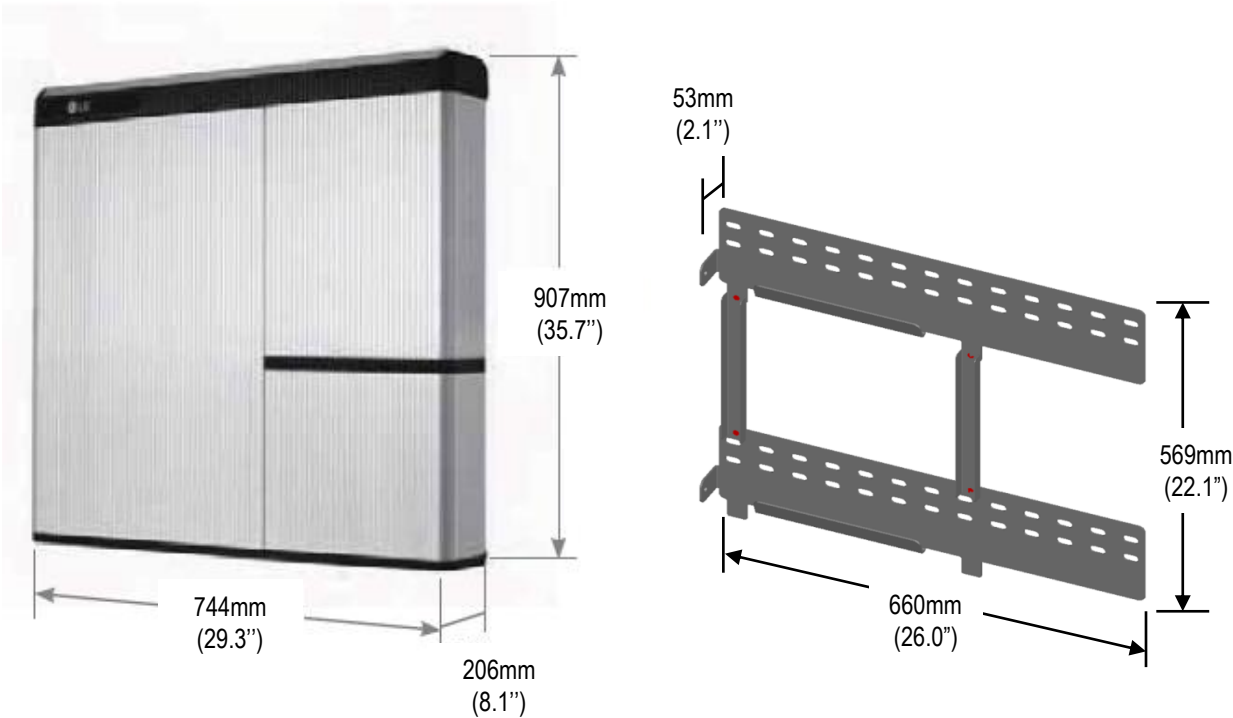
3) Peak Current excludes repeated short duration (less than 5 sec. of current pattern).

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

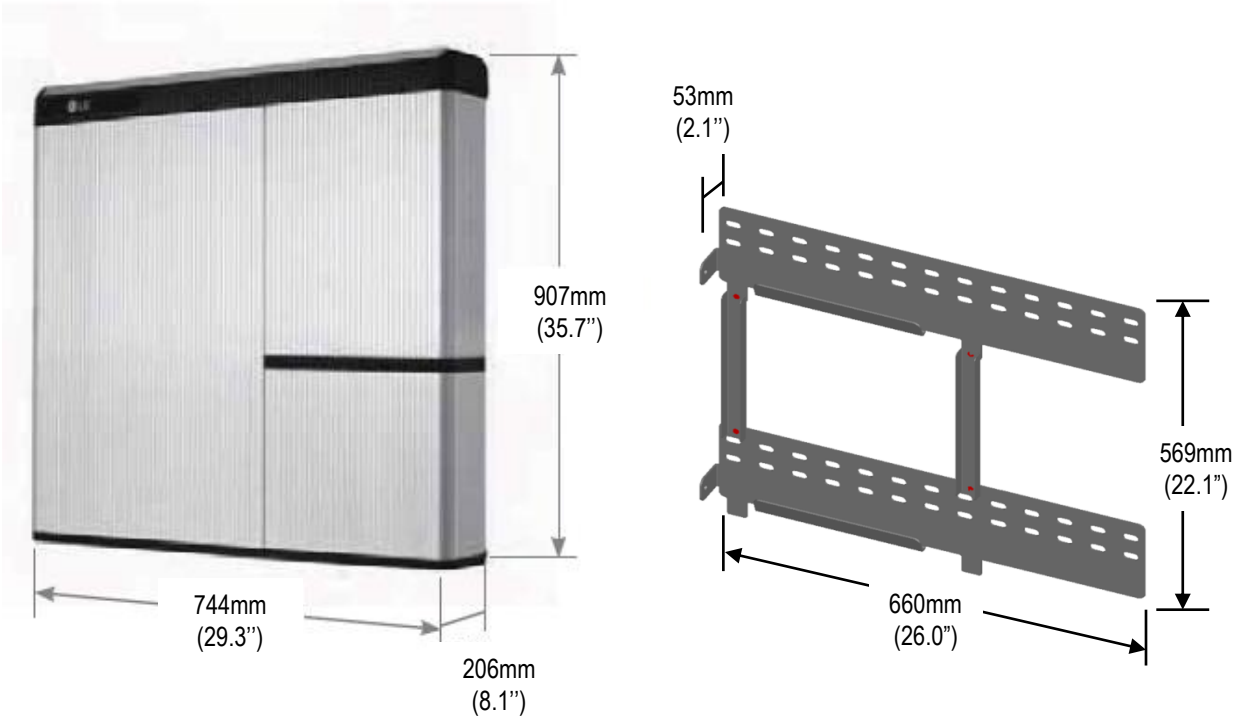
3) Peak Current excludes repeated short duration (less than 5 sec. of current pattern).

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

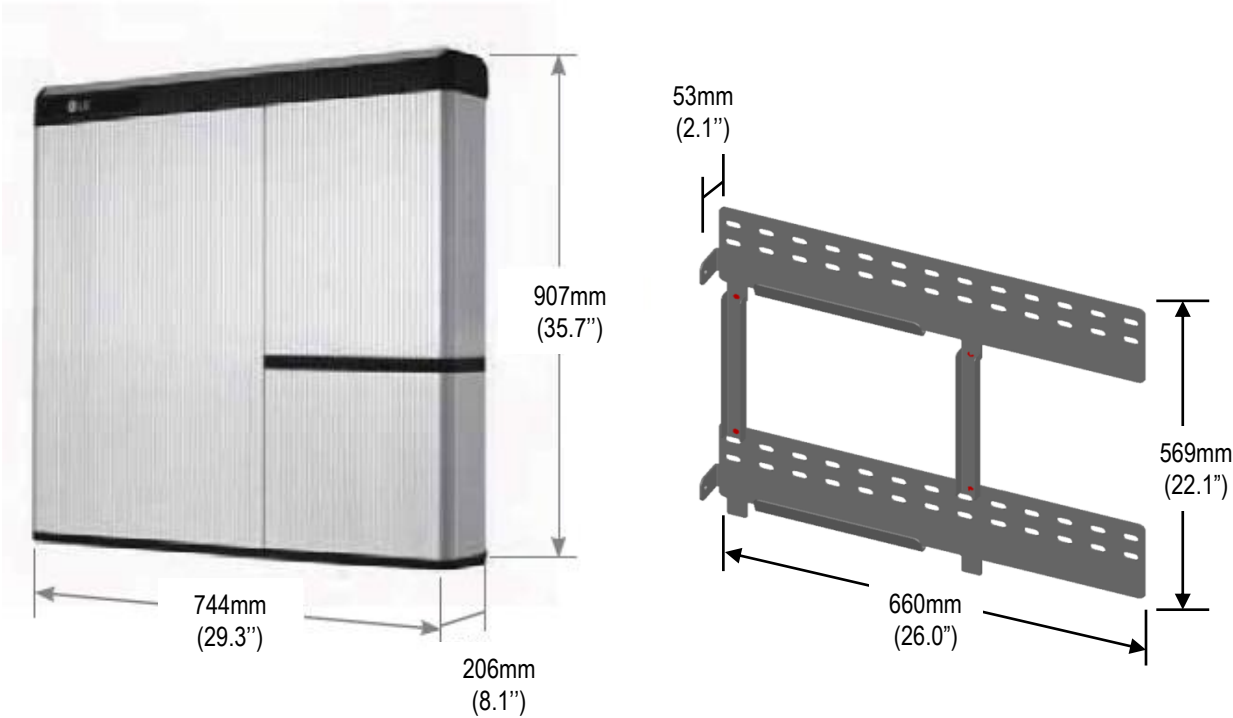
3) Peak Current excludes repeated short duration (less than 10 sec. of current pattern).

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