



## SolarEdge Single Phase StorEdge™ Solutions for North America



STOREDGE™

### SolarEdge StorEdge™ Solutions Benefits:

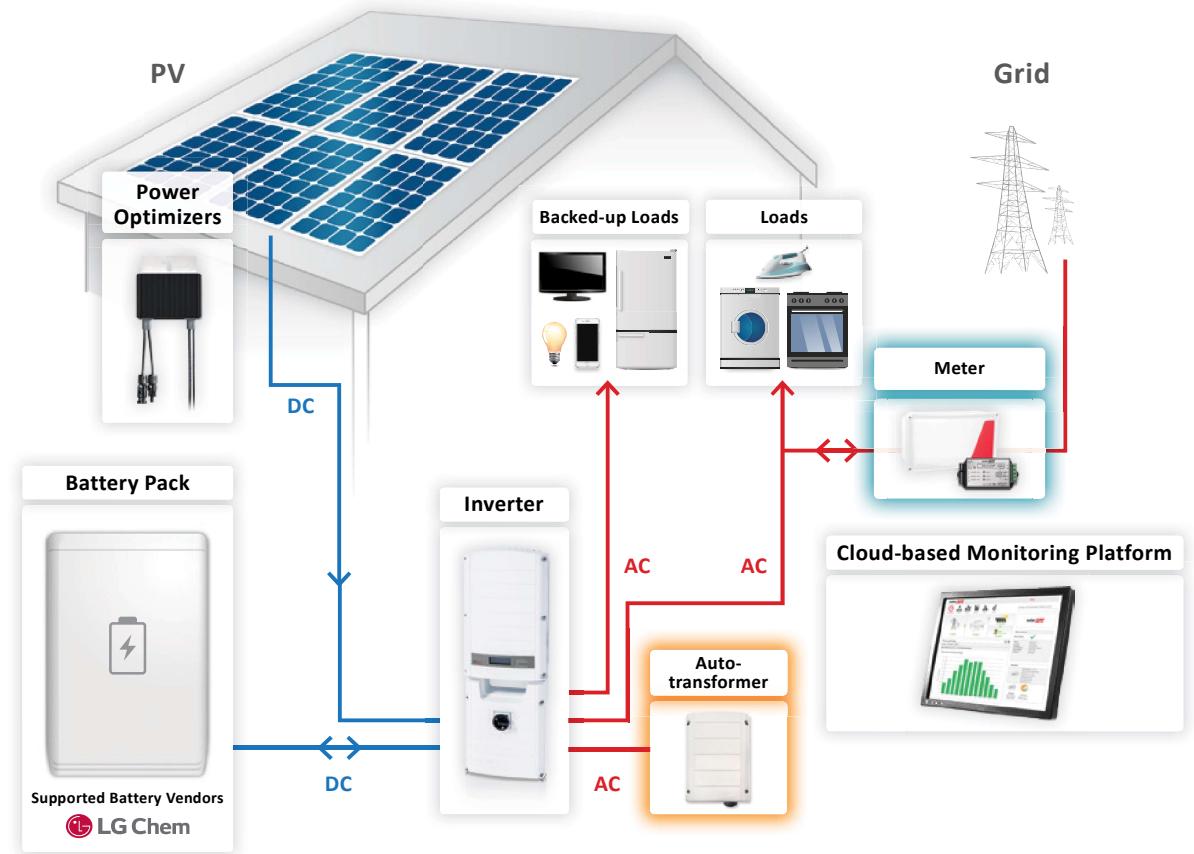
- **More Energy** - DC-coupled architecture stores PV power directly to the battery without AC conversion losses
- **Simple Design & Installation** - single inverter for PV, battery storage, grid-tied and backup applications
- **Enhanced Safety** - no high voltage during installation, maintenance or firefighting
- **Full Visibility** - monitor battery status, PV production, remaining backup power and self-consumption data



## SolarEdge Single Phase StorEdge™ Solutions for North America

### StorEdge™ Features:

- Smart Energy Management - export control, time-of-use shifting, maximized self-consumption, demand response and peak shaving capabilities
- Backup power - automatically provides power to backed-up loads in the event of grid interruption
- All-in-one solution uses a single DC optimized phase inverter to manage and monitor both PV generation and energy storage
- Compatible with the LG Chem RESU battery.



SolarEdge StorEdge™ Solutions for North America - Product Selector

|                                 | Grid-tied solar,<br>backup power<br>and smart energy<br>management | Grid-tied<br>solar and backup<br>power | Grid-tied solar<br>and smart energy<br>management |  |
|---------------------------------|--|--|---|--|
| Single Phase StorEdge™ Inverter | ✓  | ✓                                      | ✓   |  |
| Auto-transformer                | ✓  | ✓                                      |   |  |
| SolarEdge Electricity Meter     | ✓  |  | ✓   |  |
| Battery                         | ✓  | ✓                                      | ✓   |  |



## SolarEdge Single Phase StorEdge Inverter for North America SE3800A-US<sup>(1)</sup>, SE7600A-US<sup>(1)</sup>

- Single inverter for PV, grid-tied storage and backup power
- Includes the hardware required to provide automatic backup power to backed-up loads in case of grid interruption
- Includes all interfaces needed for battery connection
- UL1741 SA certified, for CPUC Rule 21 grid compliance

|   | SE3800A-US  | SE7600A-US |     |
|---|---|------------|-----|
| <b>OUTPUT - AC (LOADS/GRID)</b>   |   |            |     |
| Rated AC Power Output   | 3800  | 7600       | VA  |
| Max AC Power Output   | 4175  | 8350       | VA  |
| AC Output Voltage Min-Nom-Max (L-L) <sup>(2)</sup>                        | 211-240-264   | Vac        | Vac |
| AC Frequency Min-Nom-Max <sup>(2)</sup>                                   | 59.3 - 60 - 60.5  | Hz         | Hz  |
| Maximum Continuous Output Current @240V                                   | 16  | 32         | A   |
| GFDI  | 1   | A          | A   |
| Utility Monitoring, Islanding Protection, Country Configurable Thresholds | Yes   |            |     |
| Charge Battery from AC (if Allowed)                                       | Yes   |            |     |
| THD   | <3  | %          | %   |
| Typical Nighttime Power Consumption                                       | <5  | W          | W   |
| <b>OUTPUT - AC (BACKUP POWER)<sup>(3)</sup></b>                           |   |            |     |
| Rated AC Power Output   | 5000 <sup>(4)</sup>   | VA         | VA  |
| Max AC Power Output - Surge   | 6600 <sup>(4)</sup>   | VA         | VA  |
| AC Output Voltage Min-Nom-Max (L-L)                                       | 211-240-264   | Vac        | Vac |
| AC Output Voltage Min-Nom-Max (L-N)                                       | 105-120-132   | Vac        | Vac |
| AC Frequency Min-Nom-Max  | 55 - 60 - 65  | Hz         | Hz  |
| Maximum Continuous Output Current @240V - Backup Mode                     | 21  | A          | A   |
| Max Continuous Output Current per Phase @120V                             | 25  | A          | A   |
| GFDI  | 1   | A          | A   |
| AC Circuit Breaker  | Yes   |            |     |
| THD   | <5  | %          | %   |
| Automatic switchover time   | <2  | sec        | sec |
| Typical Nighttime Power Consumption                                       | <5  | W          | W   |
| <b>INPUT - DC (PV and BATTERY)</b>  |   |            |     |
| Transformer-less, Ungrounded  | Yes   |            |     |
| Max Input Voltage   | 500   | Vdc        | Vdc |
| Nom DC Input Voltage  | 400   | Vdc        | Vdc |
| Reverse-Polarity Protection   | Yes   |            |     |
| Ground-Fault Isolation Detection  | 600kΩ Sensitivity   |            |     |
| Maximum Inverter Efficiency   | 98  | %          | %   |
| CEC Weighted Efficiency   | 97.5  | %          | %   |
| <b>INPUT - DC (PV)</b>  |   |            |     |
| Maximum DC Power (STC)  | 5100  | 10250      | W   |
| Max Input Current <sup>(5)</sup>  | 13  | 23         | Adc |
| 2-pole Disconnection  | Yes   |            |     |
| <b>INPUT - DC (BATTERY)</b>   |   |            |     |
| Supported Battery Types   | LG Chem RESU10H   |            |     |
| Number of Batteries per Inverter  | 1 or 2 <sup>(6)</sup>   |            |     |
| Continuous Power  | 5000  | W          | W   |
| Peak Power  | 7000  | W          | W   |
| Max Input Current   | 17.5  | Adc        | Adc |
| 2-pole Disconnection  | Yes   |            |     |
| DC Fuses on Plus and Minus  | 25A (field replaceable)   |            |     |
| <b>ADDITIONAL FEATURES</b>  |   |            |     |
| Supported Communication Interfaces  | RS485 for battery, RS485, Ethernet, Cellular, ZigBee (optional) |            |     |
| Revenue Grade Data, ANSI C12.20   | Optional <sup>(7)</sup>   |            |     |
| Integrated AC, DC and Communication Connection Unit                       | Yes   |            |     |
| AC Disconnect   | Yes   |            |     |
| Manual Inverter Bypass Switch   | Yes   |            |     |
| DC Voltage Rapid Shutdown (PV and Battery)                                | Yes, according to NEC 2014 and 2017 690.12                      |            |     |
| Auto-transformer thermal protection                                       | Yes   |            |     |

<sup>(1)</sup> These specifications apply to inverters with part numbers SExxxxA-USS2 and connection unit model number BCU-1PH-USS

<sup>(2)</sup> For other regional settings please contact SolarEdge Support

<sup>(3)</sup> Not designed for standalone applications and requires AC for commissioning

<sup>(4)</sup> The rated AC power output is the minimum between the AC Power Output and the battery continuous peak power

<sup>(5)</sup> A higher current source may be used; the inverter will limit its input current to the values stated

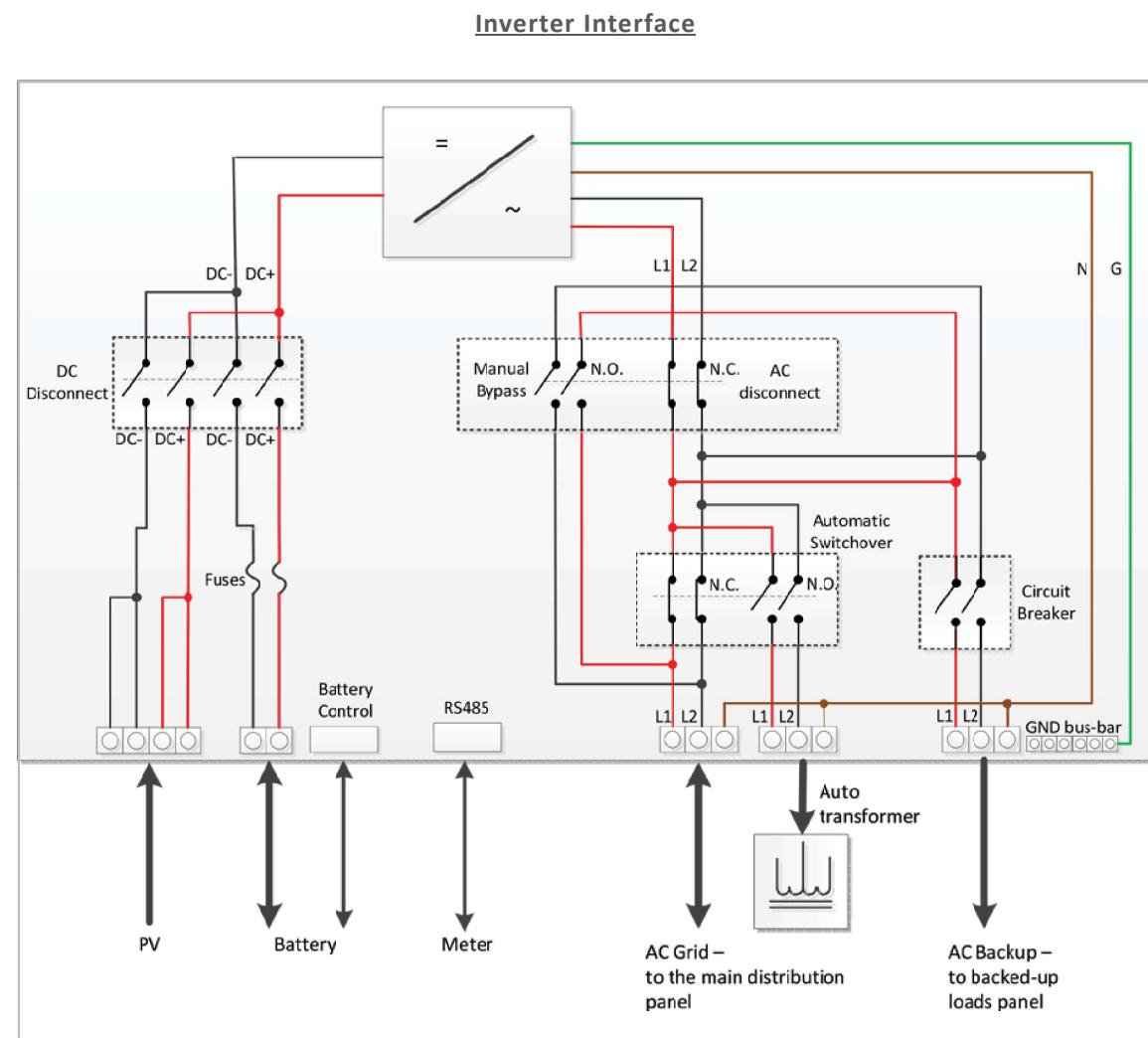
<sup>(6)</sup> When connecting two LG Chem batteries, each battery must have a different part number; supporting SolarEdge firmware required

<sup>(7)</sup> Revenue grade inverter P/N: SExxxxA-USS20NHY2



## SolarEdge Single Phase StorEdge Inverter for North America SE3800A-US, SE7600A-US

|   | SE3800A-US   | SE7600A-US |  |
|---|--|------------|--|
| <b>STANDARD COMPLIANCE</b>  |  |            |  |
| Safety  | UL1741, UL1741 SA, UL1699B, UL1998, UL9540, CSA 22.2   |            |  |
| Grid Connection Standards   | IEEE1547, Rule 21, Rule 14H                            |            |  |
| Emissions   | FCC part15 class B                                     |            |  |
| <b>INSTALLATION SPECIFICATIONS</b>                                  |  |            |  |
| AC Output (Loads/Grid) conduit size / AWG range                     | 1" / 14-6 AWG  |            |  |
| AC Output (Backup) conduit size / AWG range                         | 0.75-1" knockouts / 14-6 AWG                           |            |  |
| AC Input (Auto-transformer) conduit size / # of Strings / AWG range | 0.75-1" / 14-6 AWG                                     |            |  |
| DC Input (PV) conduit size / AWG range                              | 0.75" / 1-2 Strings 14-8 AWG                           |            |  |
| DC Input (Battery) conduit size / AWG range                         | 0.75" / 12-10 AWG                                      |            |  |
| Dimensions with Connection Unit (HxWxD)                             | 37 x 12.5 x 7.2 / 940 x 315 x 184                      | in / mm    |  |
| Weight with Connection Unit   | 58.5 / 26.5  | lb / kg    |  |
| Cooling   | Natural convection and internal fan (user replaceable) |            |  |
| Noise   | <50  | dBA        |  |
| Min - Max Operating Temperature                                     | -13 to +140 / -25 to +60                               | °F / °C    |  |
| Protection Rating   | NEMA 3R  |            |  |





## SolarEdge Auto-transformer

SEAUTO-TX-5000

| ELECTRICAL RATINGS                            |                         |
|---|-------------------------|
| Rated Power - Continuous                      | 5000 VA                 |
| Rated Power - Peak                            | 7600 for 10sec VA       |
| Output Voltage                                | 120/240V Split Phase VA |
| Max Continuous Output Current per Phase @120V | 25 A                    |
| Split Phase Imbalance (@Rated Power)          | Yes                     |
| Thermal Protection                            | Yes                     |

| INSTALLATION SPECIFICATIONS        |   |
|------------------------------------|---|
| AC Output conduit size / AWG range | 0.75" / 14-6 AWG in / mm                  |
| Dimensions (HxWxD)                 | 6.7 x 7.9 x 5.5 / 170 x 200 x 140 lb / kg |
| Weight                             | 29.7 / 13.5                               |
| Min. - Max Operating Temperature   | -13 to +140 / -25 to +60 °F / °C          |
| Protection Rating                  | NEMA 3R                                   |
| Installation                       | Wall mounted                              |



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## SolarEdge Electricity Meter for North America

SE-MTR240-0-000-S2

For meter specifications refer to: [https://www.solaredge.com/sites/default/files/se\\_electricity\\_meter\\_na.pdf](https://www.solaredge.com/sites/default/files/se_electricity_meter_na.pdf)



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## Power Optimizer

P320 / P370 / P400 / P405 / P505



### PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Compliant with arc fault protection and rapid shutdown NEC requirements (when installed as part of the SolarEdge system)
- Module-level voltage shutdown for installer and firefighter safety

**POWER OPTIMIZER**



## Power Optimizer

P320 / P370 / P400 / P405 / P505

| OPTIMIZER MODEL<br>(typical module compatibility)   | P320<br>(for high-power<br>60-cell modules)          | P370<br>(for higher-power<br>60 and 72-cell<br>modules) | P400<br>(for 72 & 96-cell<br>modules) | P405<br>(for thin film<br>modules)  | P505<br>(for higher<br>current modules) |         |
|---|--|---|---------------------------------------|-------------------------------------|---|---------|
| <b>INPUT</b>  |  |   |                                       |                                     |   |         |
| Rated Input DC Power <sup>(1)</sup>   | 320  | 370   | 400                                   | 405                                 | 505                                     | W       |
| Absolute Maximum Input Voltage<br>(Voc at lowest temperature)   | 48   | 60  | 80                                    | 125                                 | 83                                      | Vdc     |
| MPPT Operating Range  | 8 - 48   | 8 - 60  | 8 - 80                                | 12.5 - 105                          | 12.5 - 83                               | Vdc     |
| Maximum Short Circuit Current (Isc)   | 11   |   |                                       | 10.1                                | 14                                      | Adc     |
| Maximum DC Input Current  | 13.75  |   |                                       | 12.63                               | 17.5                                    | Adc     |
| Maximum Efficiency  |  |   | 99.5                                  |                                     |   | %       |
| Weighted Efficiency   |  | 98.8  |                                       |                                     | 98.6                                    | %       |
| Overvoltage Category  |  |   | II                                    |                                     |   |         |
| <b>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)</b>                    |  |   |                                       |                                     |   |         |
| Maximum Output Current  |  | 15  |                                       |                                     |   | Adc     |
| Maximum Output Voltage  |  | 60  |                                       | 85                                  |   | Vdc     |
| <b>OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)</b> |  |   |                                       |                                     |   |         |
| Safety Output Voltage per Power<br>Optimizer  |  | 1 ± 0.1   |                                       |                                     |   | Vdc     |
| <b>STANDARD COMPLIANCE</b>  |  |   |                                       |                                     |   |         |
| EMC   | FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3       |   |                                       |                                     |   |         |
| Safety  | IEC62109-1 (class II safety), UL1741                 |   |                                       |                                     |   |         |
| RoHS  | Yes  |   |                                       |                                     |   |         |
| <b>INSTALLATION SPECIFICATIONS</b>  |  |   |                                       |                                     |   |         |
| Maximum Allowed System Voltage  |  | 1000  |                                       |                                     |   | Vdc     |
| Compatible inverters  | All SolarEdge Single Phase and Three Phase inverters |   |                                       |                                     |   |         |
| Dimensions (W x L x H)  | 128 x 152 x 28 / 5 x 5.97 x 1.1                      | 128 x 152 x 36 /<br>5 x 5.97 x 1.42                     | 128 x 152 x 50 /<br>5 x 5.97 x 1.96   | 128 x 152 x 59 /<br>5 x 5.97 x 2.32 |   | mm / in |
| Weight (including cables)   | 630 / 1.4  | 750 / 1.7   | 845 / 1.9                             | 1064 / 2.3                          |   | gr / lb |
| Input Connector   | MC4 <sup>(2)</sup>                                   |   |                                       |                                     |   |         |
| Output Wire Type / Connector  | Double Insulated; MC4                                |   |                                       |                                     |   |         |
| Output Wire Length  | 0.95 / 3.0   |   | 1.2 / 3.9                             |                                     |   | m / ft  |
| Operating Temperature Range   | -40 - +85 / -40 - +185                               |   |                                       |                                     |   |         |
| Protection Rating   | IP68 / NEMA6P  |   |                                       |                                     |   |         |
| Relative Humidity   | 0 - 100  |   |                                       |                                     |   |         |

<sup>(1)</sup> Rated STC power of the module. Module of up to +5% power tolerance allowed.

<sup>(2)</sup> For other connector types please contact SolarEdge

| PV SYSTEM DESIGN USING<br>A SOLAREDGE INVERTER <sup>(3)(4)</sup> | SINGLE PHASE<br>HD-WAVE                        | SINGLE PHASE | THREE PHASE 208V | THREE PHASE 480V  |   |
|--|--|--------------|------------------|-------------------|---|
| Minimum String Length<br>(Power Optimizers)                      | P320, P370, P400<br>P405 / P505                | 8            | 10               | 18                |   |
| Maximum String Length<br>(Power Optimizers)                      |  | 6            | 8                | 14                |   |
| Maximum Power per String   | 5700 (6000 with<br>SE7600-US - SE11400-<br>US) | 25           | 25               | 50 <sup>(5)</sup> |   |
| Parallel Strings of Different Lengths<br>or Orientations         |  | 5250         | 6000             | 12750             | W |
|  | Yes  |              |                  |                   |   |

<sup>(3)</sup> For detailed string sizing information refer to: [http://www.solaredge.com/sites/default/files/string\\_sizing\\_na.pdf](http://www.solaredge.com/sites/default/files/string_sizing_na.pdf).

<sup>(4)</sup> It is not allowed to mix P405/P505 with P320/P370/P400/P600/P700/P800 in one string.

<sup>(5)</sup> A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement



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AWARD  
2016  
WINNER

For a Better Life

CHANGE  
YOUR ENERGY  
CHARGE  
YOUR LIFE



RESU



Compact Size & Easy Installation

The compact and lightweight nature of the RESU is world-class. It is designed to allow easy wall-mounted or floor-standing installation for both indoor and outdoor applications. The inverter connections have also been simplified, reducing installation time and costs.



Powerful Performance

The new RESU series features industry-leading continuous power (4.2kW for RESU6.5) and DC round-trip efficiency (95%). LG Chem's L&S (Lamination & Stacking) technology provides durability ensuring 80% of capacity retention after 10 years.



Proven Safety

LG Chem places the highest priority on safety and utilizes the same technology for its ESS products that has a proven safety record in its automotive battery. All products are fully certified in relevant global standards.

[www.lgesspartner.com](http://www.lgesspartner.com)

# RESU

Change Your Energy, Charge Your Life

**48V**



| Models                       | RESU3.3         | RESU6.5  | RESU10          |
|------------------------------|-----------------|--|-----------------|
| Total Energy [kWh]           | 3.3             | 6.5  | 9.8             |
| Usable Energy [kWh]          | 2.9             | 5.9  | 8.8             |
| Capacity [Ah]                | 63              | 126  | 189             |
| Nominal Voltage [V]          | 51.8            | 51.8   | 51.8            |
| Voltage Range [V]            | 42.0-58.8       | 42.0-58.8                                      | 42.0-58.8       |
| Max Power [kW]               | 3.0             | 4.2  | 5.0             |
| Peak Power [kW] (for 3 sec.) | 3.3             | 4.6  | 7.0             |
| Dimension [W x H x D, mm]    | 452 x 401 x 120 | 452 x 654 x 120                                | 452 x 483 x 227 |
| Weight [kg]                  | 31              | 52   | 75              |
| Enclosure Protection Rating  | IP55            |  |                 |
| Communication                | CAN 2.0 B       |  |                 |
| Certificates                 | Cell<br>UL1642  | Product<br>CE / RCM / TUV (IEC 62619) / UL1973 |                 |

Compatible Inverter Brands : SMA, SolaX, Sungrow, Schneider, Ingeteam, GoodWe, Redback, Victron Energy (As of 3Q. 2016, More brands to be added)

**RESU PLUS** 

**RESU Plus is an expansion kit specially designed for 48V models of new RESU series.**  
**With RESU Plus, all 48V models can be cross-connected with each other.**

- Dimension: 385 x 240 x 65 (W x H x D, mm)
- Number of Expandable Battery Units: Up to 2EA
- IP55

**400V**



| Models                        | RESU7H          | RESU10H                         |                               |
|-------------------------------|-----------------|---------------------------------|-------------------------------|
| Total Energy [kWh]            | 7.0             | 9.8                             |                               |
| Usable Energy [kWh]           | 6.6             | 9.3                             |                               |
| Capacity [Ah]                 | 63              | 63                              |                               |
| Voltage Range [V]             | 350~450         | 350~450                         | 385~550                       |
| Max Power [kW]                | 3.5             | 5.0                             |                               |
| Peak Power [kW] (for 10 sec.) | 5.0             | 7.0                             |                               |
| Dimension [W x H x D, mm]     | 744 x 692 x 206 | 744 x 907 x 206                 |                               |
| Weight [kg]                   | 76              | 97                              | 99.8                          |
| Enclosure Protection Rating   | IP55            |                                 |                               |
| Communication                 | RS485           | RS485                           | CAN 2.0 B                     |
| Certificates                  | Cell<br>UL 1642 | Product<br>TUV (IEC 62619) / CE | TUV (IEC 62619) / UL1973 / CE |

Compatible Inverter Brands : SMA, SolarEdge (As of 3Q. 2016, More brands to be added)