LG Electronics introduces DC-coupled energy storage system to improve PV self-consumption rate.

LG Electronics provides energy storage system to improve self-consumption rate of photovoltaic systems. LG’s DC-coupled ESS converts power more efficiently than AC-coupled ESS. Thus, LG ESS can achieve higher efficiency. Furthermore, LG ESS generates the three-phase AC current producing the balanced grid power. Above all, the user-friendly touch screen helps the easy system set-up. The web monitoring function also allows installers and users to check their system status anytime and anywhere.

About LG Electronics
In 2014, LG Electronics has established ESS business division with the acquisition of LG U+ and started ESS business in earnest, secured to the PCS technology with LG Chem’s Battery. LG Electronics has expanded its business into the ‘smart home’ or ‘smart buildings’ area linked with LED lighting system and energy management system (EMS), including residential ESS. Also, LG Electronics plans to advance to the ESS project for micro-grid, frequency regulation (FR) and renewable integration.
### DC Input
- **Max. Input Voltage**: 800 V
- **Min. Input Voltage**: 210 V
- **Max. DC Power**: 6,600W (3,300W per MPPT)
- **Input Voltage Range MPPT at Rated AC Output Power**: 210 ~ 680 V
- **Number of MPPT**: 2
- **Number of String per MPPT**: 1
- **Max. Input Current per MPPT**: 12 A

### AC Output
- **Rated Grid Voltage**: 3-NPE 400 V / 230 V
- **AC Voltage Range**: 319 ~ 458 V
- **Frequency (Frequency Range)**: 50 Hz (47.5 Hz ~ 51.5 Hz)
- **Max. Output power**: 5,000 VA
- **Rated Output Power**: 5,000 W
- **Max. Output Current**: 8.5 A
- **Total Harmonic Distortion / Power Factor with Rated Power**: < 5% / 0.95
- **Phases**: 3

### Battery
- **Battery Type**: Lithium Polymer
- **Max. Charger Power**: 3.0 kW
- **Capacity (Gross Capacity)**: 6.4 kWh
- **DoD**: 90 %
- **Current Capacity**: 31.5 Ah
- **Rated Input Voltage**: 207.2 V

### Efficiency (PCS)
- **Max. Efficiency (PV to Grid)**: 95.7 %
- **European Efficiency (PV to Grid)**: 93.6%

### General Data
- **Dimension (W/H/D, mm)**: 493 / 670 / 185 (PCS) | 408 / 682 / 180 (Battery)
- **Weight (PCS/Battery)**: 34kg / 58kg
- **Operation Temperature**: 0 °C ~ 40 °C

### Feature & Function
- **Noise Emission**: 40dB
- **Cooling Type**: Forced Convection
- **Topology**: Transformerless
- **Degree of Protection**: IP 21
- **Max. Permissible Value of Relative Humidity (Non-condensing)**: 85 % (Climate Class 3K5)
- **Display**: 7” Touch LCD
- **Warranty (PCS)**: 10 years
- **Warranty (Battery)**: 10 years (SOH 80%)
- **Certification (PCS)**: CE / IEC 62109-1 / -2
- **Certification (Battery)**: CE / IEC 62133 / IEC 62619 / UN38.3

### Smart Meter Compatibility List
- **Manufacturer** | **Model**
  - ABB | B23 212-100
  - EASTRON | SDM630-MODBUS
  - CARLO GAVAZZI | SM5M30-M00BUS
  - EM340

### System Block Diagram

### Dimensions

### Installation