

## *Nrgx*-ESS<sup>Lithium</sup>

**5kVA ~ 30kVA**



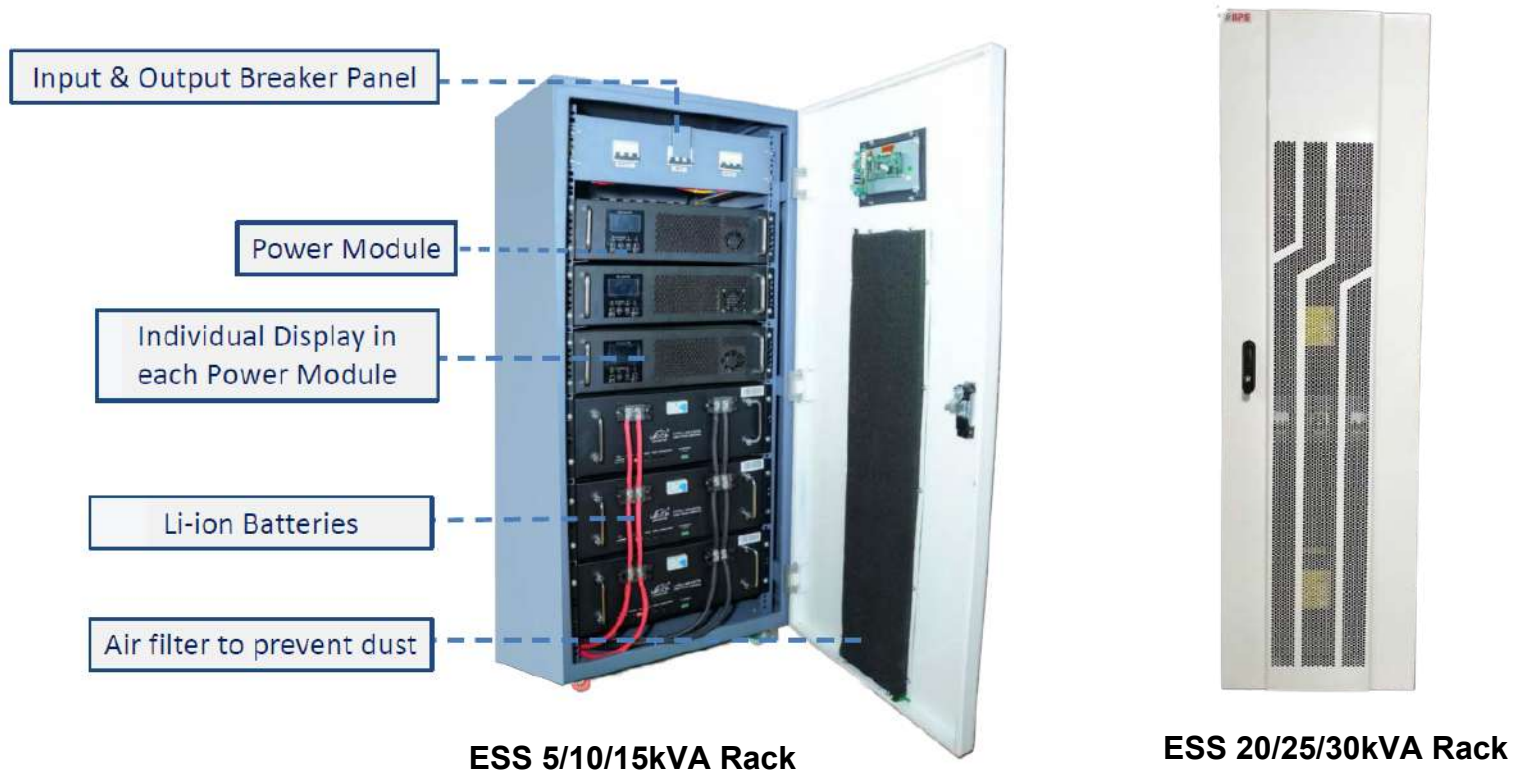
### Features:

- ♦ High energy on wheels
- ♦ On Line-Double Conversion Technology, ECO Mode Available
- ♦ DSP Control, flexible solution with Li-ion batteries
- ♦ Ultra High Efficiency 94.0%
- ♦ DC Bus of 48V for economical solution
- ♦ Fast Charging (Each power module with 60A charging current)
- ♦ Ability to configured as 1:1, 3:1 & 3:3 (with minimum 3 power modules)
- ♦ LCD for each module with power flow diagram
- ♦ Fast swappable power modules for easy installation
- ♦ SMF Battery Compatible
- ♦ Solar Compatible (MPPT Solar Charge Controller of 80A Per Module)
- ♦ Modular Architecture, each module of 5kVA/kW
- ♦ Pure Sine wave Output
- ♦ Battery Pack expandable up to 16 Nos. for more back-up time



## A new Standard in ESS Technology

The NRGX-ESS<sup>Lithium</sup> modular fast swappable online UPS ranging from 5kVA to 30kVA is designed to protect any critical load achieving maximum availability. The NRGX-ESS<sup>Lithium</sup> series feature the latest technology of PFC input control, which guarantees ultra high efficiency of 94% and reliability. Its compact design ensures power density of 30kVA which can be configured for 1:1, 3:1 & 3:3 as per demand. This solution offers the flexibility to get the back-up on demand by mounting the easy swappable batteries.



**Battery Racks for Extended Back-up time**

| MODEL                              | ESS1105B                                                                                                                                                                                                        | ESS1110B                                                  | ESS3315B |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------|
| Capacity                           | 5.0kVA                                                                                                                                                                                                          | 10.0kVA                                                   | 15.0kVA  |
| INPUT                              |                                                                                                                                                                                                                 |                                                           |          |
| Nominal Voltage                    | 230V AC (1Ph+N+PE, 3 Wire)                                                                                                                                                                                      | 230V AC (1Ph+N+PE, 3 Wire)/<br>400V AC (3Ph+N+PE, 5 Wire) |          |
| Operating Voltage Range            | 110V~300V AC (P-N) Load Dependent                                                                                                                                                                               |                                                           |          |
| Operating Frequency Range          | 50 / 60 Hz ± 10% (Auto Sensing)                                                                                                                                                                                 |                                                           |          |
| Power Factor                       | ≥0.99                                                                                                                                                                                                           |                                                           |          |
| OUTPUT                             |                                                                                                                                                                                                                 |                                                           |          |
| Output Voltage/Power Factor        | 230V ±1% / Unity                                                                                                                                                                                                | 230V ±1% / Unity<br>400V ±1% / Unity                      |          |
| Output Frequency                   | 50/60 Hz ± 0.1 Hz Battery Mode                                                                                                                                                                                  |                                                           |          |
| Harmonic Distortion (THDv)         | <3%                                                                                                                                                                                                             |                                                           |          |
| Crest Factor                       | 3:1                                                                                                                                                                                                             |                                                           |          |
| Efficiency                         | 94.0% Dual Conversion Mode, 99% ECO Mode                                                                                                                                                                        |                                                           |          |
| BATTERY                            |                                                                                                                                                                                                                 |                                                           |          |
| DC Voltage                         | 48V DC                                                                                                                                                                                                          |                                                           |          |
| Charge Current (Per Module)        | Default : 30A, Max : 60A (Configurable)                                                                                                                                                                         |                                                           |          |
| Typical Recharge Time              | 2 Hours (Approx.)                                                                                                                                                                                               |                                                           |          |
| SYSTEM FEATURES                    |                                                                                                                                                                                                                 |                                                           |          |
| LCD Indication                     | Input Voltage/Frequency, Output Voltage/Frequency, Battery Voltage, Load Watt/VA and %, Inverter Temperature, Operation Mode such as “On Line”, “ON Batt” or On “Bypass”, Fault Codes, Battery & Load Bar graph |                                                           |          |
| LED Indication                     | Normal Operation, Bypass, Abnormal, Fault and Battery Mode                                                                                                                                                      |                                                           |          |
| Alarms / Protection                | Batt. Low, DC High, Inverter Under/Over Voltage, UPS Over Load, Short Circuit, Fan Failure and UPS Fault.                                                                                                       |                                                           |          |
| Overload Capability                | 105-150% for 10s, >150% for 5s                                                                                                                                                                                  |                                                           |          |
| Transfer Time                      | AC to Battery : 0ms, Inverter to Bypass : 4ms (Typical)                                                                                                                                                         |                                                           |          |
| ENVIRONMENTAL                      |                                                                                                                                                                                                                 |                                                           |          |
| Temperature                        | Operating: 0~50°C*, Storage: -15°C ~ 60°C                                                                                                                                                                       |                                                           |          |
| Humidity / Altitude                | 0~95% RH Non-condersing / <1500 M                                                                                                                                                                               |                                                           |          |
| Noise                              | <60dBA                                                                                                                                                                                                          |                                                           |          |
| PHYSICAL                           |                                                                                                                                                                                                                 |                                                           |          |
| Dimension WxDxH (mm)               | 570 x 700 x 1350                                                                                                                                                                                                |                                                           |          |
| Weight (Kg)                        | Cabinet : 75Kg Battery Module : 40Kg UPS Module : 15Kg                                                                                                                                                          |                                                           |          |
| SOLAR CHARGER MPPT TYPE (OPTIONAL) |                                                                                                                                                                                                                 |                                                           |          |
| Rated Power                        | 4.5kW Each Module                                                                                                                                                                                               |                                                           |          |
| PV Array MPPT Volt. Range          | 60~115 Vdc                                                                                                                                                                                                      |                                                           |          |
| Max. Charging Current              | 80A Each Module                                                                                                                                                                                                 |                                                           |          |
| PV Array OCV                       | 145V DC                                                                                                                                                                                                         |                                                           |          |
| STANDARDS                          |                                                                                                                                                                                                                 |                                                           |          |
| Quality                            | ISO 9001, ISO 14001, ISO 27001, ISO 45001, ISO 50001, RoHS                                                                                                                                                      |                                                           |          |
| Safety / EMC / Performance         | IEC/EN62040-1; IEC/EN62040-2; IEC/EN62040-3, Complying to CE                                                                                                                                                    |                                                           |          |
| COMMUNICATION INTERFACE            |                                                                                                                                                                                                                 |                                                           |          |
| Standard                           | RS-232                                                                                                                                                                                                          |                                                           |          |
| LITHIUM-ION BATTERY                |                                                                                                                                                                                                                 |                                                           |          |
| Chemistry                          | LiFePO4                                                                                                                                                                                                         |                                                           |          |
| Operating Temprature               | 0~55°C                                                                                                                                                                                                          |                                                           |          |
| Charge/Discharge Rate              | 0.5C / 1.0C                                                                                                                                                                                                     |                                                           |          |

\*Conditions apply

Specifications are subject to change without prior notice.

**Best Power Equipments India Pvt. Ltd.**

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| MODEL                              | ESS3320B                                                                                                                                                                                                        | ESS3325B | ESS3330B |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|
| Capacity                           | 20.0kVA                                                                                                                                                                                                         | 25.0kVA  | 30.0kVA  |
| INPUT                              |                                                                                                                                                                                                                 |          |          |
| Nominal Voltage                    | 230V AC (1Ph+N+PE, 3 Wire) / 400V AC (3Ph+N+PE, 5 Wire)                                                                                                                                                         |          |          |
| Operating Voltage Range            | 110V~300V AC (P-N) Load Dependent                                                                                                                                                                               |          |          |
| Operating Frequency Range          | 50 / 60 Hz ± 10% (Auto Sensing)                                                                                                                                                                                 |          |          |
| Power Factor                       | ≥0.99                                                                                                                                                                                                           |          |          |
| OUTPUT                             |                                                                                                                                                                                                                 |          |          |
| Output Voltage/Power Factor        | 230V ±1% / 400V ±1%; PF : Unity (kVA=kW)                                                                                                                                                                        |          |          |
| Output Frequency                   | 50/60 Hz ± 0.1 Hz Battery Mode                                                                                                                                                                                  |          |          |
| Harmonic Distortion (THDv)         | <3%                                                                                                                                                                                                             |          |          |
| Crest Factor                       | 3:1                                                                                                                                                                                                             |          |          |
| Efficiency                         | 94.0% Dual Conversion Mode, 99% ECO Mode                                                                                                                                                                        |          |          |
| BATTERY                            |                                                                                                                                                                                                                 |          |          |
| DC Voltage                         | 48V DC                                                                                                                                                                                                          |          |          |
| Charge Current (Per Module)        | Default : 30A, Max : 60A (Configurable)                                                                                                                                                                         |          |          |
| Typical Recharge Time              | 2 Hours (Approx.)                                                                                                                                                                                               |          |          |
| SYSTEM FEATURES                    |                                                                                                                                                                                                                 |          |          |
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| Overload Capability                | 105-150% for 10s, > 150% for 5s                                                                                                                                                                                 |          |          |
| Transfer Time                      | AC to Battery : 0ms, Inverter to Bypass : 4ms (Typical)                                                                                                                                                         |          |          |
| ENVIRONMENTAL                      |                                                                                                                                                                                                                 |          |          |
| Temperature                        | Operating: 0~50°C*, Storage: -15°C ~ 60°C                                                                                                                                                                       |          |          |
| Humidity / Altitude                | 0~95% RH Non-condensing / <1500 M                                                                                                                                                                               |          |          |
| Noise                              | <65dBA                                                                                                                                                                                                          |          |          |
| PHYSICAL                           |                                                                                                                                                                                                                 |          |          |
| Dimension WxDxH (mm)               | 570 x 700 x 1900                                                                                                                                                                                                |          |          |
| Weight (Kg)                        | Cabinet : 145Kg Battery Module : 40Kg UPS Module : 15Kg                                                                                                                                                         |          |          |
| SOLAR CHARGER MPPT TYPE (OPTIONAL) |                                                                                                                                                                                                                 |          |          |
| Rated Power                        | 4.5kW Each Module                                                                                                                                                                                               |          |          |
| PV Array MPPT Volt. Range          | 60~115 Vdc                                                                                                                                                                                                      |          |          |
| Max. Charging Current              | 80A Each Module                                                                                                                                                                                                 |          |          |
| PV Array OCV                       | 145V DC                                                                                                                                                                                                         |          |          |
| STANDARDS                          |                                                                                                                                                                                                                 |          |          |
| Quality                            | ISO 9001, ISO 14001, ISO 27001, ISO 45001, ISO 50001, RoHS                                                                                                                                                      |          |          |
| Safety / EMC / Performance         | IEC/EN62040-1; IEC/EN62040-2; IEC/EN62040-3, Complying to CE                                                                                                                                                    |          |          |
| COMMUNICATION INTERFACE            |                                                                                                                                                                                                                 |          |          |
| Standard                           | RS-232                                                                                                                                                                                                          |          |          |
| LITHIUM-ION BATTERY                |                                                                                                                                                                                                                 |          |          |
| Chemistry                          | LiFePO4                                                                                                                                                                                                         |          |          |
| Operating Temperature              | 0~55°C                                                                                                                                                                                                          |          |          |
| Charge/Discharge Rate              | 0.5C / 1.0C                                                                                                                                                                                                     |          |          |

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