

# BES80S3

ALL-IN-ONE ENERGY SYSTEM

## SPECIFICATION



| BES80S3 Battery/Solar/Diesel All-in-one Energy System |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |       |
|-------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| Item                                                  | Unit   | Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |
| Voltage                                               | AC V   | 380                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 400   | 415   |
| Max. output power                                     | kVA/kW | 96/96                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 96/96 | 96/96 |
| Max. current                                          | A      | 146                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 139   | 134   |
| Continuous output power                               | kVA/kW | 80/80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 80/80 | 80/80 |
| Continuous current                                    | A      | 122                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 115   | 111   |
| Overload capability                                   |        | 110% last 10mins, 120% last 1min<br>( SOC>30%, AT<45°C )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |       |       |
| Frequency                                             | Hz     | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |
| Phase                                                 | P      | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |       |
| Power factor                                          | PF     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |       |
| Dimensions                                            | mm     | 3000 x 1150 x 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |
| Dry weight                                            | kg     | 4500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |
| 40' Loading                                           | Qty    | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |       |
| Noise level(hybrid mode)                              | dBA@7m | 55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |
| Noise level(battery mode)                             | dBA@7m | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |
| Protection level                                      |        | IP54                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |
| Wind resistance rating                                |        | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |       |
| Ambient temperature                                   |        | -20°C-50°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |       |
| Power connection input                                |        | AC socket<br>Busbar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |       |
| Power connection output                               |        | Main load socket<br>Busbar<br>AC socket: 1P, 2x16A, 1x31A; 3P, 1x63A, 1x125A;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |       |
| Certification standards                               |        |  UN 38.3<br>  IEC 62619<br> IEC 62477<br> IEC / EN 60529<br>EN 61000-6-1/2/3/4<br>AS 4777.2<br>G99<br>CE Declaration of Conformity<br>Stage V |       |       |

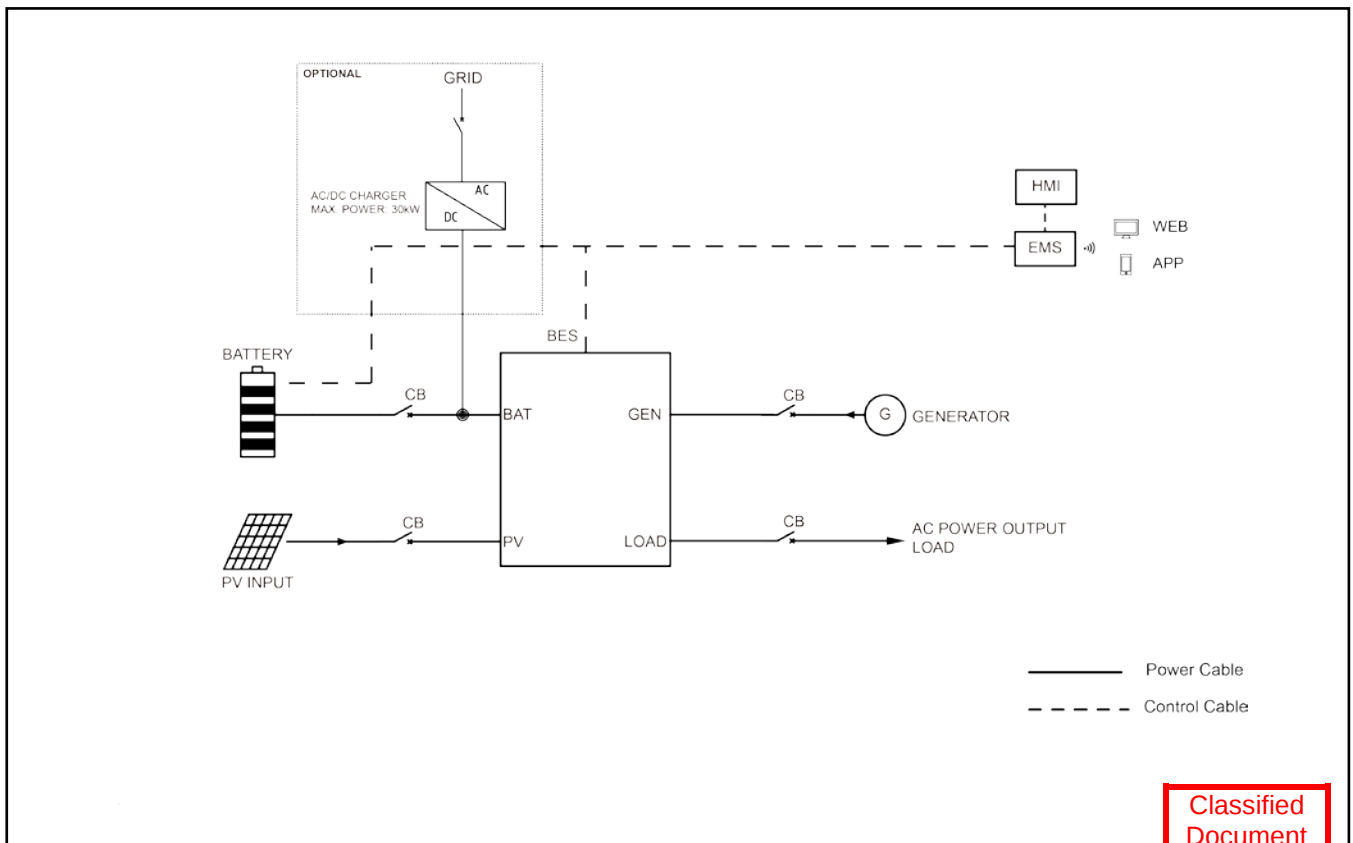
**The technical data is measured in standard conditions:**

- Absolute atmospheric pressure: 100kPa
- Ambient temperature: 25°C
- Relative air humidity: 30%

Note: If the on-site operating environment changes, the parameters on the specification will change accordingly.

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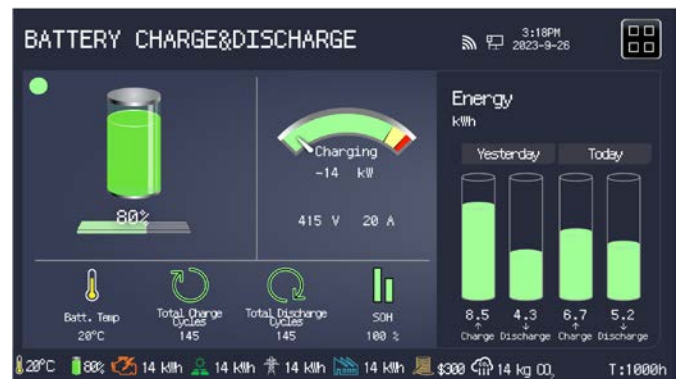
## System working principle



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## Intelligent Energy Management



| DC/AC System                |        |                                                                                              |
|-----------------------------|--------|----------------------------------------------------------------------------------------------|
| Rated power                 | kVA/kW | 2x60/2x60                                                                                    |
| Output voltage              | AC V   | 380/400/415                                                                                  |
| Parallel / On-grid function |        | Parallel: <input checked="" type="checkbox"/> ; On-grid: <input checked="" type="checkbox"/> |
| MPPT rated power            | kWp    | (38.4+38.4) x2                                                                               |
| Rated voltage               | DC V   | 200-800                                                                                      |

| Grid Power Input |        |       |
|------------------|--------|-------|
| Rated power      | kVA/kW | 80/80 |
| Phase            | P      | 3     |

| PV System            |      |       |
|----------------------|------|-------|
| Solar panel voltage  | DC V | 22-60 |
| Solar panel capacity | Wp   | 720x5 |

| Battery System                                                    |      |                           |
|-------------------------------------------------------------------|------|---------------------------|
| Battery type                                                      |      | LiFePO4                   |
| Battery capacity                                                  | kWh  | 94.8                      |
| Rated voltage                                                     | DC V | 332.8                     |
| Cooling system                                                    |      | Liquid-cooled             |
| Max charging rate                                                 |      | 1C                        |
| Max discharging rate                                              |      | 1C                        |
| DOD (depth of discharge)                                          |      | Default 80% (set via SOC) |
| NOTE: The discharge power decreases as the battery SOC decreases. |      |                           |

| Diesel Generation System |        |                    |
|--------------------------|--------|--------------------|
| Engine brand / mode      |        | Yunnei / DEF47CAA3 |
| Alternator brand         |        | Powerlink          |
| Rated power              | kVA/kW | 125/100            |
| Rated voltage            | AC V   | 415                |
| Phase                    | P      | 3                  |
| Fuel tank capacity       | L      | 150                |

| Control System          |      |                 |
|-------------------------|------|-----------------|
| HMI control panel       | inch | 13" Touchscreen |
| Communication protocol  |      | Modbus TCP/IP   |
| Communication interface |      | WAN/WIFI/SIM    |
| IoT                     |      | APP/WEB         |

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\* Data is subject to change without prior notice as new products are always developed.

Please contact POWERLINK or local agent with any doubts or for more information.

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