

## DATASHEET

# EcoFlow PowerOcean Plus Three-Phase Home Solar Battery Solution

The EcoFlow PowerOcean Plus redefines solar power utilisation to an extreme, especially for houses with big and complex roof structures. With up to 40kW solar input, 29.9kW AC output and dynamic tariff support, the system achieves maximum power independence and financial savings on energy bills.

Full compatibility with all EcoFlow home energy Ecosystem products, smart monitoring and control over your household appliances can be achieved right now.



### Support up to 4 PV strings, ideal for complex rooftop designs

Support up to 40kW PV input, equivalent to 200 sqm of the total rooftop size

### Up to 29.9kW AC output, power everything all at once, now with solar

No appliance is too big for solar, maximising your entire home's power independence

### EcoFlow home energy ecosystem supported

From EV charging to heat pump, personalise your energy independence effortlessly

### Dynamic tariff supported

Plan your energy purchases at low pricing, ensuring the maximised bill savings

### For installers

EcoFlow Pro App

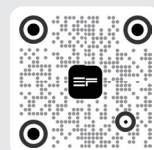


EcoFlow Pro Web Portal

<https://portal.ecoflow.com/pro/eu>

### For users

EcoFlow App



EcoFlow Web Portal

<https://portal.ecoflow.com/user/eu>

## EcoFlow PowerOcean Plus Hybrid Inverter

| Technical parameters |                                                                  | EF HD-P3-29K9-S1                                                                                                                                                                                                   | EF HD-P3-25K0-S1 | EF HD-P3-20K0-S1 | EF HD-P3-15K0-S1 |
|----------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------------|
| PV1 Input            | Max. Input Power (W)                                             | 20000                                                                                                                                                                                                              | 20000            | 15000            | 10000            |
|                      | Input Voltage Range(V)                                           | 160-1000                                                                                                                                                                                                           |                  |                  |                  |
|                      | MPPT Operating Voltage Range (V)                                 | 180-850                                                                                                                                                                                                            |                  |                  |                  |
|                      | Start-up Voltage (V)                                             | 200                                                                                                                                                                                                                |                  |                  |                  |
|                      | Nominal Input Voltage (V)                                        | 620                                                                                                                                                                                                                |                  |                  |                  |
|                      | Max. Input Current per MPPT (A)                                  | 32                                                                                                                                                                                                                 |                  |                  |                  |
|                      | Max. Short Circuit Current per MPPT (A)                          | 38                                                                                                                                                                                                                 |                  |                  |                  |
|                      | Number of Strings per MPPT                                       | 2                                                                                                                                                                                                                  |                  |                  |                  |
| PV2/PV3 Input        | Number of MPP Trackers                                           | 1                                                                                                                                                                                                                  |                  |                  |                  |
|                      | Max. Input Power (W)                                             | 10000                                                                                                                                                                                                              |                  |                  |                  |
|                      | Input Voltage Range(V)                                           | 160-1000                                                                                                                                                                                                           |                  |                  |                  |
|                      | MPPT Operating Voltage Range (V)                                 | 180-850                                                                                                                                                                                                            |                  |                  |                  |
|                      | Start-up Voltage (V)                                             | 200                                                                                                                                                                                                                |                  |                  |                  |
|                      | Nominal Input Voltage (V)                                        | 600                                                                                                                                                                                                                |                  |                  |                  |
|                      | Max. Input Current per MPPT (A)                                  | 16                                                                                                                                                                                                                 |                  |                  |                  |
|                      | Number of Strings per MPPT                                       | 1                                                                                                                                                                                                                  |                  |                  |                  |
| Battery Input        | Number of MPP Trackers                                           | 1                                                                                                                                                                                                                  |                  |                  |                  |
|                      | Nominal Battery Voltage (V)                                      | 800                                                                                                                                                                                                                |                  |                  |                  |
|                      | Max. Continuous Charging Current (A)                             | 40                                                                                                                                                                                                                 | 33.3             | 26.6             | 20               |
|                      | Max. Continuous Discharging Current (A)                          | 40                                                                                                                                                                                                                 | 33.3             | 26.6             | 20               |
|                      | Max. Charging Power (W)                                          | 29900                                                                                                                                                                                                              | 25000            | 20000            | 15000            |
|                      | Max. Discharging Power (W)                                       | 29900                                                                                                                                                                                                              | 25000            | 20000            | 15000            |
| AC Output (On-grid)  | Maximum Battery Capacity (kWh)                                   | 61.2                                                                                                                                                                                                               |                  |                  |                  |
|                      | Nominal Apparent Power Output to Utility Grid (VA)               | 29900                                                                                                                                                                                                              | 25000            | 20000            | 15000            |
|                      | Max. Apparent Power Output to Utility Grid (VA)                  | 29900                                                                                                                                                                                                              | 25000            | 20000            | 15000            |
|                      | Nominal Apparent Power from Utility Grid (VA)                    | 29900                                                                                                                                                                                                              | 25000            | 20000            | 15000            |
|                      | Max. Apparent Power from Utility Grid (VA)                       | 29900                                                                                                                                                                                                              | 25000            | 20000            | 15000            |
|                      | Nominal Output Voltage (V)                                       | 230/400, 3L+N+PE                                                                                                                                                                                                   |                  |                  |                  |
|                      | Nominal AC Grid Frequency (Hz)                                   | 50                                                                                                                                                                                                                 |                  |                  |                  |
|                      | AC Grid Frequency Range (Hz)                                     | 47-52                                                                                                                                                                                                              |                  |                  |                  |
|                      | Max. AC Current From Utility Grid (A)                            | 49.8                                                                                                                                                                                                               | 41.6             | 33.3             | 25               |
|                      | Nominal Output Current (A)                                       | 43.3                                                                                                                                                                                                               | 36.2             | 29               | 21.7             |
|                      | Power Factor                                                     | -0.8 to 0.8                                                                                                                                                                                                        |                  |                  |                  |
|                      | Inrush Current                                                   | <120% of the nominal AC current for a maximum of 10 ms                                                                                                                                                             |                  |                  |                  |
|                      | Current Total Harmonic Distortion (@Rated Power)                 | ≤3%                                                                                                                                                                                                                |                  |                  |                  |
|                      | Back-up Nominal Apparent Power (VA)                              | 29900                                                                                                                                                                                                              | 25000            | 20000            | 15000            |
| AC Output (Backup)   | Max. Output Apparent Power (VA)                                  | 35880@1sec                                                                                                                                                                                                         | 30000@1sec       | 24000@1sec       | 18000@1sec       |
|                      | Nominal Output Current (A)                                       | 43.3                                                                                                                                                                                                               | 36.2             | 29               | 21.7             |
|                      | Max. Output Current (A)                                          | 52@1sec                                                                                                                                                                                                            | 43.4@1sec        | 34.8@1sec        | 26@1sec          |
|                      | Nominal Output Voltage (V)                                       | 230/400, 3L+N+PE                                                                                                                                                                                                   |                  |                  |                  |
|                      | Nominal Output Frequency (Hz)                                    | 50                                                                                                                                                                                                                 |                  |                  |                  |
|                      | Voltage Total Harmonic Distortion (@Linear Load & @ Rated Power) | ≤3%                                                                                                                                                                                                                |                  |                  |                  |
|                      | PV Insulation Resistance Detection                               | Yes                                                                                                                                                                                                                |                  |                  |                  |
| Protection           | Residual Current Monitoring                                      | Yes                                                                                                                                                                                                                |                  |                  |                  |
|                      | PV Reverse Polarity Protection                                   | Yes                                                                                                                                                                                                                |                  |                  |                  |
|                      | Anti-islanding Protection                                        | Yes                                                                                                                                                                                                                |                  |                  |                  |
|                      | AC Overcurrent Protection                                        | Yes                                                                                                                                                                                                                |                  |                  |                  |
|                      | Backup Load Short Circuit Protection                             | Yes                                                                                                                                                                                                                |                  |                  |                  |
|                      | AC Overvoltage Protection                                        | Yes                                                                                                                                                                                                                |                  |                  |                  |
|                      | DC Switch                                                        | Yes                                                                                                                                                                                                                |                  |                  |                  |
|                      | DC Surge Protection                                              | Type II                                                                                                                                                                                                            |                  |                  |                  |
|                      | AC Surge Protection                                              | Type II                                                                                                                                                                                                            |                  |                  |                  |
| Efficiency           | Maximum Efficiency                                               | 98.0%                                                                                                                                                                                                              |                  |                  |                  |
|                      | Maximum MPPT Efficiency                                          | 97.0%                                                                                                                                                                                                              |                  |                  |                  |
|                      | European Efficiency                                              | 99.9%                                                                                                                                                                                                              |                  |                  |                  |
| Compliance           | Certificates                                                     | CE mark                                                                                                                                                                                                            |                  |                  |                  |
|                      | Safety Standards                                                 | IEC/EN62109-1<br>IEC/EN62109-2                                                                                                                                                                                     |                  |                  |                  |
|                      | Grid-tied Standards                                              | VDE-AR-N-4105                                                                                                                                                                                                      |                  |                  |                  |
|                      | EMC&RF                                                           | EN IEC 61000-6-1<br>EN IEC 61000-6-2<br>EN IEC 61000-6-3<br>EN IEC 61000-6-4<br>EN IEC 61000-3-2<br>EN 61000-3-3<br>EN IEC 61000-3-11<br>EN 61000-3-12<br>EN 300328<br>EN 301489-1<br>EN 301489-17<br>EN IEC 62311 |                  |                  |                  |
|                      |                                                                  |                                                                                                                                                                                                                    |                  |                  |                  |
|                      |                                                                  |                                                                                                                                                                                                                    |                  |                  |                  |

|              |                                  |                                         |
|--------------|----------------------------------|-----------------------------------------|
| General Data | Operating Temperature Range (°C) | -20 to 50                               |
|              | Relative Humidity                | 10-95%                                  |
|              | Max. Operating Altitude (m)      | 3000                                    |
|              | Cooling Method                   | Intelligent air cooling                 |
|              | User Interface                   | LED, APP                                |
|              | Communication with BMS           | CAN                                     |
|              | Communication with Meter         | RS485                                   |
|              | Communication with Porta         | WLAN, WAN, Bluetooth, 4G                |
|              | Wi-Fi Frequency Range (MHz)      | 2412-2472 (20) / 2422-2462 (40),        |
|              | Maximum Output Power (dBm)       | < 20                                    |
|              | Bluetooth Frequency Range (MHz)  | 2402-2480,                              |
|              | Maximum Output Power (dBm)       | < 8                                     |
|              | Weight (kg)                      | 40                                      |
|              | Dimension (WxDxH mm)             | 680×242×480(±1 mm) (without trim cover) |
|              | Noise Emission (dB)              | <45                                     |
|              | Topology                         | Non-isolated                            |
|              | Self-consumption at Night (W)    | <15                                     |
|              | Ingress Protection Rating        | IP65                                    |
|              | Environmental Category           | Outdoor/Indoor                          |
|              | Pollution Degree                 | PD2                                     |
|              | Overvoltage Category             | AC: III, PV: II                         |
|              | Storage Temperature (°C)         | -30 to 60                               |
|              | Mounting Method                  | Wall Mounted                            |

## EcoFlow PowerOcean LFP Battery

| Number of Battery Packs |                                                        | EF BD-JC-S1 x 1<br>EF BD-5.1-S1 x 1<br>EF BD-B-S1 x 1     | EF BD-JC-S1 x 1<br>EF BD-5.1-S1 x 2<br>EF BD-B-S1 x 1 | EF BD-JC-S1 x 1<br>EF BD-5.1-S1 x 3<br>EF BD-B-S1 x 1 |
|-------------------------|--------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| Performance             | Battery Nominal Capacity (kWh)                         | 5.1                                                       | 10.2                                                  | 15.3                                                  |
|                         | Battery Usable Capacity (95% Depth of Discharge) (kWh) | 4.8                                                       | 9.7                                                   | 14.5                                                  |
|                         | Max. Output Power (W)                                  | 3300                                                      | 6600                                                  | 9900                                                  |
|                         | Max. Input Power (W)                                   | 2500                                                      | 5000                                                  | 7500                                                  |
|                         | Nominal Voltage (V)                                    | 800                                                       |                                                       |                                                       |
|                         | Operating Voltage Range (V)                            | 720-960                                                   |                                                       |                                                       |
|                         | Battery Cell Type                                      | LFP                                                       |                                                       |                                                       |
| Compliance              | Certificates                                           | CE MARK                                                   |                                                       |                                                       |
|                         | Safety Standard                                        | EN62619, EN62040-1, EN62477-1, ISO13849, VDE-AR-E-2510-50 |                                                       |                                                       |
|                         | Delivery Standard                                      | UN38.3                                                    |                                                       |                                                       |
|                         | EMC                                                    | EN 61000-6-1, EN 61000-6-3                                |                                                       |                                                       |
| General                 | Dimension (WxDxH) (Without Adjustable Feet) (mm)       | 680×183×612 (±1)                                          | 680×183×1009 (±1)                                     | 680×183×1406 (±1)                                     |
|                         | Weight (kg)                                            | 65.6                                                      | 120.9                                                 | 176.2                                                 |
|                         | Installation                                           | Floor stand                                               |                                                       |                                                       |
|                         | Operating Temperature (°C)                             | -20 to 50                                                 |                                                       |                                                       |
|                         | Max. Operating Altitude (m)                            | 3000                                                      |                                                       |                                                       |
|                         | Cooling Method                                         | Natural convection                                        |                                                       |                                                       |
|                         | Noise Level (dB)                                       | ≤35                                                       |                                                       |                                                       |
|                         | Relative Humidity                                      | 0%-100% (Condensing)                                      |                                                       |                                                       |
|                         | Protection Level                                       | IP65                                                      |                                                       |                                                       |
|                         | Protective Class                                       | I                                                         |                                                       |                                                       |

Please be advised that EcoFlow reserves the right to modify the design, components, and specifications of its products at any time without prior notice or obligation. The actual product details and final design may vary from those shown or described in this brochure.