DATASHEET

# EcoFlow PowerOcean Plus (Three-Phase)

## Solar Battery Storage 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/au
Mail to
solutionsales.au@ecoflow.com

## For users

EcoFlow App

EcoFlow Web Portal
https://portal.ecoflow.com/user/au

# 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) | 200-850 | | | |
| | Start-up Voltage (V) | 160 | | | |
| | Nominal Input Voltage (V) | 620 | | | |
| | Max. Input Current per MPPT (A) | 16×2 | | | |
| | Max. Short Circuit Current per MPPT (A) | 19×2 | | | |
| | Number of Strings per MPPT | 2 | | | |
| | Number of MPP Trackers | 1 | | | |
| | Overvoltage Category | II | | | |
| PV2/PV3 Input | Max. Input Power (W) | 10000 | | | |
| | Input Voltage Range(V) | 160-1000 | | | |
| | MPPT Operating Voltage Range (V) | 200-850 | | | |
| | Start-up Voltage (V) | 160 | | | |
| | Nominal Input Voltage (V) | 620 | | | |
| | Max. Input Current per MPPT (A) | 16 | | | |
| | Max. Short Circuit Current per MPPT (A) | 24 | | | |
| | Number of Strings per MPPT | 1 | | | |
| | Number of MPP Trackers | 1 | | | |
| | Overvoltage Category | II | | | |
| PV Input (PV1+PV2+PV3) | Max. Input Power (W) | 40 000 | 40 000 | 35 000 | 30 000 |
| Battery Input | 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 |
| | Maximum Battery Capacity (kWh) | 61.2 | | | |
| AC Input (On-grid) | Nominal Input Voltage (V) | 230/400, 3L+N+PE | | | |
| | Nominal Apparent Power from Utility Grid (VA) | 43470 | | | |
| | Max. Apparent Power from Utility Grid (VA) | 43470 | | | |
| | Max. AC Current from Utility Grid (A) | 63 | | | |
| | Nominal AC Grid Frequency (Hz) | 50 | | | |
| | Overvoltage Category | III | | | |
| AC Output (On-grid) | 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 Output Voltage (V) | 230/400, 3L+N+PE | | | |
| | Nominal AC Grid Frequency (Hz) | 50 | | | |
| | AC Grid Frequency Range (Hz) | 45-52 | | | |
| | 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% | | | |
| | Overvoltage Category | III | | | |
| AC Output (Backup) | Back-up Nominal Apparent Power (VA) | 29900 | 25000 | 20000 | 15000 |
| | Max. Output Apparent Power (VA) | 35880 for 1 sec | 30000 for 1 sec | 24000 for 1 sec | 18000 for 1 sec |
| | Nominal Output Current (A) | 43.3 | 36.2 | 29 | 21.7 |
| | Max. Output Current (A) | 52 for 1 sec | 43.4 for 1 sec | 34.8 for 1 sec | 26 for 1 sec |
| | Nominal Output Voltage (V) | 230/400, 3L+N+PE | | | |
| | Nominal Output Frequency (Hz) | 50 | | | |
| | RD Load (kW) | 1.65 | | | |
| | Voltage Total Harmonic Distortion (@Linear Load & @Rated Power) | ≤3% | | | |
| Efficiency | Max. Efficiency | 98.0% | | | |
| | European Efficiency | 97.0% | | | |
| | Max. MPPT Efficiency | 99.9% | | | |
| Compliance | Certificates | CE mark | | | |
| | Safety Standards | IEC/EN 62109-1, IEC/EN 62109-2 | | | |
| | Grid-tied Standards | VDE-AR-N-4105, TOR Erzeuger Typ A, EN 50549, PTPiREE, G99, TF 3.3.1 (B1.2 for type A), CEI 0-21, C10/11, UNE, NTS, AS 4777.2 | | | |
| | EMC&RF | EN 301 489-1, EN 301 489-3, EN 301 489-17, EN 300 328, EN 301 893, EN 300 440, EN IEC 61000-6-1, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4, EN 61000-3-11, EN 61000-3-12, EN IEC 62311, EN 62311, EN 50665 | | | |

| | | |
|---|---|---|
| **Protection** | AFCI | Yes |
| | PV Insulation Resistance Detection | Yes |
| | 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 |
| | Remote Shutdown | Yes |
| | Protective Class | I |
| | DC Surge Protection | Type II |
| | AC Surge Protection | Type II |
| **General** | Cascading | Up to 180kWh battery capacity*[1] |
| | Operating Temperature Range (°C) | –20 to 50 |
| | Relative Humidity | 0-100% |
| | Max. Operating Altitude (m) | 3000 |
| | Cooling Method | Intelligent air cooling |
| | User Interface | LED indicator, EcoFlow app |
| | Communication Method | RS485 (for meter) & CAN (for BMS) & Wi-Fi & Bluetooth & WAN & 4G |
| | Wi-Fi Frequency Range (MHz)<br>Maximum Output Power (dBm) | 2.4GHz: 2412-2472, 5GHz: 5180-5700, 5745-5825<br><20 |
| | Bluetooth Frequency Range (MHz)<br>Maximum Output Power (dBm) | 2402-2480,<br><8 |
| | Weight (kg) | Approx. 41 |
| | Dimension (W×D×H mm) | 636×235×498 (±1) (with trim cover)<br>636×235×419 (±1) (without trim cover) |
| | Noise Emission (dB) | <45*[2] |
| | Topology | Non-isolated |
| | Self-consumption at Night (W) | <20.5 |
| | Ingress Protection Rating | IP65 |
| | Environmental Category | Outdoor/Indoor |
| | Pollution Degree | PD3 |
| | Storage Temperature (°C) | –30 to 60 |
| | Mounting Method | Wall Mounted |

*[1] For a total battery capacity of 180kWh, 3 hybrid inverters are required. One hybrid inverter can support a maximum of 60kWh.

# EcoFlow PowerOcean LFP Battery

| Number of Battery Packs | | EF BD-JC-S2<br>EF BD-5.1-S1<br>EF BD-B-S1 | EF BD-JC-S2<br>EF BD-10.2-S1<br>EF BD-B-S1 | EF BD-JC-S2<br>EF BD-15.3-S1<br>EF BD-B-S1 | EF BD-JC-S2<br>EF BD-20.4-S1<br>EF BD-B-S1 |
|---|---|---|---|---|---|
| **Performance** | Battery Nominal Capacity (kWh) | 5.1 | 10.2 | 15.3 | 20.4 |
| | Battery Usable Capacity (100% Depth of Discharge)*[3] (kWh) | 5.1 | 10.2 | 15.3 | 20.4 |
| | Max. Discharge Power (W) | 3300 | 6600 | 9900 | 13200 |
| | Max. Charge Power (W) | 2500 | 5000 | 7500 | 10000 |
| | Nominal Voltage (V) | 800 | | | |
| | Operating Voltage Range (V) | 720-960 | | | |
| | Battery Cell Type | LiFePO4 | | | |
| **Compliance** | Certificates | RCM MARK | | | |
| | Safety Standard | IEC 62619, IEC 62040-1, IEC 62477-1, ISO13849 | | | |
| | Delivery Standard | UN38.3 | | | |
| | EMC | IEC 61000-6-1/3 | | | |
| **General** | Dimension (mm) | 680×183×612 (±1) | 680×183×1009 (±1) | 680×183×1406 (±1) | 680×183×1803 (±1) |
| | | 680×183×424 (±1) (EF BD-5.1-S1 x 1) | | | |
| | Weight (kg) | 65.6 | 120.9 | 176.2 | 231.5 |
| | | 55.5 (EF BD-5.1-S1 x 1) | | | |
| | Installation | Floor stand / wall mounted | | | |
| | Operating Temperature (°C) | –20 to 50 | | | |
| | Max. Operating Altitude (m) | 3000 | | | |
| | Cooling Method | Natural convection | | | |
| | Noise Level (dB) | ≤35*[2] | | | |
| | Relative Humidity | 0%-100% (Condensing) | | | |
| | Active Aerosol Fire Prevention Module | Integrated | | | |
| | Ingress Protection Rating | IP65 | | | |
| | Protective Class | I | | | |

*[2] Noise emission value measured under laboratory conditions: ambient temperature 25°C, free-field acoustic environment, measurement position 1m directly in front of the equipment. Actual noise levels may vary depending on load conditions, installation methods and environmental reflection characteristics. This data is only applicable to the declared test conditions.
*[3] To maintain optimal battery performance in low-temperature environments, the depth of discharge (DoD) may vary with actual temperature. This is a normal fluctuation.

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