

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 36kW solar input, 18kW 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 36kW PV input, equivalent to 200 sqm of the total rooftop size

Up to 18kW 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

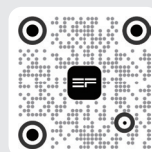


EcoFlow Pro Web Portal

<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-P3-18K0-S1	EF HD-P3-15K0-S1	EF HD-P3-12K0-S1
PV1 Input	Max. Input Power (W)	16000	10000	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		
PV2/PV3 Input	Overvoltage Category	II		
	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		
PV Input (PV1+PV2+PV3)	Number of MPP Trackers	1		
	Overvoltage Category	II		
Battery Input	Max. Input Power (W)	36 000	30 000	30 000
	Nominal Battery Voltage (V)	800		
	Max. Continuous Charging Current (A)	40	33.3	26.6
	Max. Continuous Discharging Current (A)	24	20	16
	Max. Charging Power (W)	29900	25000	20000
	Max. Discharging Power (W)	18000	15000	12000
	Maximum Battery Capacity (kWh)	61.2		
AC Input (On-grid)	Nominal Input Voltage (V)	230, 3L		
	Nominal Apparent Power from Utility Grid (VA)	25000		
	Max. Apparent Power from Utility Grid (VA)	25000		
	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)	18000	15000	12000
	Max. Apparent Power Output to Utility Grid (VA)	18000	15000	12000
	Nominal Output Voltage (V)	230, 3L		
	Nominal AC Grid Frequency (Hz)	50		
	AC Grid Frequency Range (Hz)	45-52		
	Nominal Output Current (A)	45.2	37.6	30.1
	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%		
AC Output (Backup)	Overvoltage Category	III		
	Back-up Nominal Apparent Power (VA)	18000	15000	12000
	Max. Output Apparent Power (VA)	21600 for 1 sec	18000 for 1 sec	14400 for 1 sec
	Nominal Output Current (A)	45.2	37.6	30.1
	Max. Output Current (A)	54.2 for 1 sec	45.1 for 1 sec	36.1 for 1 sec
	Nominal Output Voltage (V)	230, 3L+N+PE		
	Nominal Output Frequency (Hz)	50		
	RD Load (kW)	1		
	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		
	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	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	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) Maximum Output Power (dBm)	2.4GHz: 2412-2472, 5GHz: 5180-5700, 5745-5825 <20
	Bluetooth Frequency Range (MHz) Maximum Output Power (dBm)	2402-2480, <8
	Weight (kg)	Approx. 41
	Dimension (W×D×H mm)	636×235×498 (±1) (with trim cover) 636×235×419 (±1) (without trim cover)
	Topology	Non-isolated
	Ingress Protection Rating	IP65
	Environmental Category	Outdoor/Indoor
	Pollution Degree	PD3
	Storage Temperature (°C)	-30 to 60
	Mounting Method	Wall Mounted

EcoFlow PowerOcean LFP Battery

Number of Battery Packs		EF BD-JC-S2 x 1 EF BD-5.1-S1 x 1 EF BD-B-S1 x 1	EF BD-JC-S2 x 1 EF BD-5.1-S1 x 2 EF BD-B-S1 x 1	EF BD-JC-S2 x 1 EF BD-5.1-S1 x 3 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 61000-6-2, EN 61000-6-3, EN 61000-6-4		
General	Dimension (W×D×H) (Without Adjustable Feet) (mm)	680×183×612 (±1)	680×183×1009 (±1)	680×183×1406 (±1)
		680×183×424 (±1) (EF BD-5.1-S1 x 1)		
	Weight (kg)	65.6	120.9	176.2
		55.5 (EF BD-5.1-S1 x 1)		
	Installation	Floor stand		
	Operating Temperature (°C)	-20 to 50		
	Max. Operating Altitude (m)	3000		
	Cooling Method	Natural convection		
	Relative Humidity	0%-100% (Condensing)		
	Active Aerosol Fire Prevention Module	Integrated		
	Ingress Protection Rating	IP65		
	Protective Class	I		

* To maintain optimal battery performance in low-temperature environments, the depth of discharge (DoD) may vary with actual temperature. This is a normal fluctuation.

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.

EcoFlow OCEAN 2 LFP Battery

Technical Specification		EF OCEAN 2 LFP Battery 5kWh (EF BD-5-S2)	EF OCEAN 2 LFP Battery 8kWh (EF BD-8-S2)
Performance	Battery Nominal Capacity(kWh)	5.02	8.03
	Battery Usable Capacity ¹ (kWh)	4.87	7.76
	Battery Cell Type	LiFePO ₄	LiFePO ₄
	Nominal Charging Power(kW)	2.5	4.1
	Nominal Discharging Power(kW)	3.4	4.1
	Maximum Discharging Power ² (kW)	4.08	6.4
	Nominal Voltage(V)	400 / 800	400 / 800
	Operating Voltage Range(V)	360-520 / 720-960	360-520 / 720-960
General	Dimension(WxDxH)(mm)	680 × 196 × 279	680 × 196 × 378
	Weight(kg)	46	67.5
	Installation	Floor Stand: A stack of up to 6 batteries Wall Mounted: A stack of up to 3 batteries	
	Operating Temperature ³ (°C)	-20~ 55	-20~ 55
	Storage Temperature(°C)	-25~ 60	-25~ 60
	Max. Operating Altitude ⁴ (m)	3000	3000
	Relative Humidity	0% ~100%	0% ~100%
	Cooling Method	Natural Cooling	Intelligent Air Cooling
	Ingress Protection Rating	IP66	IP66
	Communications Method	CAN	CAN
	Protection	Over-charge/over-discharge protection, over-voltage/under-voltage protection, over-current protection, short-circuit protection,reverse-polarity protection,temperature protection, thermal-runaway protection, leakage-current protection, insulation protection, over-pressure protection, automatic power-off protection, emergency shutdown	Over-charge/over-discharge protection, over-voltage/under-voltage protection, over-current protection, short-circuit protection,reverse-polarity protection, temperature protection, thermal-runaway protection, leakage-current protection, insulation protection, over-pressure protection,automatic power-off protection, emergency shutdown, Water Ingress Detection
Compliance		IEC/EN 62619, IEC/EN 62040-1, IEC/EN 62477-1, ISO 13849-1, VDE-AR-E 2510-50, EN IEC 61000-6-1, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4, UN 38.3	IEC/EN 62619, IEC/EN 62040-1, IEC/EN 62477-1, ISO 13849-1, VDE-AR-E 2510-50, EN IEC 61000-6-1, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4, UN 38.3, SA TS 5398
1. Test conditions: 100% depth of discharge, 0.2C rate charge & discharge averagely at 25°C, at the beginning of life. 2. In a laboratory environment at 25°C ambient and device temperature, the discharge time at this power is no more than 30 minutes for Ocean 2 LFP 8kWh and 20 minutes for Ocean 2 LFP 5kWh. 3. Power may be derated when the temperature exceeds 40°C. 4. Power may be derated above 2000 m.			