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)	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			
	Max. Output Current (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%			
	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			
	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)
	Noise Emission (dB)	<45*[1]
	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

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**	**EF BD-JC-S2 x 1 EF BD-5.1-S1 x 4 EF BD-B-S1 x 1**
Performance	Battery Nominal Capacity (kWh)	5.1	10.2	15.3	20.4
	Battery Usable Capacity (95% Depth of Discharge)*[2] (kWh)	4.8	9.7	14.5	19.4
	Max. Output Power (W)	3300	6600	9900	13200
	Max. Input Power (W)	2500	5000	7500	10000
	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			
Performance	Dimension (W×D×H) (Without Adjustable Feet) (mm)	680×183×612 (±1)	680×183×1009 (±1)	680×183×1406 (±1)	680X183X1803 (±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			
	Operating Temperature (°C)	–20 to 50			
	Max. Operating Altitude (m)	3000			
	Cooling Method	Natural convection			
	Noise Level (dB)	≤35*[1]			
	Relative Humidity	0%-100% (Condensing)			
	Active Aerosol Fire Prevention Module	Integrated			
	Ingress Protection Rating	IP65			
	Protective Class	I			

*[1] 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.
*[2] 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.