

Solar Battery Storage Solution

EcoFlow OCEAN 2 Plus Single-Phase

The Next-Level All-in-One.



DATASHEET

EcoFlow OCEAN 2 Plus Hybrid Inverter Single-Phase

Technical Specification		EF HD-P1-6K0-S2 EF HD-P1-6K0-S2F	EF HD-P1-8K0-S2 EF HD-P1-8K0-S2F	EF HD-P1-10K0-S2 EF HD-P1-10K0-S2F	EF HD-P1-12K0-S2 EF HD-P1-12K0-S2F
PV Input	PV Operating Voltage Range(V)	50-900			
	MPPT Voltage Range at Rated Power (V)	500-810			
	MPPT Start-up Voltage (V)	120			
	Max. Input Voltage ¹ (V)	900			
	Max. Input Current per MPPT (A)	16			
	Max. Short Circuit Current per MPPT (A)	20			
	Number of MPPT Trackers	3			
	Number of Strings per MPPT	1			
	Max. Input Power per MPPT(W)	8000			
	Max. Total Input Power (W)	12000	16000	20000	24000
AC Input/ Output (On-grid)	Nominal Output power (W)	6000	8000	10000	12000
	Max. Output Apparent Power(VA)	6600	8800	11000	12000
	Supported Power Grid Types	TN-S, TN-C, TN-C-S, TT systems			
	Nominal Voltage (V)	L-N: 220V AC/230V AC; L+N+PE			
	Nominal Frequency (Hz)	50/60			
	Nominal Output Current	26.1 A@230 V 27.3 A@220 V	34.8 A@230 V 36.4 A@220 V	43.5 A@230 V 45.5 A@220 V	52.2 A@230 V 54.5 A@220 V
	Max. Output Current (A)	32.1	42.8	53.5	64.2
	Power Factor	0.8 leading~0.8 lagging			
	Max. Input Current (A)	72			
AC Output (Backup)	THDi at Full Load	Current Total Harmonic Distortion ≤3%			
	Nominal Output Current (A)	26.1 A@230 V 27.3 A@220 V	34.8 A@230 V 36.4 A@220 V	43.5 A@230 V 45.5 A@220 V	52.2 A@230 V 54.5 A@220 V
	Nominal Voltage (V)	L-N: 220V AC/230V AC; L+N+PE			
	Nominal Frequency (Hz)	50/60			
	Off-grid THDu	≤2%			
Battery Input/Output	Rated Voltage (V)	800			
	Voltage Range (V)	720-900			
	Battery Capacity	Up to 12 battery modules			
	Communication Method	CAN			
Parallel Installation	Maximum On-Grid Capacity ²	Up to 5 cascaded inverters			
	Maximum Off-Grid Capacity	Up to 2 cascaded inverters			
Efficiency	Max. Efficiency	97.6%			
	Deep Power Saving Mode (W)	15			
	Self Consumption (Light-load scenario) ³ (W)	50			
Protection	Grid-to-Off-grid Switching Time ⁴ (ms)	0			
	Off-grid-to-Grid Switching Time ⁴ (ms)	0			
	GFCI	Yes			
	AFCI	Yes			
	PV Insulation Resistance Detection	Yes			
	PV Reverse Polarity Protection	Yes			
	Emergency Power Off (EPO)	Yes			
	AC Overcurrent Protection	Yes			
	AC Short Circuit Protection	Yes			
	AC Overvoltage Protection	Yes			
	DC Surge Protection	Type II			
	AC Surge Protection	Type II			
General	Operating Temperature Range (°C)	-20 to 60			
	Storage Temperature (°C)	-30 to 60			
	Relative Humidity	0 to 100%			
	Operating Altitude (m)	3000 (>2000 derating)			
	User Interface	LED & APP			

General	Communication Method	Bluetooth,WiFi,RS485, CAN
	Wi-Fi Frequency Range	2.4GHz~2.4835 GHz、 5.15GHz~5.35GHz、 5.47GHz~5.725GHz、 5.725GHz~5.85GHz <20dBm
	Bluetooth Frequency Range	2,402GHz~2,480GHz <20dBm
	Weight (kg)	Approx.36.5
	Dimension(WxDxH mm)	Approx.679.6 x203.2 x406.5
	Anti-Theft	Supported
	Ingress Protection Rating	IP66
	Mounting Method ⁵	Floor Stand/Wall Mounted
	Installation Scenarios	Outdoor/Indoor
Compliance	Safety Standards	IEC/EN 62109-1,IEC/EN 62109-2,AS 60947.3,ISO4892-4
	Grid-tied Standards	EN 50549.G99.UNE.NTS.AS/NZS4777.2
	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.ENIEC 61000-6-2.ENIEC 61000-6-3. EN IEC61000-6-4,EN 61000-3-11,EN 61000-3-12,ENIEC 62311.EN 62311,EN 50665, EN62920, EN 55011

¹ PV input voltage should not exceed the specified maximum value. Exceeding this limit may trigger system protection or affect normal operation.

² In grid-connected parallel operation, load-side current is limited by the maximum input current rating of the grid port.

³ 50±1W indicates the system self-consumption measured under light-load conditions (<300W total load) in a laboratory environment for one OCEAN2 inverter and two OCEAN2 5kWh Battery.

⁴ The 0 ms transfer time applies under the following conditions: compliance with local grid regulations, in the open-circuit state of the power grid, total load power does not exceed the rated output backup power, stable grid conditions.

⁵ Maximum 3 battery packs supported for wall-mounted installation.

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 x 196 x 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.

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