

DATASHEET

EcoFlow OCEAN 2 Plus Hybrid Inverter Single-Phase

Technical Specification		EF HD-P1-8K0-S2A	EF HD-P1-9K9-S2A	EF HD-P1-12K0-S2A
PV Input	Number of MPPT Trackers	3		
	Number of Strings per MPPT	1		
	Max. Input Power per MPPT(W)	8000		
	Max. Input Voltage ¹ (V)	900		
	PV Operating Voltage Range(V)	50~900 (>810 derating)		
	MPPT Start-up Voltage(V)	120		
	Max. Total Input Power(W)	16000	20000	24000
	Max. Input Current per MPPT(A)	16		
	Max. Short Circuit Current per MPPT(A)	20		
AC Input/ Output (On-Grid)	Nominal Output Power(W)	8000	9999	12000
	Rated Output Apparent Power(VA)	8000	9999	12000
	Max. Output Apparent Power(VA)	8800	9999	12000
	Supported Power Grid Types	Supports TN-S,TN-C,TN-C-S,TT systems		
	Nominal Voltage(V)	L-N: 220Vac/230Vac; L+N+PE		
	Nominal Frequency(Hz)	50/60		
	Rated Output Current nominal	34.8A@230V; 36.4A@220V;	43.5A@230V; 45.5A@220V;	52.2A@230V; 54.5A@220V;
	Max. Output Current(A)	42.8	53.5	63.0
	Max. Input Current(A)	63		
	Power Factor	0.8 leading ~ 0.8 lagging		
	THDi at Full Load	Current Total Harmonic Distortion ≤3%		
AC Output (Backup)	Nominal Output Power(W)	8000	9999	12000
	Rated Output Apparent Power(VA)	8000	9999	12000
	Max. Output Apparent Power(VA)	8800	9999	12000
	Nominal Voltage(V)	L-N: 220Vac/230 Vac; L+N+PE		
	Nominal Frequency(Hz)	50/60		
	Rated output current	34.8A@230V; 36.4A@220V;	43.5A@230V; 45.5A@220V;	52.2A@230V; 54.5A@220V;
	Power Factor	0.8 leading ~ 0.8 lagging		
	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		
	Max. Charge Current of Stacking Terminal(A)	20.8		
	Max. Continuous Discharge Current of Stacking Terminal (A)	12.0	15.0	18.0
	Max. Charge Current of Expansion Terminal(A)		28	
	Max. Continuous Discharge Current of Expansion Terminal(A)	12.0	15.0	18.0
Efficiency	Max. Efficiency	97.90%		
	Deep power saving Mode ³ (W)	15		
	Self Consumption (Light-load scenario) ⁴ (W)	50		
Protection	Grid-to-Off-grid Switching Time ⁵ (ms)	0		
	Off-grid-to-Grid Switching Time ⁵ (ms)	0		
	GFCI	Yes		
	AFCI	Yes		
	PV Insulation Resistance Detection	Yes		
	Anti-islanding Protection	Slip Mode Frequency Shift		
	PV Reverse Polarity Protection	Yes		
	Emergency Power Off (EPO)	Yes		
	DC Surge Protection	Type II		
	AC Surge Protection	Type II		
	AC Overcurrent Protection	Yes		
	AC Short Circuit Protection	Yes		
	AC Overvoltage Protection	Yes		
	Protective Class	I		

General	Inverter Topology	Non-Isolated
	Relative Humidity	0% ~ 100%
	Operating Temperature Range (°C)	-20~60
	Storage Temperature(°C)	-30~60
	Operating Altitude(m)	3000 (>2000 derating)
	Ingress Protection Rating	IP66
	Communication Method	Bluetooth, WiFi, RS485, CAN
	Wi-Fi Frequency Range (MHz) Maximum Output Power (dBm)	2.4GHz:2400-2483.5; 5GHz:5150-5350, 5470-5725, 5725-5850 <20
	Bluetooth Frequency Range (MHz) Maximum Output Power (dBm)	2402-2480 <20
	User Interface	LED & APP
	Weight(kg)	Approx. 36.5
	Dimension (W×D×H) (mm)	679.6×203.2×406.5
	Environmental Category	Outdoor/Indoor
	Mounting Method ⁶	Floor Stand/Wall Mounted
	Anti-theft	Supported
	Overvoltage Category	OVC II(DC), OVC III(AC)
	Manufacture	Made in China
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	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, 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 15W + 0.5W represents the loss of an inverter; under this mode, the load draws power from the grid.

⁴ 50±1W indicates the system self-consumption measured under light-load conditions (<300W total load) in a laboratory environment for one OCEAN 2 Inverter and two OCEAN 2 5kWh Battery.

⁵ This specification refers to the disruption time on the BACKUP side. To achieve this functionality, the system's maximum output must exceed the total load connected to the BACKUP side. The performance was validated compliance with local grid regulations, ,under stable grid conditions, where a grid outage doesnot cause a sudden voltage drop.

⁶ Maximum 3 battery packs supported for wall-mounted installation.

EcoFlow OCEAN 2 LFP Battery 5 kWh

Technical Specification		EF BD-5-S2	EF BD-10-S2	EF BD-15-S2	EF BD-20-S2	EF BD-25-S2	EF BD-30-S2
Performance	Battery Nominal Capacity (kWh)	5.02	10.04	15.06	20.08	25.10	30.12
	Nominal Voltage (V)	400/800					
	Operating Voltage Range (V)	360-520 / 720-960					
	Nominal Charging Power (W)	2500/2500	5000/5000	7500/7500	10000/10000	12000/12500	12000/15000
	Nominal Discharging Power (W)	3400/3400	6800/6800	12500/13600	12500/13600	12500/17000	12500/20400
	Battery Cell Type	LiFePO ₄					
Compliance	Certificates	CE Mark					
	Safety Standards	IEC/EN 62619, IEC/EN 62040-1, IEC/EN 62477-1, ISO 13849-1, VDE-AR-E 2510-50					
	Delivery Standards	UN 38.3					
	EMC	EN IEC 61000-6-1, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4					
General	Dimension (L x P x H) (mm)	679.6x195.6x494.75	679.6x195.6x774.45	679.6x195.6x1054.15	679.6x195.6x1333.85	679.6x195.6x1613.55	679.6x195.6x1893.25
	Weight (kg)	54.6	100.1	145.6	191.1	236.6	282.1
	Installation	Floor Stand: A stack of up to 6 batteries Wall Mounted: A stack of up to 3 batteries					
	Operating Temperature ¹ (°C)	-20~55					
	Storage Temperature (°C)	-25~60					
	Max. Operating Altitude (m)	3000					
	Relative Humidity	0 % ~ 100 %					
	Cooling Method	Natural Cooling					
	Ingress Protection Rating	IP66					
	Anti-theft	Supported					
	Communication method	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					

¹ Power may be derated when the temperature exceeds 40 °C.

² Power may be derated above 2000 m.