EcoFlow OCEAN 2 Single-Phase

Up to 6kW AC Output | Up to 12kW PV Input | 2 MPPTs



DATASHEET

EcoFlow OCEAN 2 Hybrid Inverter Single-Phase

Technical parameters		EF HD-P1-3K-S2	EF HD-P1-3K68-S2	EF HD-P1-4K6-S2	EF HD-P1-5K-S2	EF HD-P1-5K75-S2	EF HD-P1-6K-S2
DC Input (PV)	Maximum PV Power (W)	9000	9680	10600	11000	11000	12000
	Maximum Input Voltage (V)	600					
	Mppt Voltage Range (V)	90-520					
	Maximum Input Current per MPPT (A)	18 (single PV input), 16 (dual PV input)					
	Maximum Short Circuit Current per MPPT (A)	20					
	Backfeed Current to the PV Array (A)	0					
	Number of MPPTs	2					
	Overvoltage Category	II					
DC Input (Battery)	Rated Voltage (V)	790					
	Maximum Voltage (V)	800					
	Rated Current (A)	7.6					
	Maximum Current (A)	7.6	7.6	7.6	7.6	8.4	8.4
AC Input	Grid Connection	L+N+PE					
	Overvoltage Category	III					
	Rated Input Power (W)	3000	3680	4600	5000	5750	6000
	Maximum Apparent Power (VA)	3000	3680	4600	5000	5750	6000
	Rated Input Voltage (V)	220/230/240, L+N+PE					
	Maximum Input Current (A)	16	19.7	24.6	26.7	30.7	32
	Nominal Frequency (Hz)	50/60					
	Inrush Current (Peak Value/Duration Time) (A)	92@3μs					
AC Output (On-grid)	Grid Connection	L+N+PE					
	Overvoltage Category	III					
	Rated Output Power (W)	3000	3680	4600	5000	5750	6000
	Maximum Apparent Power (VA)	3000	3680	4600	5000	5750	6000
	Rated Output Voltage (V)	220/230/240, L+N+PE					
	Rated Output Current (A)	13.1	16	20	21.7	25	26.1
	Maximum Output Current (A)	15	18.4	23	25	28.8	30
	Nominal Frequency (Hz)	50/60					
	Total Harmonic Distortion (At Rated Power)	≤5%	≤5%	≤3%	≤3%	≤3%	≤3%
	Power Factor	0.8 leading ~ 0.8 lagging					
	Inrush Current (Peak Value/Duration Time) (A)	92@3μs					
	Maximum Output Fault Current (Peak Value/Duration Time) (A)	108@2.8μs					
AC Output (Backup load)	Maximum Output Power (VA)	3000	3680	4600	5000	5750	6000
	Nominal Output Voltage (V)	220/230/240, L+N+PE					
	Nominal Frequency (Hz)	50/60					
	Maximum Output Current (A)	16	19.7	24.6	26.7	30.7	32
	Rated Output Current (A)	13.1	16	20	21.7	25	26.1
	Inrush Current (Peak Value/Duration Time) (A)	92@3μs					
	Maximum Output Fault Current (Peak Value/Duration Time) (A)	108@2.8μs					
Efficiency	Maximum Efficiency	>96%	>96.5%				
	European Weighted Efficiency	>95%	>96%				
Protection	GFCI	Supported					
	AFCI	Supported					
	Insulation Resistance Detection	Supported					
	Anti-Islanding Protection	Supported					
	PV Reverse Polarity Protection	Supported					
	AC Overcurrent Protection	Supported					
	AC Short-Circuit Protection	Supported					
	AC Overvoltage Protection	Supported					
	Protective Class	I					
Compliance	Certificates	CE/CB/DEKRA MARK					
	Safety Standard	IEC/EN62109-1, IEC/EN62109-2					
	Grid-Tied Standards	G98, G99, G100, VDE-AR-N 4105, CEI 0-21, UTE C15-712-1, VDE 0126-1-1, EN 50549-1, C10/11, NTS631, UNE 217001, UNE 217002, PPDS, PTPiREE, PSE, NC RfG, ORDINANCE No.140, NRS 097-2-1					
	EMC	EN/IEC 61000-6-1/2/3/4, IEC 61000-4-16/18/29, IEC 61000-2-2, EN 300328, EN 301489-1, EN 301489-17, EN IEC 62311					
General	Topology	Non-isolated					
	Ingress Protection Rating	IP65					
	Operating Temperature Range (°C)	–20 to 50 (derating when the temperature is above 40 or below 0)					
	Storage Temperature Range (°C)	–30 to 60					
	Operating Humidity	0%-100% (Condensing)					
	Maximum Operating Altitude (m)	3000 (derating above 2000)					
	Weight (kg)	21.5					
	Dimensions (W×D×H) (mm)	679.6×182.7×280 (without IOT & 4G dongle)					
	Noise Emission (dB)	40[1]					
	Self-Consumption at Night (W)	<30[2]					
	Cooling Method	Natural Convection					
	Communication Method	RS485 & CAN & Wi-Fi & Bluetooth & WAN & 4G					
	Wi-Fi	Frequency Range: 2400 MHz-2483.5 MHz, Maximum Output Power: 17 dBm					
	Bluetooth	Frequency Range: 2400 MHz-2483.5 MHz, Maximum Output Power: 8 dBm					
	Pollution Degree	PD3					
	Environmental Category	Outdoor/Indoor					

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. When the single-phase inverter has no battery charge or discharge and draws no power from the grid, all protection, early warning and active regulation functions remain operational, and its static power consumption can be steadily kept below 30W.

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] (℃)	-20~ 55	-20~ 55
	Storage Temperature(℃)	-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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