

PLENTICORE plus

with BYD Battery-Box Premium HVS/HVM



Technical Specification

PLENTICORE plus power class		3.0	4.2	5.5	7.0	8.5	10	
Input side (DC)	Max. PV power (cos $\varphi = 1$)	kWp	4.5	6.3	8.25	10.5	12.75	15
	Nominal DC power	kW	3.09	4.33	5.67	7.22	8.76	10.31
	Input voltage range ($U_{DCmin} - U_{DCmax}$)	V	120...1000					
	MPP working voltage range ($U_{MPPworkmin} - U_{MPPworkmax}$)	V	120...720					
	Number of DC inputs		3					
	Number of combined DC inputs (PV or battery)		1					
	Number of independent MPP trackers		3					
	DC 3 – battery input optional - Activation code battery available at: shop.kostal-solar-electric.com							
Working voltage for battery input ($U_{DCworkbatmin} - U_{DCworkbatmax}$)	V	120...650						
Max. charging current/discharging current at battery input	A	13/13						
Output side (AC)	Rated power, cos $\varphi = 1$ ($P_{AC,r}$)	kW	3.0	4.2	5.5	7.0	8.5	10
	Output voltage ($U_{ACmin} - U_{ACmax}$)	V	320...500					
	Rated output current ($I_{AC,r}$)	A	4.33	6.06	7.94	10.10	12.27	14.43
	Max. output current (I_{ACmax})	A	4.81	6.74	8.82	11.23	13.63	16.04 ⁴⁾
	Grid connection		3N~, 230/400 V, 50 Hz					
	Standby	W	7.9					
η	Max. efficiency	%	97.1	97.1	97.1	97.2	97.2	97.2
	European efficiency	%	95.3	96.5	96.2	96.5	96.5	96.5
System data	Protection class according to IEC 60529		IP 65					
	Height/width/depth	mm	563 / 405 / 233					
	Weight	kg	19.6			21.6		
	Ambient temperature	°C	-20...60					
	Connection technology, DC side		SUNCLIX plug					
Directives/Certification ¹⁾		CE, GS, CEI 0-21, CEI10/11, EN 62109-1, EN 62109-2, EN 60529, EN 50438*, EN 50549-1*, NA/EEA, G98, G99, IFS2018, IEC 61727, IEC 62116, RD 1699, RFG, TF3.3.1, TOR Erzeuger, UNE 206006 IN, UNE 206007-1 IN, UTE C15-712-1, VDE 0126-1-1, VDE-AR-N 4105, VJV2018						

BYD Battery-Box Premium		HVS 5.1	HVS 7.7	HVS 10.2	HVS 12.8	HVM 11.0	HVM 13.8	HVM 16.6	HVM 19.3	HVM 22.1	
Modul type		HVS (High Voltage Small) 2.56kWh, 102.4V, 25Ah, 38kg, LiFePO ₄				HVM (High Voltage Medium) 2.76kWh, 51.2V, 53Ah, 38kg, LiFePO ₄					
System data	Max. Power consumption in connection with PLENTICORE plus 3.0-10 ^{2,3,4)}	kW	2.66	3.99	5.32	6.5	2.66	3.3	3.99	4.66	5.32
	Usable capacity 95%/100% DoD ⁵⁾	kWh	4.86/ 5.12	7.30/ 7.68	9.73/ 10.24	12.16/ 12.8	10.49/ 11.04	13.11/ 13.8	15.73/ 16.56	18.35/ 19.32	20.98/ 22.08
	Number of battery modules		2	3	4	5	4	5	6	7	8
	Nominal voltage	V	204	307	409	512	204	256	307	358	409
	Voltage range	V	160- 240	240- 360	320- 480	400- 600	160- 240	200- 300	240- 360	280- 420	320- 480
	Interface to inverter		RS485								
	Height	mm	712	945	1178	1411	1178	1411	1644	1877	2110
	Width/depth	mm	585/298								
	Weight	kg	91	129	167	205	167	205	243	281	319
	Ambient temperature	°C	-10...50								
IP protection class		IP 55									
Certification / Safety Standard		VDE2510-50 / IEC62619 / CEC / CE / UN38.3									

Subject to technical changes. Errors excepted. You can find current information at www.kostal-solar-electric.com.

¹⁾ Does not apply to all national annexes

²⁾ The use of the BYD Battery-Box Premium HVM 13.8, 16.6, 19.3 and 22.1 are not approved for the PLENTICORE plus 3.0

³⁾ Depending on the max. Rated power AC of the inverter (PLENTICORE plus 3.0 max. 3.0 kW, 4.2 max 4.2 kW and 5.5 max 5.5 kW)

⁴⁾ Using the BYD Battery-Box Premium HVM 11.0 or 13.8 is technically possible. Due to the relatively low battery voltage of these variants, a restriction of the charging and final charging power (U_{bat} x 13A max. Input current of the WR) and the system efficiency must be pointed out.

⁵⁾ Test Conditions: 0.2 C charge and discharge at + 25 °C, real usable capacity with PLENTICORE plus system / theoretically usable capacity acc. BYD battery data sheet at 100% DoD

⁶⁾ UK G83/2 and G98-1 settings: The maximum output current is limited to 16 A @ rated AC grid voltage.