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Technical Specification

PLENTICORE BI 5.5/13
with BYD Battery-Box Premium HVS/HVM

BI
Battery Inverter

	PLENTICORE BI power class		5.5/13
Input (DC)	Working voltage for battery input ($U_{DCworkbatmin}$ - $U_{DCworkbatmax}$)	V	120...650
	Charging current/discharging current at battery input	A	13/13
	Number of DC inputs		1
Output (AC)	Rated power, cos φ = 1 ($P_{AC,r}$)	kW	5.5
	Max. apparent output power, cos ϕ, adj	kVA	5.5
	Output voltage (U_{ACmin} - U_{ACmax})	V	320...460
	Rated output current ($I_{AC,r}$)	A	7.94
	Max. output current (I_{ACmax})	A	8.82
	Grid connection		3N~, 400 V, 50 Hz
	Standby / Standby night consumption	W	7.9 / 4.5
η	Max. efficiency Bat2AC	%	96.7
	Max. efficiency AC2Bat	%	96.6
System data	Protection class according to IEC 60529		IP 65
	Height/width/depth	mm	563 / 405 / 233
	Weight	kg	19.6
	Ambient temperature	°C	-20…60
	Connection technology, DC side		SUNCLIX Stecker
	Directives/Certification[1)]		CE, GS, IEC62109-1, IEC62109-2, EN60529, DIN VDE 0126-1-1:2013-08, VDE AR-N4105:2018, VDE AR-N4100:2018, TOR Erzeuger, ÖNORM E8001-4-712/A2:2016, NA/EEA-CH 2014, IEC62116:2014

	BYD Battery-Box Premium		HVS 5.1	HVS 7.7	HVS 10.2	HVS 12.8	HVM 13.8[3)]	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 BI[3)]	kW	2.66	3.99	5.32	5.5	3.3	3.99	4.66	5.32
	Usable capacity 95%/100% DoD[2)]	kWh	4.86/ 5.12	7.30/ 7.68	9.73/ 10.24	12.16/ 12.8	13.11/ 13.8	15.73/ 16.56	18.35/ 19.32	20.98/ 22.08
	Number of battery modules		2	3	4	5	5	6	7	8
	Nominal voltage	V	204	307	409	512	256	307	358	409
	Voltage range	V	160-240	240-360	320-480	400-600	200-300	240-360	280-420	320-480
	Interface to inverter		RS485							
	Height	mm	712	945	1178	1411	1411	1644	1877	2110
	Width/depth	mm	585/298							
	Weight	kg	91	129	167	205	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)] Test Conditions: 0,2 C charge and discharge at + 25 °C, real usable capacity with Plenticoe BI system / theoretically usable capacity acc. BYD battery data sheet at 100% DoD

[3)] Using the BYD Battery-Box Premium HVM 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.

04/2020 - EN - DOC02423383 - Contact: KOSTAL Solar Electric GmbH, Hanferstr. 6, 79108 Freiburg i. Br., Germany, Tel. +49 761 477 44 - 100, Fax +49 761 477 44 - 111, www.kostal-solar-electric.com