SOLAR ELECTRIC

KOSTAL

PIKO MP plus

with BYD Battery-Box Premium HVS/HVM

Technical Specification

Technical Specification PIKO MP plus

	PIKO MP plus plus power class		2.0-1	2.5-1	3.0-1	3.0-2	3.6-1	3.6-2	4.6-2	5.0-2
Input side (DC) (DC)	Max. PV-power (cos φ = 1)	kWp	3.0	3.75	4.5		5.4		6.9	7.5
	Nominale DC power	kW	2.05	2.56	3.07		3.77		4.74	5.2
	Input voltage range (U_{DCmin} - U_{DCmax})	V	75-450		75-750					
	MPP working voltage range ($U_{MPPworkmin}$ - $U_{MPPworkmax}$)	V	75-360		75-600					
	MPP range at nominal power (U_{MPPmin} - U_{MPPmax})	V	160-360	200-360	230-600		280-600		360-600	360-600
	Number of DC inputs		1	1	1	2	1	2	2	2
	Number of combined DC inputs (PV or battery)		1	1	1	1	1	1	1	1
	Number of independent MPP trackers		1	1	1	2	1	2	2	2
	One DC battery input - optional Activation code battery and KOSTAL Smart Energy Meter available at: shop.kostal-solar-electric.com									
	Working voltage for battery input ($U_{DCworkbatmin}$ - $U_{DCworkbatmax}$)	V	75-360		75-600					
	Max. charging current/discharging current at battery input	A	13/13							
Output side (AC)	Rated power, cos φ = 1 ($P_{AC,r}$)	kW	2.0	2.5	3.0		3.68		4.6	5.0
	Output voltage (U_{ACmin} - U_{ACmax})	V	185...276							
	Rated output current ($I_{AC,r}$)	A	8.7	10.9	13.1		16		20	22
	Max. output current (I_{ACmax})	A	12	14	14		16		20	22
	Grid connection		1N~, 400 V, 50 Hz							
	Standby/standby incl. 24h home-consumption measurement	W	<3.0/<20.0							
η	Max. efficiency	%	97.4	97.4	97.0		97.0		97.4	97.4
	European efficiency	%	96.5	96.6	96.3		96.3		96.9	96.8
System data	Protection class according to IEC 60529		IP 65							
	Height/width/depth	mm	657/399/222							
	Weight	kg	12.6	12.6	13.8	14.0	13.8	14.0	14.0	14.0
	Ambient temperature	°C	-20…60							
	Connection technology, DC side		SUNCLIX plug							
	Directives/Certification [1)]		IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 60730, IEC 62116, VDE-AR-N 4105, DIN VDE 0126 1-1, G59/3-2, G83/2, UTE C 15-712-1, CEI 0-21, TOR D4, RD1699, RD 413, UNE 206007-1, IEC 61727, EN 50438*							

[1)] Does not apply to all national annexes

Technical Specification BYD Battery-Box Premium HVS/HVM

	BYD Battery-Box Premium HVS/HVM[5]			HVS 5.1	HVS 7.7	HVS 10.2	HVS 12.8	HVM 8.3	HVM 11.0	HVM 13.8	HVM 16.6	HVM 19.3	HVM 22.1
System data	Module type			HVS (High Voltage Small) 2.56kWh, 102.4V, 25Ah, 38kg, $LiFePO_4$				HVM (High Voltage Medium) 2.76 kWh, 51.2 V, 53 Ah, 38 kg, $LiFePO_4$					
	Max. Power consumption / charging capacity[3] battery in connection with	PIKO MP plus 2.0-1	kW	2.0	2.0	--- [2]		2.0	2.0	--- [2]			
		PIKO MP plus 2.5-1	kW	2.5	2.5			2.5	2.5				
		PIKO MP plus 3.0-1	kW	2.66	3.0	3.0	3.0	2.0	2.66	3.0	3.0	3.0	3.0
		PIKO MP plus 3.0-2	kW	2.66	3.0	3.0	3.0	2.0	2.66	3.0	3.0	3.0	3.0
		PIKO MP plus 3.6-1	kW	2.66	3.6	3.6	3.6	2.0	2.66	3.33	3.6	3.6	3.6
		PIKO MP plus 3.6-2	kW	2.66	3.6	3.6	3.6	2.0	2.66	3.33	3.6	3.6	3.6
		PIKO MP plus 4.6-2	kW	2.66	3.99	4.6[6]	4.6[6]	2.0	2.66	3.33	3.99	4.66[6]	4.66[6]
		PIKO MP plus 5.0-2	kW	2.66	3.99	5.0[6]	5.0[6]	2.0	2.66	3.33	3.99	4.66[6]	5.0[6]
	Usable capacity 95%/100% DoD[4]		kWh	4.86/ 5.12	7.30/ 7.68	9.73/ 10.24	12.16/ 12.8	7.87/ 8.28	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	3	4	5	6	7	8
	Nominal voltage		V	204	307	409	512	153	204	256	307	358	409
	Voltage range		V	160-240	240-360	320-480	400-600	120-180	160-240	200-300	240-360	280-420	320-480
	Interface to KOSTAL Smart Energy Meter			RS485									
	Height		mm	712	945	1178	1411	945	1178	1411	1644	1871	2110
	Width/depth		mm	585/298									
	Weight		kg	91	129	167	205	129	167	205	243	281	319
	Ambient temperature		°C	-10…50									
	Housing protection class			IP 55									
	Safety Standard / Certification			VDE2510-50 / IEC62619 / CEC / CE / UN38.3									

[2] The use of these variants of the BYD Battery-Box Premium are not approved for the PIKO MP plus

[3] When using the PIKO MP plus as a hybrid inverter in combination with the BYD Battery-Box Premium, the charging power can be greater than the discharging power if the corresponding range of services is high (calculation of the maximum charging power of the battery: maximum charging current PIKO MP plus battery input (13A) x nominal voltage battery)

[4] Test conditions: 0.2 C charge and discharge at + 25 ° C, 95% real usable capacity with PIKO MP plus system / theoretically usable capacity acc. BYD battery data sheet at 100% DoD

[5] HVS (High Voltage Small), HVM (High Voltage Medium)

[6] These combinations may not be used in Germany due to §14a (controllable consumers).

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You can find current information at www.kostal-solar-electric.com.