SOLAR ELECTRIC

KOSTAL

Smart connections.

Data sheet

PLENTICORE plus 3.0-10

plus

PLENTICORE plus: The new standard – versatile and smart

All-in-one

PV hybrid inverter with battery input with optional activation code[1, 3)]

Compatibility with various high-voltage batteries[2, 3)]

3 MPP trackers suited to the layout of almost all roofs

Extended MPP range – perfect for repowering

Smart connected

Smart Communication Board – future proof, new functions can be added via the integrated Web Application

Display, data logger, system monitoring, network and control interfaces integrated as standard, WLAN Ready via external USB WLAN adapter[2)]

Free Solar Portal for monitoring the PV system

EEBus and Sunspec for Smart Home integration

Smart performance

Fast, self-learning shadow management – adapts individually to the installation site

Dynamic active power control and 24-hour home-consumption measurement[3)]

Self-learning generation and consumption forecast – for optimum self-consumption[3)]

Low conversion losses due to DC coupling and high-voltage battery

Prepared for additional battery charge via AC energy sources[3)]

Easy to install

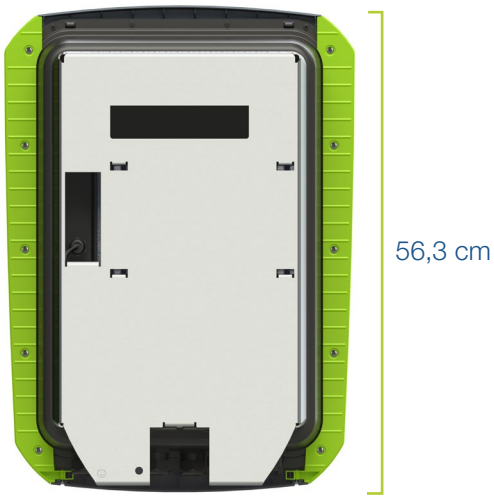
Simple device configuration using commissioning wizard

Safe installation due to clearly arranged, separate terminal compartment and protected power electronics

Compatible with RCD type A

Auto update and remote support[2)]

PLENTICORE plus: compact and rapidly deployable



[1)] Activation code battery available at: shop.kostal-solar-electric.com
[2)] Available later on via software update
[3)] KOSTAL Smart Energy Meter required

Technical data PLENTICORE plus

	Power class		3.0	4.2	5.5	7.0	8.5	10
Input side (DC)	Max. PV power (cos φ = 1)	kWp	4.5	6.3	8.25	10.5	12.75	15
	Max. PV power per DC input	kWp	6.5					
	Nominal DC power	kW	3.09	4.33	5.67	7.22	8.76	10.31
	Rated input voltage ($U_{DC,r}$)	V	570					
	Start-up input voltage ($U_{DCstart}$)	V	150					
	Input voltage range (U_{DCmin} - U_{DCmax})	V	120...1000					
	MPP range at rated output in single-tracker operation (U_{MPPmin} - U_{MPPmax})	V	240...720[3]	350...720[3]	450...720[3]	-	-	-
	MPP range at rated output in two-tracker operation (U_{MPPmin} - U_{MPPmax})	V	180...720[3]	180...720[3]	225...720[3]	290...720[3]	345...720[3]	405...720[3]
	MPP range at rated output in three-tracker operation (U_{MPPmin} - U_{MPPmax})	V	140...720[3]	140...720[3]	160...720[3]	195...720[3]	230...720[3]	275...720[3]
	MPP working voltage range ($U_{MPPworkmin}$ - $U_{MPPworkmax}$)	V	120...720[3]					
	Max. working voltage ($U_{DCworkmax}$)	V	900					
	Max. input current (I_{DCmax}) per DC input	A	13					
	Max. PV short-circuit current (I_{SC_PV}) per DC input	A	16.25					
	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							
	Min. working voltage for battery input ($U_{DCworkbatmin}$)	V	120[3]					
	Max. working voltage for battery input ($U_{DCworkbatmax}$)	V	650					
	Max. charging current/discharging current at battery input	A	13/13					
Output side (AC)	Rated power, cos φ = 1 ($P_{AC,r}$)	kW	3.0	4.2	5.5	7.0	8.5	10
	Max. apparent output power, cos Φ, adj	kVA	3.0	4.2	5.5	7.0	8.5	10
	Min. output voltage (U_{ACmin})	V	320					
	Max. output voltage (U_{ACmax})	V	460					
	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
	Short-circuit current (peak/RMS)	A	6.8/4.8	9.5/6.7	12.5/8.8	15.9/11.2	19.3/13.6	22.8/16.1
	Grid connection		3N~. 400V. 50 Hz					
	Rated frequency (f_r)	Hz	50					
	Min/max grid frequency (f_{min}/f_{max})	Hz	47/52.5					
	Setting range of the power factor (cos $\varphi_{AC,r}$)		0.8...1...0.8					
	Power factor for rated power (cos $\varphi_{AC,r}$)		1					
	Max. THD	%	3					
	Standby/standby incl. 24h home-consumption measurement	W	4.5/7.9					
η	Max. efficiency	%	97.1	97.1	97.1	97.2	97.2	97.2
	European efficiency	%	95.3	95.5	96.2	96.5	96.5	96.5
	MPP adjustment efficiency	%	99.9	99.9	99.9	99.9	99.9	99.9

	Power class		3.0	4.2	5.5	7.0	8.5	10
System data	Topology: Without galvanic isolation – transformerless		✓					
	Protection class according to IEC 60529		IP 65					
	Protective class according to IEC 62103		I					
	Overvoltage category according to IEC 60664-1, input side (PV generator)		II					
	Overvoltage category according to IEC 60664-1, output side (grid connection)		III					
	Degree of contamination		4					
	Environmental category (outdoor installation)		✓					
	Environmental category (indoor installation)		✓					
	UV resistance		✓					
	AC cable diameter (min-max)	mm	8...17					
	AC cable cross-section (min-max)	mm^2	1.5...6			2.5...6		4...6
	DC cable cross-section (PV/BAT) (min-max)	mm^2	2,5...6 / 4...6					
	Max. fuse protection on output side		B16/C16					B25/C25
	Internal operator protection according to EN 62109-2 (compatible with RCD type A from FW 01.14)		✓					
	Independent disconnection device according to VDE 0126-1-1		✓					
	Height/width/depth	mm (in)	563/405/233 (22.17/15.94/9.17)					
	Weight	kg (lb)	19.6 (43.21)			21.6 (46,62)		
	Cooling principle – regulated fans		✓					
	Max. air throughput	m^3/h	184					
	Noise emission (typical)	dB(A)	39					
	Ambient temperature	°C (°F)	-20…60 (-4...140)					
	Max. installation altitude above sea level	m (ft)	2000 (6562)					
	Relative humidity	%	4…100					
	Connection technology, DC side		SUNCLIX plug					
	Connection technology, AC side		Spring-type terminal strip					
Interfaces	Ethernet LAN (RJ45)		1					
	Connection of energy meter for collecting energy data (Modbus RTU)		1					
	Digital inputs (e.g. for digital ripple control receiver)		4					
	USB 2.0		1					
	Potential-free contact for self-consumption control		1					
	Webserver (user interface)		✓					
	KOSTAL Smart Warranty / Warranty[1]	Years	5 (2)					
	Optional warranty extension for (years)		5/10/15					
	Directives/Certification[2]		CE, GS, CEI 0-21, CEI10/11, EN 62109-1, EN 62109-2, EN 60529, EN 50438*, EN 50549-1*, ENA/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					

Subject to technical changes. Errors excepted. You can find current information at www.kostal-solar-electric.com. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

[1] KOSTAL Smart Warranty: 5-year warranty only after registration in the KOSTAL Solar online shop

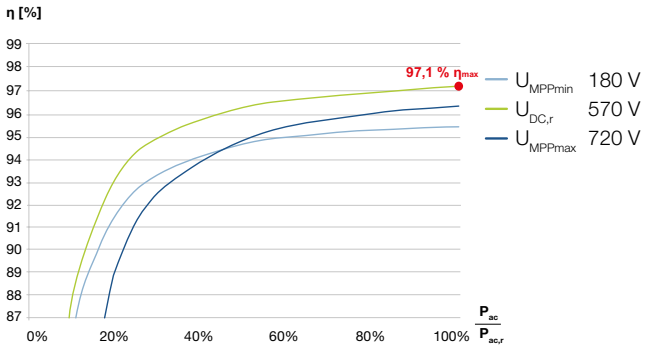
[2] Does not apply to all national annexes

[3] MPP range of 120 V...180 V (with limited current of 9.5-13 A). MPP range of 680 V...720 V (with limited current of 11 A). Detailed layout can be seen in KOSTAL (PIKO) Solar Plan.

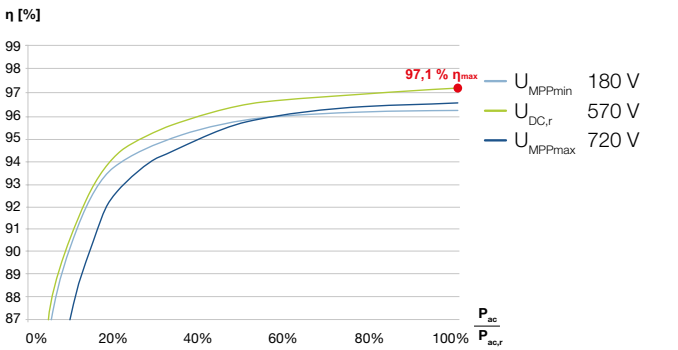
PLENTICORE plus available in 6 power classes

3.0	4.2	5.5	7.0	8.5	10

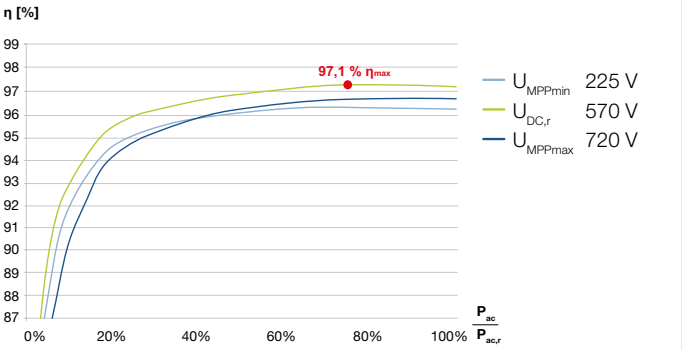
PLENTICORE plus 3.0



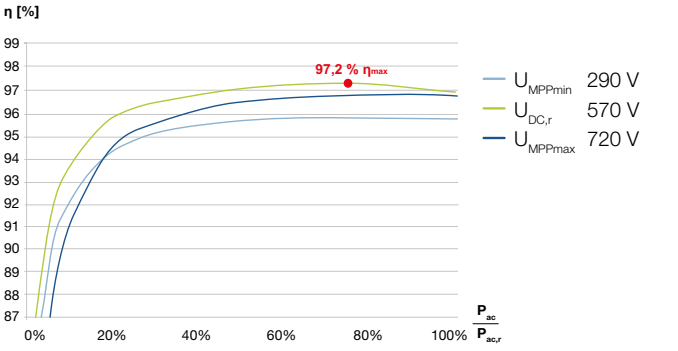
PLENTICORE plus 4.2



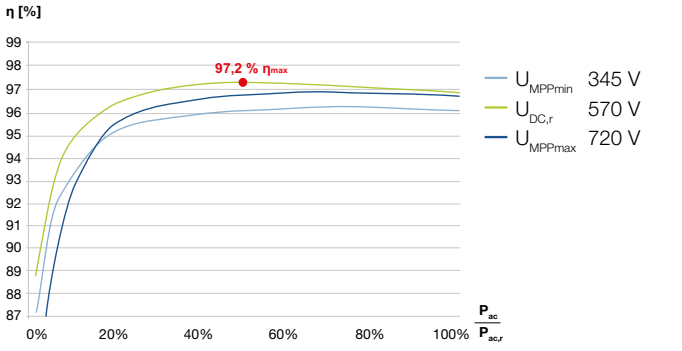
PLENTICORE plus 5.5



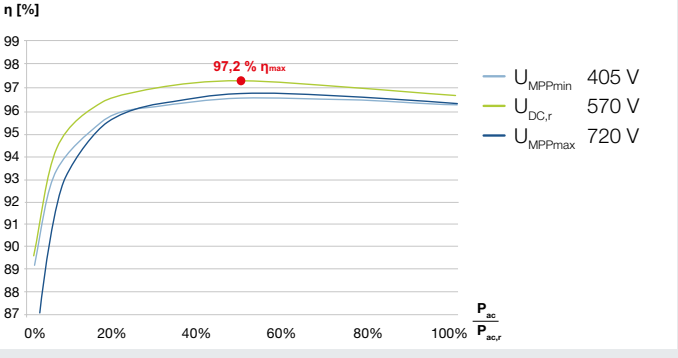
PLENTICORE plus 7.0



PLENTICORE plus 8.5



PLENTICORE plus 10



Services for our products

FAQs:
kostal-solar-electric.com/Service_Support

Product registration, KOSTAL Smart Warranty, warranty extension, battery activation code or purchase of accessories: shop.kostal-solar-electric.com

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