



Smart  
connections.

Data sheet

PLENTICORE plus 4.2-10

plus

# PLENTICORE plus: The new standard – versatile and smart

## All-in-one

PV hybrid inverter with battery input with optional activation code<sup>1)</sup>

Compatibility with various high-voltage batteries

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<sup>2)</sup>

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

Self-learning generation and consumption forecast – for optimum self-consumption

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

Prepared for additional battery charge via AC energy sources<sup>2)</sup>

## Easy to install

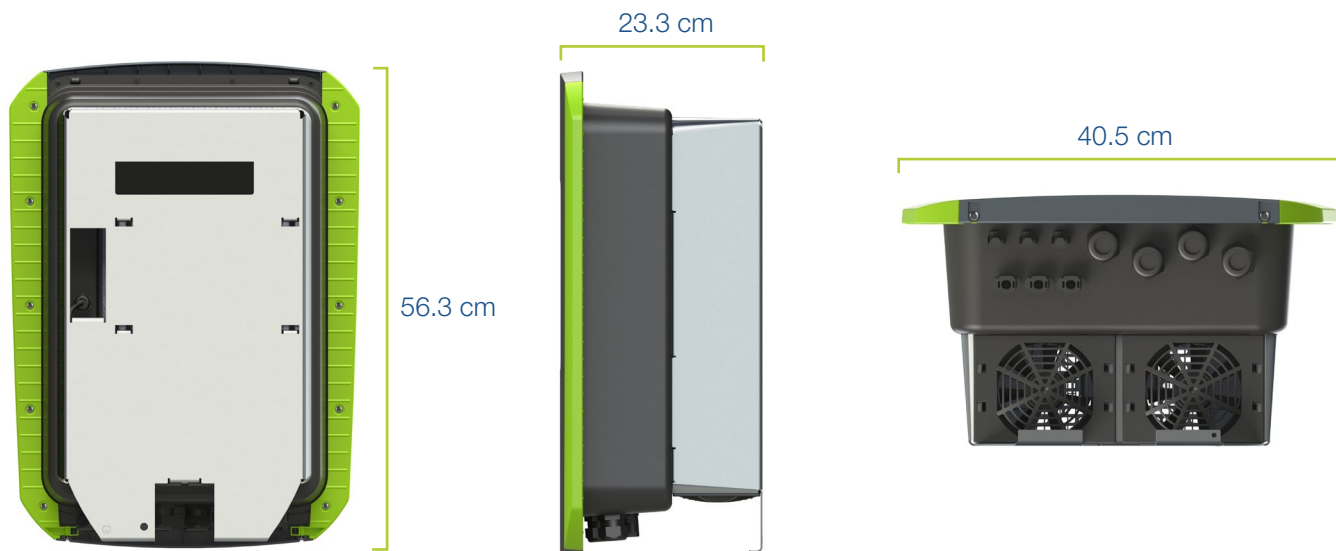
Simple device configuration using commissioning wizard

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

Auto update and remote support<sup>2)</sup>



# PLENTICORE plus: compact and rapidly deployable



<sup>1)</sup> Activation code battery available at: [shop.kostal-solar-electric.com](http://shop.kostal-solar-electric.com)

<sup>2)</sup> Available later on via software update

# Technical data PLENTICORE plus

Power class		4.2	5.5	7.0	8.5	10	
Input side (DC)	Max. PV power ( $\cos \varphi = 1$ )	kWp	6,3	8,25	10,5	12,75	15
	Max. PV power per DC input	kWp	6,5				
	Nominal DC power	kW	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	350...720 <sup>3)</sup>	450...720 <sup>3)</sup>	-	-	-
	MPP range at rated output in two-tracker operation ( $U_{MPPmin} - U_{MPPmax}$ )	V	180...720 <sup>3)</sup>	225...720 <sup>3)</sup>	290...720 <sup>3)</sup>	345...720 <sup>3)</sup>	405...720 <sup>3)</sup>
	MPP range at rated output in three-tracker operation ( $U_{MPPmin} - U_{MPPmax}$ )	V	140...720 <sup>3)</sup>	160...720 <sup>3)</sup>	195...720 <sup>3)</sup>	230...720 <sup>3)</sup>	275...720 <sup>3)</sup>
	MPP working voltage range ( $U_{MPPworkmin} - U_{MPPworkmax}$ )	V	120...720 <sup>3)</sup>				
	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 <sup>3)</sup>				
	Max. working voltage for battery input ( $U_{DCworkbatmax}$ )	V	500				
Max. charging current/discharging current at battery input	A	13/13					
Output side (AC)	Rated power, $\cos \varphi = 1$ ( $P_{AC,r}$ )	kW	4.2	5.5	7.0	8.5	10
	Max. apparent output power, $\cos \varphi_{adj}$	kVA	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	6.06	7.94	10.10	12.27	14.43
	Max. output current ( $I_{ACmax}$ )	A	6.74	8.82	11.23	13.63	16.04
	Short-circuit current (peak/RMS)	A	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				
$\eta$	Max. efficiency	%	97.1	97.1	97.2	97.2	97.2
	European efficiency	%	96.2	96.2	96.5	96.5	96.5
	MPP adjustment efficiency	%	99.9	99.9	99.9	99.9	99.9

		4.2	5.5	7.0	8.5	10		
Power class								
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 <sup>2</sup>	1.5...6	2.5...6		4...6		
	DC cable cross-section (min-max)	mm <sup>2</sup>						2.5...6
	Max. fuse protection on output side			B16/C16			B25/C25	
	Internal operator protection according to EN 62109-2						RCCB type B	
	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 <sup>3</sup> /h						184
	Max. noise emission	dB(A)						51
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)						✓	
	Warranty <sup>1)</sup>	Years						5 (2)
Optional warranty extension for (years)						5/10/15		
Directives/Certification <sup>2)</sup>						CE, GS, EN 62109-1, EN 62109-2, EN 60529, IEC 61683, CEI 0-21, EN 50438*, G83/2, IEC 61727, IEC 62116, RD 1699, TOR D4, UNE 206006 IN, UNE 206007-1 IN, UTE C15-712-1, VDE 0126-1-1, VDE-AR-N 4105		

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

<sup>1)</sup> 5-year warranty only after registration in the KOSTAL Solar online shop

<sup>2)</sup> Does not apply to all national annexes to EN 50438

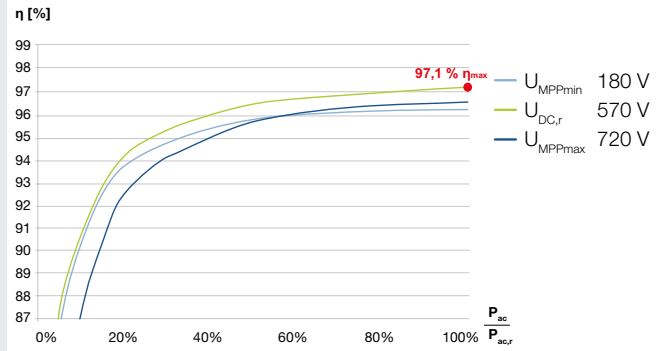
<sup>3)</sup> MPP range of 120 V...180 V (with limited current of 9.5-13 A), MPP range of 680 V...720 V (with limited current of 11 A). Detailed layout can be seen in KOSTAL (PIKO) Solar Plan.

# PLENTICORE plus available in 5 power classes

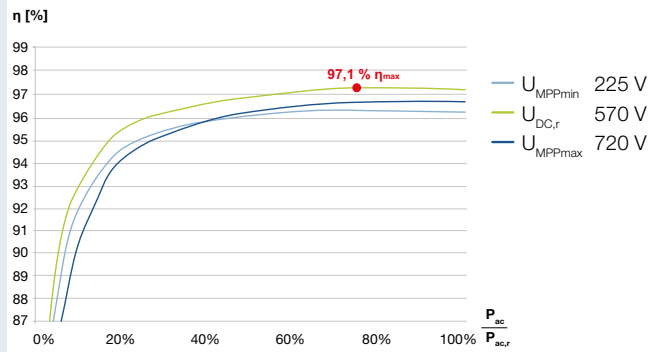


- 4.2
- 5.5
- 7.0
- 8.5
- 10

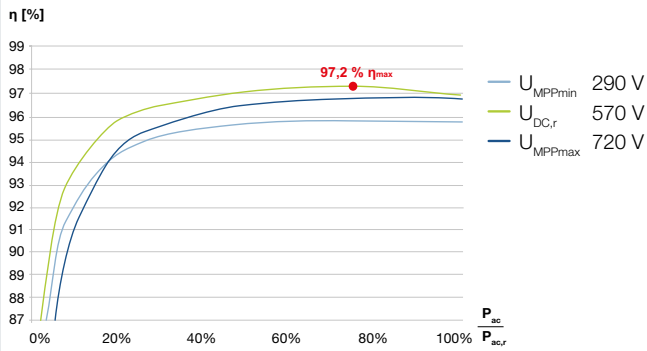
## PLENTICORE plus 4.2



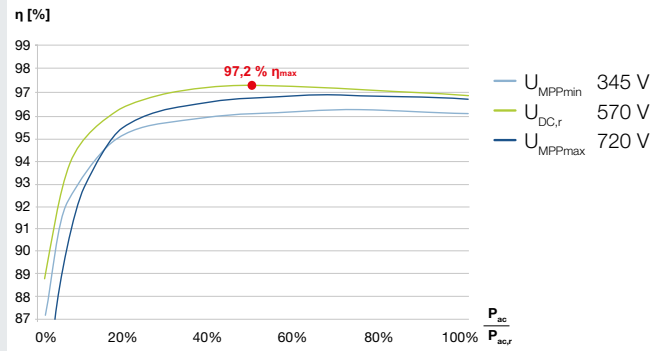
## PLENTICORE plus 5.5



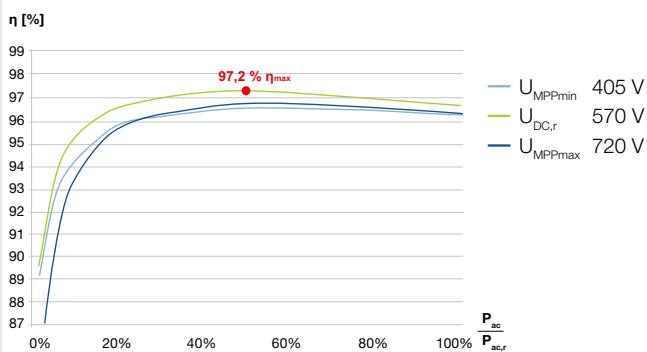
## PLENTICORE plus 7.0



## PLENTICORE plus 8.5



## PLENTICORE plus 10



### Services for our products

FAQs:  
[kostal-solar-electric.com/Service\\_Support](http://kostal-solar-electric.com/Service_Support)

Product registration, warranty extension,  
 battery activation code or purchase of accessories:  
[shop.kostal-solar-electric.com](http://shop.kostal-solar-electric.com)

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