

PLENTICORE plus

Hybrid inverter - 3.0–10 kW



Data sheet

PLENTICORE plus: The new standard – versatile and smart

All-in-one

- PV hybrid inverter with battery input with optional activation code ^{1, 2)}
- Compatibility with various high-voltage batteries ²⁾
- 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
- Free Solar Portal for monitoring the PV system
- Modbus/Sunspec (TCP) 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 ²⁾
- Self-learning generation and consumption forecast – for optimum self-consumption ²⁾
- Low conversion losses due to DC coupling and high-voltage battery
- Prepared for additional battery charge via AC energy sources ²⁾

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: Always at the cutting edge of technology

PLENTICORE plus: compact and rapidly deployable



56,3 cm



23,3 cm



40,5 cm

¹⁾ Activation code battery available at: shop.kostal-solar-electric.com

²⁾ 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($\cos \varphi = 1$)	kWp	4.5	6.3	8.25	10.5	12.75
	Max. PV power per DC input	kWp			6.5		
	Nominal DC power	kW	3.09	4.33	5.67	7.22	8.76
	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⁾
	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⁾
	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, $\cos \varphi = 1$ ($P_{AC,r}$)	kW	3.0	4.2	5.5	7.0	8.5
	Apparent output power ($S_{AC,Nom}, S_{AC,max}$)	kVA	3.0	4.2	5.5	7.0	8.5
	Min. output voltage (U_{ACmin})	V			320		
	Max. output voltage (U_{ACmax})	V			500		
	Rated output current ($I_{AC,r}$)	A	4.33	6.06	7.94	10.10	12.27
	Max. output current (I_{ACmax})	A	4.81	6.74	8.82	11.23	13.63
	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
	Grid connection				3N~, 230/400V, 50Hz		
	Rated frequency (f_r)	Hz			50		
	Min/max grid frequency (f_{min}/f_{max})	Hz			47/53		
	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	W			7.9		
Efficiency	Max. efficiency	%	97.1	97.1	97.1	97.2	97.2
	European efficiency	%	95.3	95.5	96.2	96.5	96.5
	MPP adjustment efficiency	%	99.9	99.9	99.9	99.9	99.9

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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)	
Interfaces	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		
	Ethernet LAN (RJ45)				1		
	Connection of energy meter for collecting energy data (Modbus RTU)				1		
Warranty	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 (Smart Warranty / Smart Warranty plus ¹⁾)	Years			10 (5 + 5)		
	Directives/Certification				CE, GS, CEI 0-21, CEI10/11, EN 62109-1, EN 62109-2, EN 60529, EN 50438 ²⁾ , EN 50549-1 ²⁾ , 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⁾ Activate your free warranty (Smart Warranty) now in the KOSTAL Solar online shop (shop.kostal-solar-electric.com). This does not affect your statutory warranty. You will find more information about the service and warranty conditions in the download area for your product.

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.

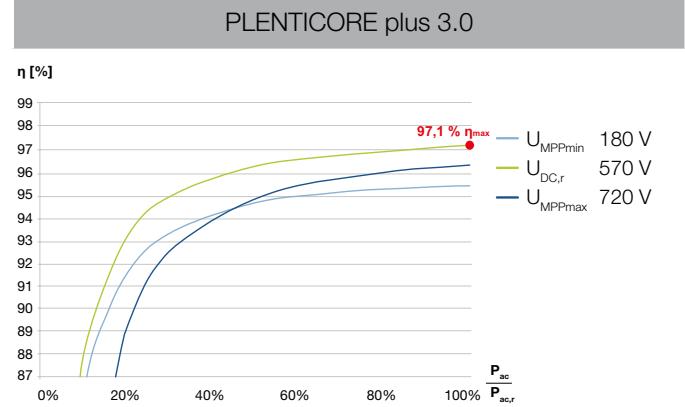
⁴⁾ UK G83/2 and G98-1 settings: The maximum output current is limited to 16 A @ rated AC grid voltage.

PLENTICORE plus available in 6 power classes



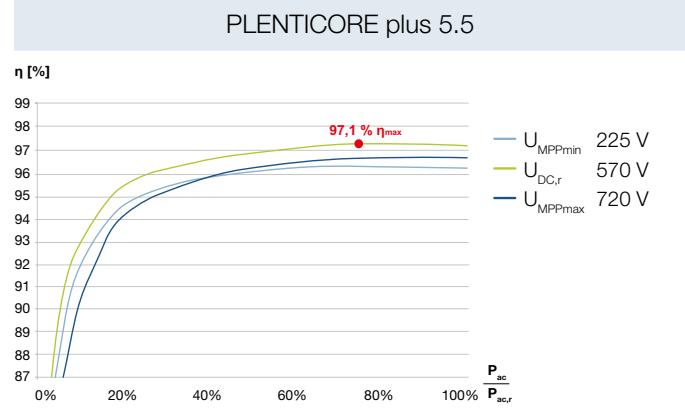
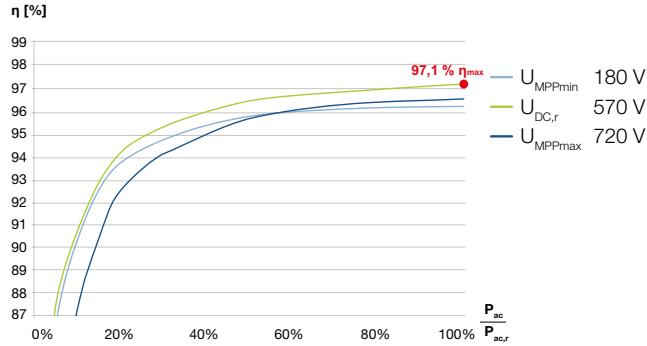
3.0 4.2 5.5 7.0 8.5 10

PLENTICORE plus 3.0



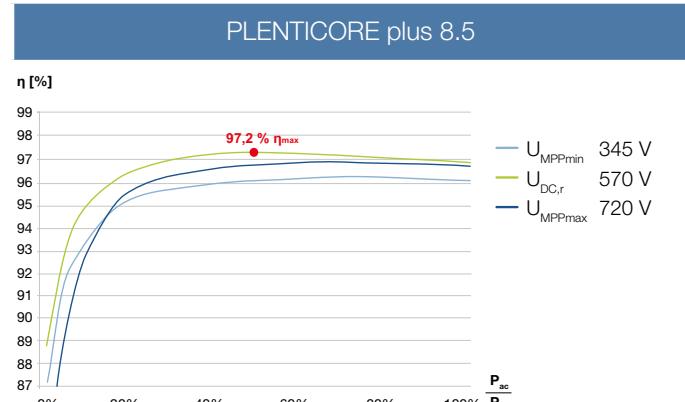
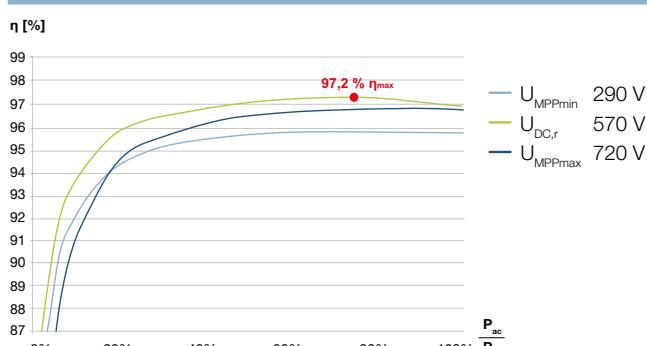
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PLENTICORE plus 4.2



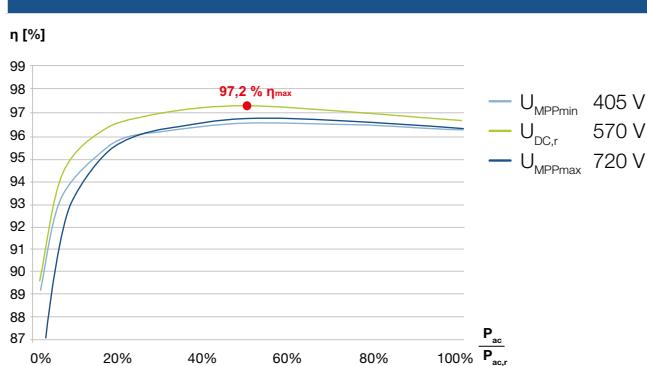
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PLENTICORE plus 7.0



3.0 4.2 5.5 7.0 8.5 10

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

Get in touch: service-solar@kostal.com

