SOLAR ELECTRIC

KOSTAL

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[1)]

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[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

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[2)]

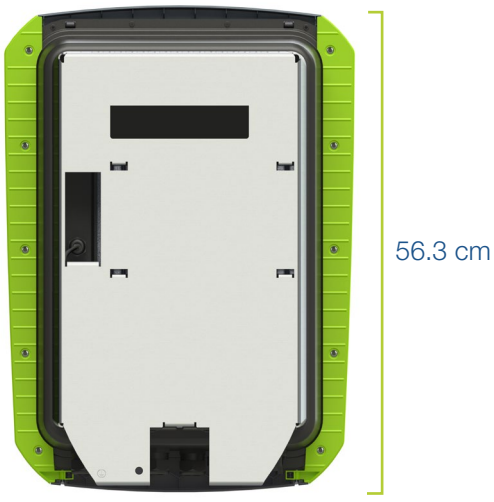
Easy to install

Simple device configuration using commissioning wizard

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

Auto update and remote support[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

Technical data PLENTICORE plus

	Power class		4.2	5.5	7.0	8.5	10
Input side (DC)	Max. PV power (cos φ = 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[3]	450...720[3]	-	-	-
	MPP range at rated output in two-tracker operation (U_{MPPmin} - U_{MPPmax})	V	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]	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	500				
	Max. charging current/discharging current at battery input	A	13/13				
Output side (AC)	Rated power, cos φ = 1 ($P_{AC,r}$)	kW	4.2	5.5	7.0	8.5	10
	Max. apparent output power, cos Φ, 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~, 400 V, 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	97.2	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

	Power class		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 (min-max)	mm^2	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^3/h	184				
	Max. noise emission	dBA	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[1]	Years	5 (2)				
	Optional warranty extension for (years)		5/10/15				
	Directives/Certification[2]		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. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

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

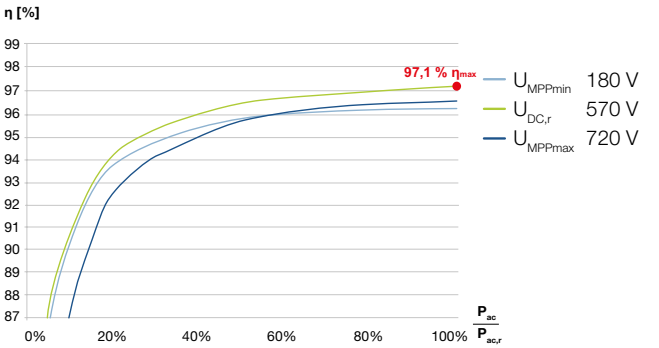
[2] Does not apply to all national annexes to EN 50438

[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.

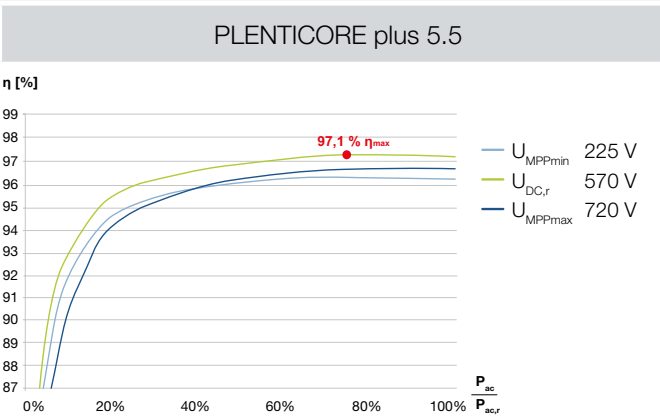
PLENTICORE plus available in 5 power classes

4.2	5.5	7.0	8.5	10

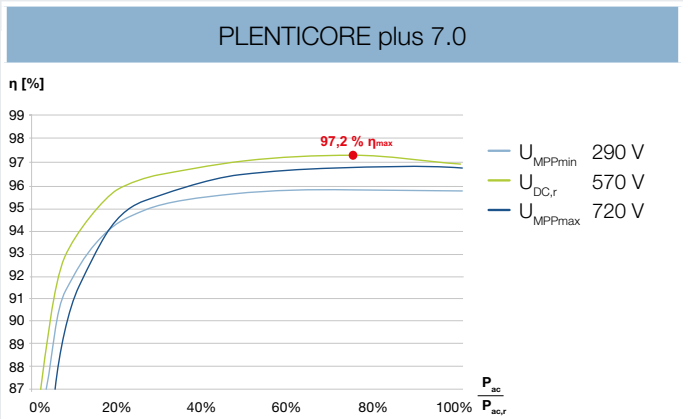
PLENTICORE plus 4.2



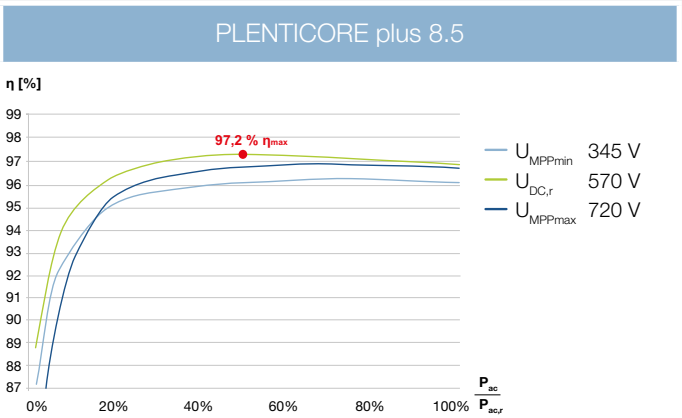
PLENTICORE plus 5.5



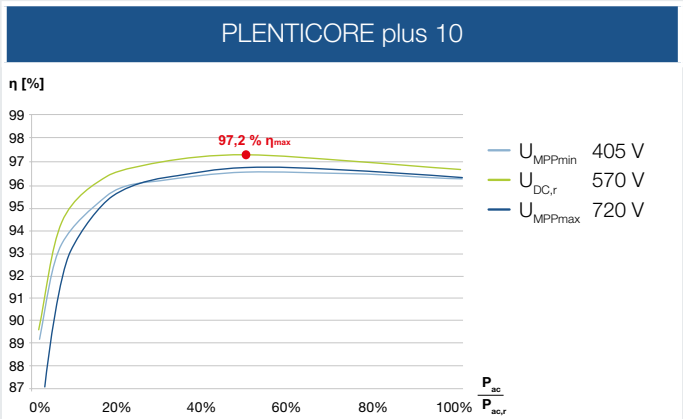
PLENTICORE plus 7.0



PLENTICORE plus 8.5



PLENTICORE plus 10



Services for our products

FAQs:
kostal-solar-electric.com/Service_Support

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

Get in touch: service-solar@kostal.com

KOSTAL

KOSTAL Solar Electric GmbH
Hanferstr. 6
79108 Freiburg i. Br.
Deutschland
Telefon: +49 761 47744 - 100
Fax: +49 761 47744 - 111

KOSTAL Solar Electric Ibérica S.L.
Edificio abm
Ronda Narciso Monturiol y Estarriol, 3 Torre B, despachos 2 y 3
Parque Tecnológico de Valencia
46980 Valencia
España
Teléfono: +34 961 824 - 934
Fax: +34 961 824 - 931

KOSTAL Solar Electric France SARL
11, rue Jacques Cartier
78280 Guyancourt
France
Téléphone: +33 1 61 38 - 4117
Fax: +33 1 61 38 - 3940

KOSTAL Solar Electric Hellas E.Π.E.
47 Steliou Kazantzidi st., P.O. Box: 60080 1st building – 2nd entrance
55535, Pilea, Thessaloniki
Ελλάδα
Τηλέφωνο: +30 2310 477 - 550
Φαξ: +30 2310 477 - 551

KOSTAL Solar Electric Italia Srl
Via Genova, 57
10098 Rivoli (TO)
Italia
Telefono: +39 011 97 82 - 420
Fax: +39 011 97 82 - 432

KOSTAL Solar Elektrik Turkey
Mahmutbey Mah. Taşocağı Yolu Cad.
No:3 (B Blok), Ağaoğlu My Office 212
Kat:16, Ofis No:269
Bağcılar - İstanbul / Türkiye
Telefon: +90 212 803 06 24
Faks: +90 212 803 06 25

www.kostal-solar-electric.com

04/2018 - EN - 12033584