SOLAR ELECTRIC

KOSTAL

PLENTICORE plus

Hybrid inverter - G2 3.0–10 kW

Data sheet

PLENTICORE plus G2: 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: control interfaces integrated as standard
- Future-proof: new functions via software update
- Display, data logger and system monitoring
- Free Solar Portal for monitoring the PV system
- 2 x LAN, WiFi, 4 x digital switching outputs for self-consumption control or event reporting, „SG Ready“ compatible, Evaluation of external overvoltage protection modules
- 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 via display or smartphone
- Safe installation due to clearly arranged, separate terminal compartment with Push-In terminals and protected power electronics
- Compatible with RCD type A
- Auto Update: Always at the cutting edge of technology

PLENTICORE plus G2: compact and rapidly deployable

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

[2)] Compatible energy meter required (see document Released energy meters in the download area for the product)

Technical data PLENTICORE plus G2

	PLENTICORE plus G2		3.0	4.2	5.5	7.0	8.5	10
	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					
	Max. system voltage (U_{DCmax})	V	1000					
	MPP range at rated output (U_{MPPmin}) [3]	V	180	180	225	290	345	405
	MPP range at rated output (U_{MPPmax}) [3]	V	720	720	720	720	720	720
	Working voltage range ($U_{DCworkmin}$ - $U_{DCworkmax}$) [4]	V	120...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					
	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
	Apparent output power ($S_{AC,Nom}$, $S_{AC,max}$)	kVA	3.0/3.0	4.2/4.2	5.5/5.5	7.0/7.0	8.5/8.5	10/10
	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	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~, 230/400 V, 50 Hz					
	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					
	Power factor for rated power (cos $\varphi_{AC,r}$)		1					
	Max. THD	%	3					
	Standby	W	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

	PLENTICORE plus G2		3.0	4.2	5.5	7.0	8.5	10
System data	Topology: Without galvanic isolation – transformerless		yes					
	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)		yes					
	Environmental category (indoor installation)		yes					
	UV resistance		yes					
	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)		yes					
	Independent disconnection device according to VDE 0126-1-1		yes					
	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		yes					
	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					
	Connection technology, interfaces		Push-In terminal					
Interfaces	Ethernet LAN (RJ45) / WiFi (IEEE 802.11b/g/n 2.4GHz)		2 / yes					
	Connection of energy meter for collecting energy data (Modbus RTU)		1					
	Digital inputs		Ripple control receiver or external battery control, CEI, OVP monitoring					
	Digital outputs		4 (24 V, 100 mA)					
	Webserver (user interface)		yes					
	Warranty (Smart Warranty / Smart Warranty plus[1])	Years	10 (5 + 5)					
	Directives/Certification		CE, GS, CEI 0-21, C10/11, EN 62109-1, EN 62109-2, EN 60529, EN 50438[2], EN 50549-1[2], NA/EEA, G98, G99, EIFS2018, IEC 61727, IEC 62116, RD 1699, RD 647, RFG, TF3.3.1, TOR Erzeuger, UNE 206006, UNE 206007-1, 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

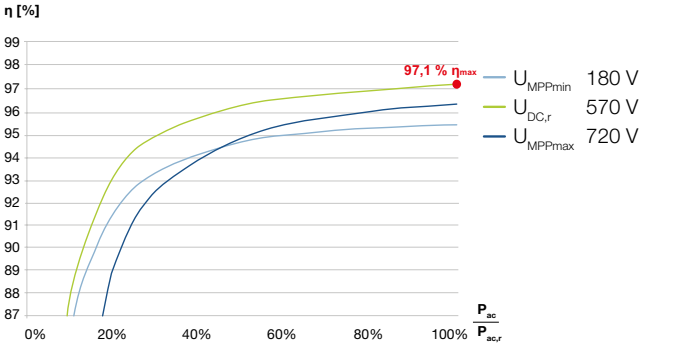
[3] MPP range at rated output: Outside the MPP range, MPP control takes place below the nominal power. Based on full occupancy of all MPP trackers.

[4] Working voltage range: No feed-in takes place outside the working voltage range.

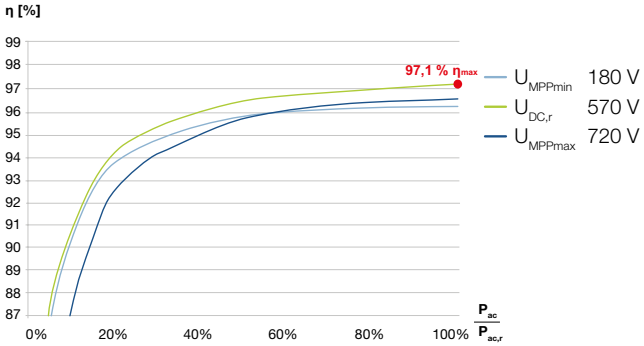
PLENTICORE plus G2 available in 6 power classes

3.0	4.2	5.5	7.0	8.5	10

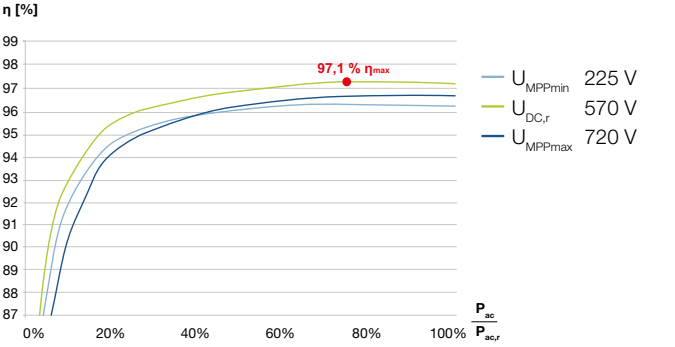
PLENTICORE plus 3.0 G2



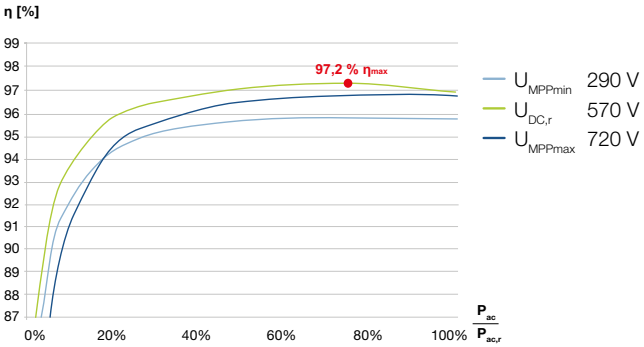
PLENTICORE plus 4.2 G2



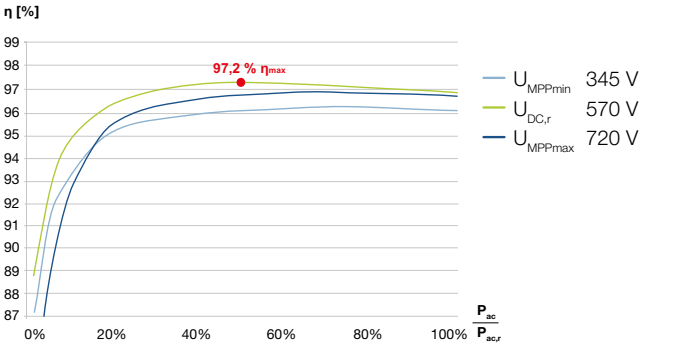
PLENTICORE plus 5.5 G2



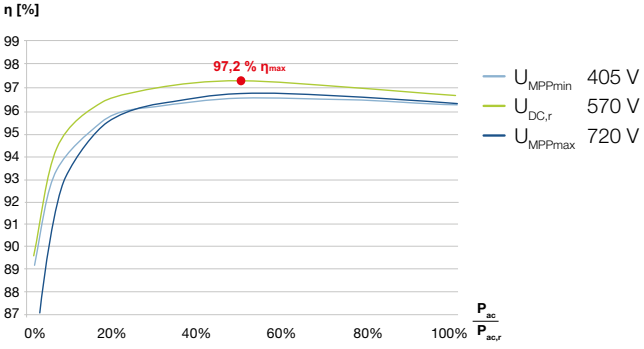
PLENTICORE plus 7.0 G2



PLENTICORE plus 8.5 G2



PLENTICORE plus 10 G2



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

www.kostal-solar-electric.com

07/2023 - EN - DOC02993348 - Subject to technical changes, errors excepted.
You can find current information at www.kostal-solar-electric.com. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany