

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



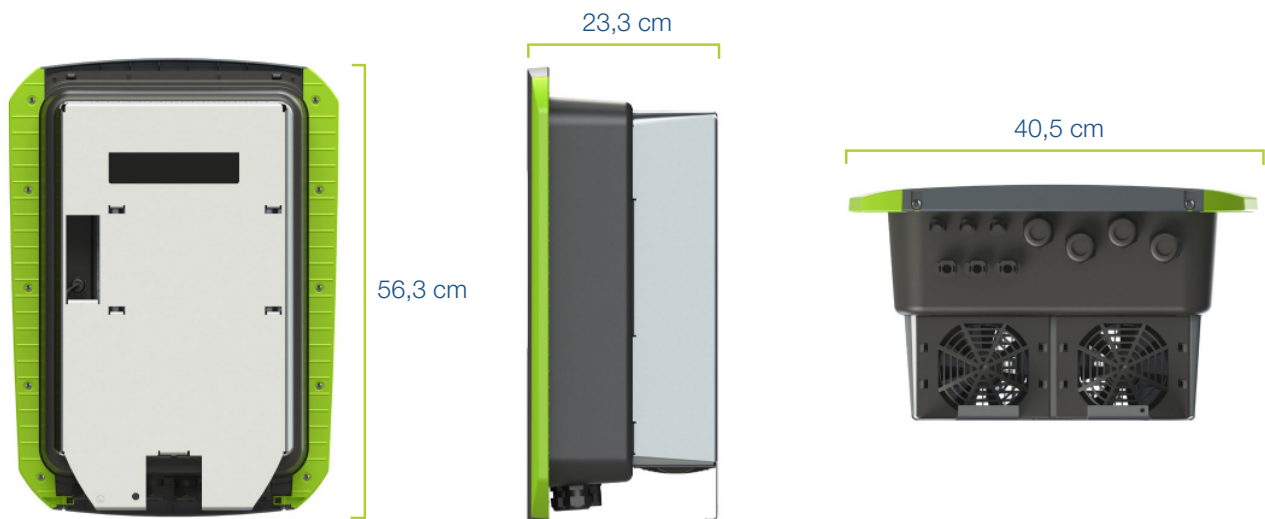
Smart performance

- 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

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 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	
	Apparent output power (S _{AC,Nom} , S _{AC,max})	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	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 ⁴⁾	
	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~, 230/400V, 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 φ _{AC,r})		0.8 ... 1						
	Power factor for rated power (cos φ _{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

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)	mm²	1.5...6			2.5...6	4...6
	DC cable cross-section (PV/BAT) (min-max)	mm²			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	m³/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		
Interfaces	Connection technology, DC side				SUNCLIX plug		
	Connection technology, AC side				Spring-type terminal strip		
	Connection technology, interfaces				Push-In terminal		
	Ethernet LAN (RJ45) / WiFi (IEEE 802.11b/g/n 2.4GHz)				2 / ✓		
	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)				✓		
	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 ³⁾ , 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 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 Solar Plan.

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