

PLENTICORE MP G3

Hybrid inverter monophase - 3.0 to 7.0 kW



Data sheet

PLENTICORE MP G3: For single-phase connection

All-in-one

- Can be used universally as PV, hybrid or battery inverter
- Optionally releaseable Battery input^{1, 2)}
- Optional power upgrade¹⁾
- Compatibility with various high-voltage batteries²⁾
- Backup power capable (backup function) with external switchover device
- 2-3 MPP trackers for maximum flexibility
- Extended MPP range - perfect for repowering

Easy to install

- Simple device configuration with commissioning wizard via display, smartphone with web browser or KOSTAL Solar App.
- Safe installation thanks to clearly arranged, separate terminal compartment with Push-In terminals and protected power electronics
- DC overvoltage protection type 2 optionally retrofittable
- Always up to date with the latest software thanks to AutoUpdate



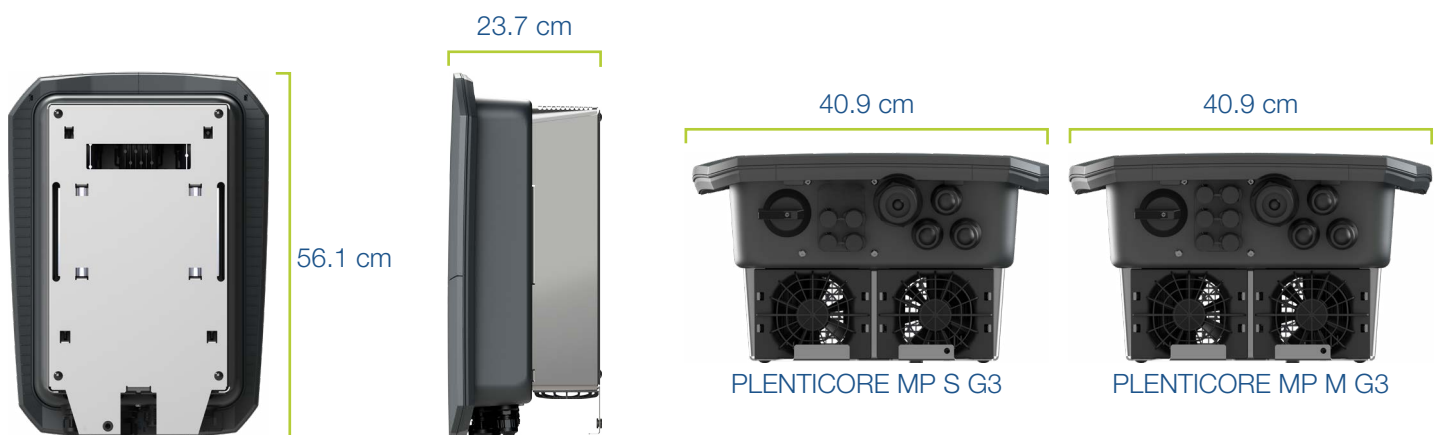
Smart performance

- Fast, self-learning shadow management for maximum yields
- Dynamic active power control and 24-hour home-consumption measurement²⁾
- Low conversion losses due to DC coupling and high-voltage battery
- High DC input currents (17A)
- Prepared for additional battery charge via AC energy sources²⁾

Smart connected

- Smart Communication Board: control interfaces integrated as standard
- Display, data logger and system monitoring
- Free KOSTAL Solar Portal and KOSTAL Solar App 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 SmartHome integration
- EEBus

PLENTICORE MP G3: compact and rapidly deployable



¹⁾ Optional battery and power upgrade available for a fee from your wholesaler.

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

PLENTICORE MP G3: Technical data

PLENTICORE MP G3			S			M				
Input side (DC)	Basic power	kW	3.0	-	-	4.6 ⁵⁾	5.0 ⁵⁾	-	-	
	Optional power upgrade level 1 ¹⁾	kW	-	3.6 ⁵⁾	4.0 ⁵⁾	-	-	6.0	-	
	Optional power upgrade level 2 ¹⁾	kW	-	-	-	-	-	-	7.0	
	Max. PV power	kWp	4.5	5.4	6.0	6.9	7.5	9.0	10.5	
	Max. PV power per DC input	kW	4.5	4.7	4.7	6.9	7.5	8.25	8.25	
	Nominal DC power	kW	3.07	3.68	4.09	4.69	5.1	6.12	7.14	
	Rated input voltage (U _{DC,r})	V	650							
	Start-up input voltage (U _{DCstart})	V	95							
	Max. system voltage (U _{DCmax})	V	1000							
	MPP range at rated output (U _{MPPmin}) ³⁾	V	85	125	125	95	105	125	145	
	MPP range at rated output (U _{MPPmax}) ³⁾	V	800	800	800	800	800	800	800	
	Working voltage range (U _{DCworkmin} - U _{DCworkmax}) ⁴⁾	V	75...900							
	Max. input current (I _{DCmax}) per DC input	A	17			17				
	Max. PV short-circuit current (I _{SC_PV}) per DC input	A	23.8			23.8				
	Number of DC inputs		2			3				
	Output side (AC)	Number of combined DC inputs (PV or battery)		1						
		Number of independent MPP trackers		2			3			
DC 3 – battery input optional										
Min. working voltage for battery input (U _{DCworkbatmin})		V	95							
Max. working voltage for battery input (U _{DCworkbatmax})		V	820							
Max. charging/discharging current at battery input		A	17/17 ⁷⁾							
Max. battery power DC input		kW	4.5	4.7	4.7	6.9	7.5	8.25	8.25	
Rated power, cos φ = 1 (P _{AC,r})		kW	3.0	3.6	4.0	4.6	5.0	6.0	7.0	
Rated power, cos φ = 0.9 (P _{AC,r}) ⁶⁾		kW	2.70	3.24	3.6	4.14	4.5	5.4	6.3	
Apparent output power (S _{AC,Nom} , S _{AC,max})		kVA	3.0/3.0	3.6/3.6	4.0/4.0	4.6/4.6	5.0/5.0	6.0/6.0	7.0/7.0	
Min. output voltage (U _{ACmin})		V	184							
Max. output voltage (U _{ACmax})		V	264.5							
Rated AC current (I _{AC,r})		A	13.0	15.7	17.4	20.0	21.7	26.1	30.4	
Max. output current (I _{ACmax})		A	19.3			32.0				
Short-circuit current (peak/RMS)		A	9.1/ 6.4	12.4/ 8.8	15.9/ 11.3	19.2/ 13.6	22.6/ 16.0	28.2/ 20.0	34.1/ 24.1	
Backup operation		Grid connection		~, 230V, 50Hz						
		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 φ _{AC,r})		0.8 ... 1 (ind./cap.)							
	Power factor for rated power (cos φ _{AC,r})		1							
	Max. THD	%	3							
	Standby	W	2.5							
	Backup power operation		~, 230V, 51 Hz							
	Nominal apparent power in backup mode ²⁾	kVA	4.0			7.0				
	Nominal power per phase	kW	4.0			7.0				
	Range cos φ		0...1							
	Start-up apparent power for min. 5 sec at U _{AC,r}	kVA	4.4			7.36				
	Max. output current	A	19.32			32.0				
	Start time with manual KOSTAL BackUp Switch	s	<5							
	Start time with automatic backup box	s	<30							
	Operating hours in backup mode	h	5000							

¹⁾ Optional battery and power upgrade available for a fee from your wholesaler.

²⁾ Nominal output power: The actual output power depends on the system and storage size.

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.

⁵⁾ Only one PLENTICOREIN is needed for the power upgrade 3.6 and 4.0. The basic power level 4.6 and 5.0 is country-dependent and is set via the country parameter set.

⁶⁾ Nominal power defined for Italy

⁷⁾ Limited charge/discharge current 7.1–17 A (in the voltage range 75–175 V)

PLENTICORE MP G3			S			M			
η	Max. efficiency	%	97.7	97.7	97.7	98.0	98.0	98.0	98.0
	European efficiency	%	96.5	96.6	96.7	96.9	97.0	97.1	97.2
	MPP adjustment efficiency	%				99.9			
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			
	DC overvoltage protection module type 2 - optionally retrofittable					yes			
	Degree of contamination					4			
	Environmental category (outdoor installation)					yes			
	Environmental category (indoor installation)					yes			
	UV resistance					yes			
	AC cable diameter (min-max)	mm				10...28			
	AC cable cross-section (min-max)	mm²	2.5 ...10			4...10			
	DC cable cross-section (PV/BAT) (min-max)	mm²	2.5...6 / 6			2.5...6 / 6			
	Max. fuse protection on output side according to IEC 60898-1		B25/C25			B32/C32			
	Internal operator protection according to EN 62109-2					RCCB type B			
	Independent disconnection device according to VDE 0126-1-1					yes			
	Mechanical DC disconnecter according to IEC 60947-3					yes			
	Height/width/depth	mm				561 / 409 / 237			
	Weight	kg	18.6			20.3			
	Cooling principle – regulated fans					yes			
	Max. air throughput	m³/h				184			
	Noise emission (typical)	dB(A)				< 39			
	Ambient temperature	°C				-20...60			
	Max. installation altitude above sea level	m				2000			
	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)					yes			
	Connection external switching device (backup)					yes			
	Digital inputs					Ripple control receiver or external battery control, CEI, OVP monitoring			
	Digital outputs					4 (24 V, 100 mA)			
	Clamping range, connection terminals, interfaces	mm²				0.2 ... 1.5			
	Webserver (user interface)					yes			
	Warranty (Smart Warranty / Smart Warranty plus ¹⁾)	Years				10 (5 + 5)			
	Directives/Certification ²⁾					CE, GS, CEI 0-21, C10/11, EN 62109-1, EN 62109-2, EN 60529, EN 50438, EN 50549-1, NA/EEA, G98, G99, EIFS2018, IEC 61727, IEC 62116, RD 1699, RD 647, RFG, 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.

¹⁾ Activate your free warranty (Smart Warranty) now in the KOSTAL Solar online shop (shop.kostal-solar-electric.com). For Smart Warranty Plus, you must also register your device in our KOSTAL Solar portal. 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⁾ Information on available Directive/parameter sets can be found in the product download area in the document 'Initial commissioning - Country setting'.

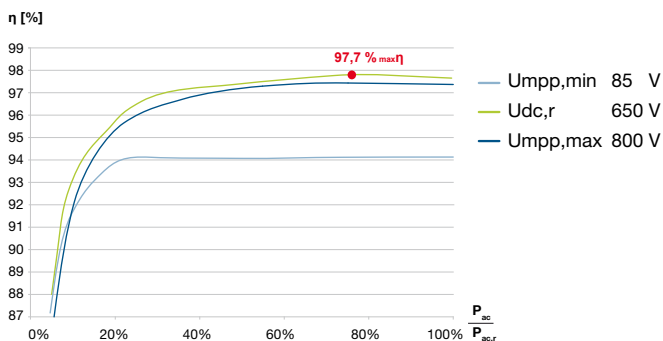
Directive EN50438, EN50549-1: does not apply to all national annexes

PLENTICORE MP G3: Overview of all power classes

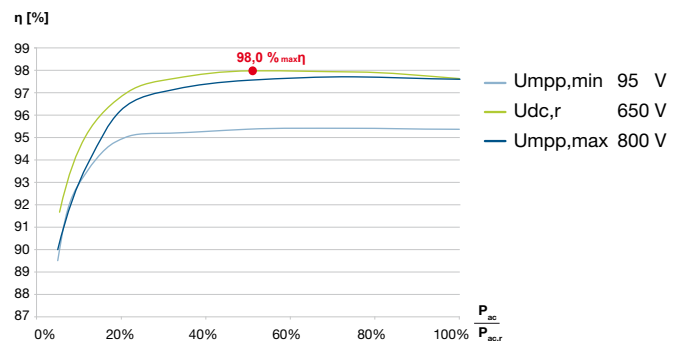


Purchase the PLENTICORE MP inverter with a basic power of S or M.
The basic power can be optionally upgraded in two stages.
This gives you maximum flexibility when planning your system - even at a later date without replacing the inverter.

PLENTICORE MP S G3



PLENTICORE MP M G3



PLENTICORE MP G3

S
3.0 - 4.0 kW

M
4.6 - 7.0 kW

Basic power [kW]

3.0

4.6/5.0*

Optional
power upgrade [kW]
Level 1

3.6*

6.0

4.0*

Optional
power upgrade [kW]
Level 2

-

7.0



Optional battery and power upgrade available for a fee from your wholesaler.

* PLENTICORE MP S G3: Only one PLENTICOIN is needed for power upgrades from 3.6 to 4.0.
PLENTICORE MP M G3: The basic power level 4.6 and 5.0 is country-dependent and is set via the country parameter set.

Services for our products

Activation of the KOSTAL Smart Warranty via shop.kostal-solar-electric.com
You can find all further information at www.kostal-solar-electric.com

