

# PIKO CI

Solar Inverter 100 kW

available from  
Q4/2023



Data sheet

Draft

# PIKO CI: Smart Power – Optimised costs and high levels of safety



## Smart Project Design

- Optimised generator design with system voltage of up to 1100 V
- Integrated KOSTAL Smart AC Switch takes the place of the external circuit breaker
- Simple DC installation at an attractive cost without any string distribution boxes
- Generator is disconnected on site by integrated DC voltage separator
- Over-assignment of up to 50% (DC to AC) permits flexible generator design

## Smart Performance

- Maximum energy yield thanks to high certified efficiency
- The connected PV strings are monitored in pairs for optimum monitoring and service
- Integrated, certified grid service functions ensure reliable operation

## Smart Connected

- Simple communication (daisy chain) via dual LAN interface (RJ45) with integrated switch
- Tried and tested communication via RS485 bus integrated as standard
- Compatible with many parc controllers and data loggers, so you can use the monitoring system you prefer
- Trouble-free use in direct marketing thanks integrated feed management
- Integrated data loggers back system information up at all times

## Smart Installation

- Optimum protection from dust and water for tough outdoor use (protection class IP66)
- Low weight for simple transport and installation
- Quick, uncomplicated, and tool-free AC and DC installation
- Protection against overvoltage on the AC and DC side
- Cost-optimised 4-wire AC connection, neutral wire not applicable in symmetrical grids

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PIKO CI		100	
Power class		100	
Input side (DC)	Max. PV power ( $\cos \varphi = 1$ )	kWp	150
	Nominal DC power	kW	101.6
	Rated input voltage ( $U_{DC,r}$ )	V	600
	Start-up input voltage ( $U_{DCstart}$ )	V	250
	Max system voltage ( $U_{DCmax}$ )	V	1100
	MPP range at rated output ( $U_{MPPmin} - U_{MPPmax}$ ) <sup>3)</sup>	V	540...800
	Working voltage range ( $U_{DCworkmin} - U_{DCworkmax}$ ) <sup>4)</sup>	V	200...1000
	Max. input current ( $I_{DCmax}$ ) per MPPT	A	MPPT 1-3: 40 / MPPT 4-8: 32
	Max. DC short-circuit current ( $I_{SC\_PV}$ )	A	375 (MPPT 1-3: 50 / MPPT 4-8: 45)
	Max. DC current per DC terminal ( $I_{Stringmax}$ )	A	20
	Number of DC inputs		16
	Number of independent MPP trackers		8
	Output side (AC)	Rated power, $\cos \varphi = 1$ ( $P_{AC,r}$ )	kW
Apparent output power ( $S_{ACnom} / S_{ACmax}$ )		kW	100 / 111
Min. output voltage ( $U_{ACmin}$ )		V	322
Max. output voltage ( $U_{ACmax}$ )		V	520
Rated AC current ( $I_{AC,r}$ )		A	145
Max. output current ( $I_{ACmax}$ )		A	168.8
Short-circuit current (RMS)		A	tbd
Grid connection			3N~, 230/400V, 50 Hz
Rated frequency ( $f_r$ )		Hz	50
Grid frequency ( $f_{min}/f_{max}$ )		Hz	45/55
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 (night-time consumption)	W	<1	
$\eta$	Max. efficiency	%	98.4
	European efficiency	%	98.2
	MPP adjustment efficiency	%	99.9

PIKO CI		100
Topology: Without galvanic isolation – transformerless		yes
Protection class in accordance with EN 60529		IP 66
Protective class in accordance with EN 62109-1		I
Oversoltage category in accordance with IEC 60664-1, input side (PV generator)		II
Oversoltage category in accordance with IEC 60664-1, output side (grid connection)		III
DC/AC oversoltage protection		Typ 2 (exchangeable)
Degree of contamination		4
Environmental category (outdoor installation)		yes
Environmental category (indoor installation)		yes
UV resistance		yes
AC cable diameter (min-max)	mm	24...69
AC cable cross-section (min-max)	mm <sup>2</sup>	Copper: 70...240 / Aluminium: 95...240
DC cable cross-section (min-max)	mm <sup>2</sup>	4...6
Max. fuse protection on output side		B200 / C200
Internal operator protection in accordance with EN 62109-2		RCMU/RCCB type B
Automatic switching device integrated in accordance with VDE V 0126-1-1		yes
Height/width/depth	mm	678/936/365
Weight	kg	93
Cooling principle – regulated fans		yes
Max. air throughput	m <sup>3</sup> /h	tbd
Typical noise emission	dB(A)	65
Ambient temperature	°C	-25...60
Max. installation altitude above sea level	m	4000
Relative humidity	%	0...100
Connection technology, DC side		Amphenol plug H4
Connection technology, AC side (bolt)		M12
Ethernet LAN TCP/IP (RJ45)		2
WiFi		yes
RS485		2
Bluetooth		yes
Ext. disconnection		yes
Digital inputs		4
Communication at night		yes
Warranty (Smart Warranty <sup>1)</sup> )	Years	5
Warranty extension <sup>2)</sup>	Years	5
Directives/Certification (*does not apply to all national annexes to EN 50438)		EN62109-1, EN62109-2, IEC 62920, VDE-AR-N 4105:2018, VDE V 0124-100, PO12.2, RD 244:2019, UNE 217001, EN 50549-1* -2*, CEI0-16 2019, CEI0-21 2019 >11,08kW, UK G99/1-4 LV, IRR-DCC MV 2015, IEC61727/62116

Subject to technical changes. Errors excepted. You can find current information at [www.kostal-solar-electric.com](http://www.kostal-solar-electric.com). Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

<sup>1)</sup> Activate your free warranty (Smart Warranty) now in the KOSTAL Solar online shop ([shop.kostal-solar-electric.com](http://shop.kostal-solar-electric.com)). This does not affect your statutory warranty.

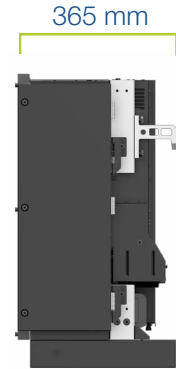
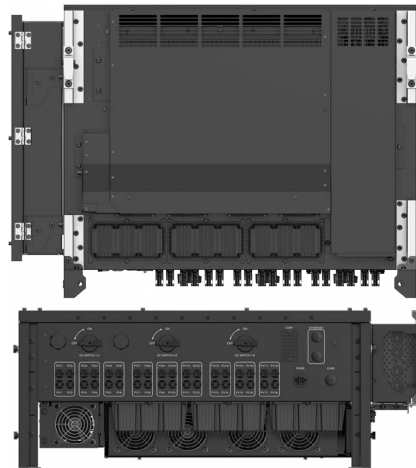
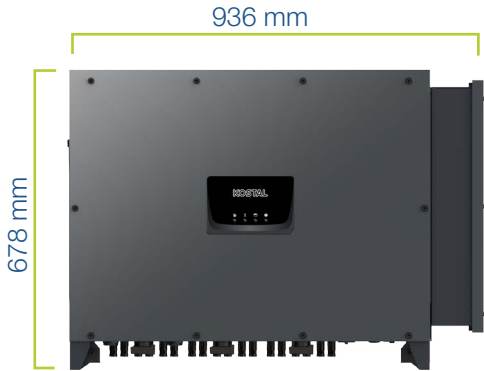
You will find more information about the service and warranty conditions in the download area for your product.

<sup>2)</sup> Available subject to a charge from the KOSTAL Solar online shop ([shop.kostal-solar-electric.com](http://shop.kostal-solar-electric.com))

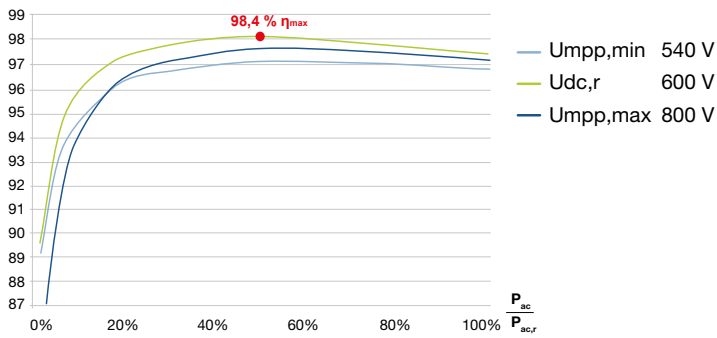
<sup>3)</sup> MPP range at rated output: Outside the MPP range, MPP control takes place below the nominal power. Based on full occupancy of all MPP trackers.

<sup>4)</sup> Working voltage range: No feed-in takes place outside the working voltage range.

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Services for our products

Activation of the KOSTAL Smart Warranty via [shop.kostal-solar-electric.com](http://shop.kostal-solar-electric.com)  
You can find all further information at [www.kostal-solar-electric.com](http://www.kostal-solar-electric.com)

