

# PIKO CI

Solar Inverter 30/50/60 kW



Data sheet

# 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 (>98%)
- In the event of an error, individual strings are shut down to maintain high availability
- 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 plant 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 IP65)
- 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, no neutral wire

# Technical data PIKO CI

PIKO CI		30	50	60	
Input side (DC)	Max. PV power ( $\cos \varphi = 1$ )	kWp	45	75	90
	Nominal DC power	kW	30	50	60
	Rated input voltage ( $U_{DC,r}$ )	V	620	620	620
	Start-up input voltage ( $U_{DCstart}$ )	V	250	250	250
	Max system voltage ( $U_{DCmax}$ )	V	1000	1100	1100
	MPP range at rated output ( $U_{MPPmin} - U_{MPPmax}$ ) <sup>4)</sup>	V	480...800	540...800	540...800
	Working voltage range ( $U_{DCworkmin} - U_{DCworkmax}$ ) <sup>5)</sup>	V	180...960	200...960	200...960
	Max. input current ( $I_{DCmax}$ ) per MPPT <sup>3)</sup>	A	DC 1-3: 40.5 DC 4-6: 40.5	DC 2-4: 39 DC 6-8: 39 DC 10-11: 26 DC 13-14: 26	DC 2-4: 39 DC 6-8: 39 DC 9-11: 39 DC 12-14: 39
	Max. DC short-circuit current ( $I_{SC\_PV}$ )	A	90 (45/45)	150 (45/45/30/30)	180 (45/45/45/45)
	Max. DC current per DC terminal ( $I_{stringmax}$ ) <sup>3)</sup>	A	14	18	18
	Internal DC string fuses	A	20 (10 x 38 mm, gPV)	20 (10 x 38 mm, gPV)	20 (10 x 38 mm, gPV)
	Number of DC inputs		6	10	12
	Number of independent MPP trackers		2	4	4
Output side (AC)	Rated power, $\cos \varphi = 1$ ( $P_{AC,r}$ )	kW	30	50	60
	Nominal apparent power ( $S_{ACnom}$ )	kW	30	50	60
	Max. apparent output power ( $S_{ACmax}$ )	kVA	33	55	66
	Min. output voltage ( $U_{ACmin}$ )	V	277	277	277
	Max. output voltage ( $U_{ACmax}$ )	V	520	520	520
	Rated current ( $I_{nom}$ )	A	43.3	72.2	86.6
	Max. output current ( $I_{ACmax}$ )	A	48	83	92
	Short-circuit current (RMS)	A	48	83	92
	Grid connection		3N~, 230/400V, 50 Hz		
	Rated frequency ( $f_r$ )	Hz	50		
	Grid frequency ( $f_{min}/f_{max}$ )	Hz	47/53		
	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	%	98.2	98.3	98.3
	European efficiency	%	97.9	98.1	98.1
	MPP adjustment efficiency	%	99.9	99.9	99.9

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System data	Topology: Without galvanic isolation – transformerless		✓		
	Protection class in accordance with EN 60529		IP 65		
	Protective class in accordance with EN 62109-1		I		
	Overvoltage category in accordance with IEC 60664-1, input side (PV generator)		II		
	Overvoltage category in accordance with IEC 60664-1, output side (grid connection)		III		
	DC/AC overvoltage protection		Typ 2		
	Degree of contamination		4		
	Environmental category (outdoor installation)		✓		
	Environmental category (indoor installation)		✓		
	UV resistance		✓		
	AC cable diameter (min-max)	mm	22...32	35...50	
	AC cable cross-section (min-max)	mm <sup>2</sup>	10...25	35...50	35...50
	DC cable cross-section (min-max)	mm <sup>2</sup>	4...6		
	Max. fuse protection on output side		B63 / C63	B125 / C125	B125 / C125
	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		✓		
	Height/width/depth	mm	470/555/270	710/885/285	710/855/285
	Weight	kg	41	83	83
	Cooling principle – regulated fans		✓		
	Max. air throughput	m <sup>3</sup> /h	185	411	
Typical noise emission	dB(A)	50	<63		
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)		M5	M8		
Interfaces	Ethernet LAN TCP/IP (RJ45)		2		
	W-LAN		✓		
	RS485		1		
	Digital inputs		4		
	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, VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, PO12.2, RD 244:2019, UNE 217001, EN 50549-1 -2, CEIO-16 2019, CEIO-21 2019 >11,08kW, UK G99/1-4 LV, IRR-DCC MV 2015, IEC61727/62116			

<sup>1)</sup> 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.

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

<sup>3)</sup> Valid from item number: PIKO CI 30 - 10534223, PIKO CI 50 - 10534084, PIKO CI 60 - 10534085

<sup>4)</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>5)</sup> Working voltage range: No feed-in takes place outside the working voltage range.

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

# PIKO CI - The best choice for your project

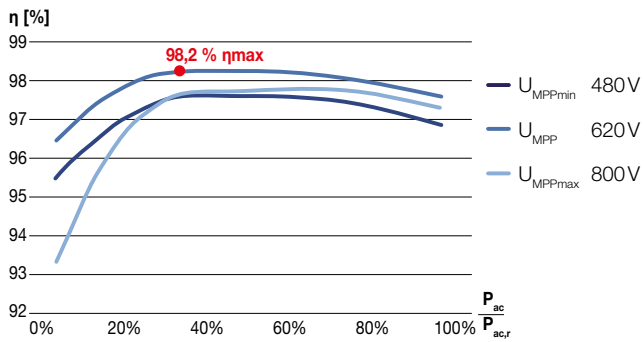
## PIKO CI 30



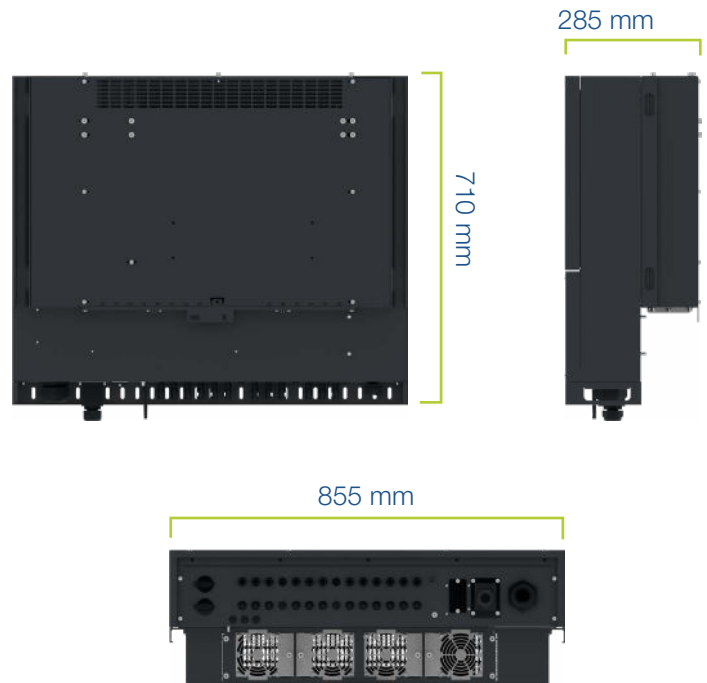
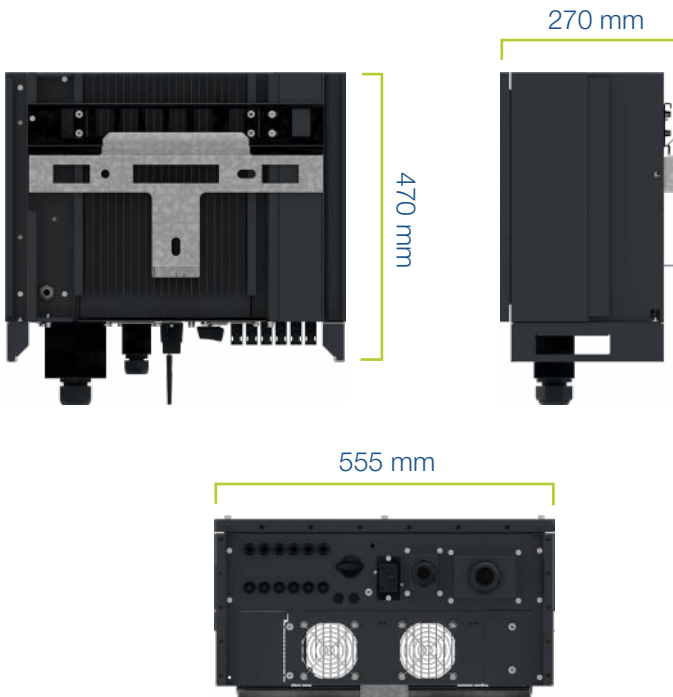
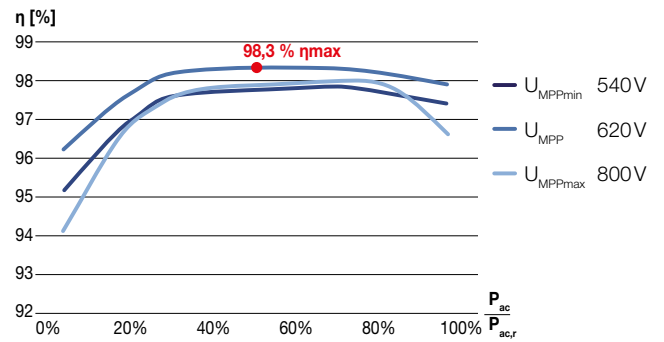
## PIKO CI 50/ 60



### Efficiency characteristic PIKO CI 30



### Efficiency characteristic PIKO CI 50 / 60



## 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)

