



Smart  
connections.

Data sheet

PIKO CI

CI

# 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

Power class		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
	Input voltage range ( $U_{DCmin} - U_{DCmax}$ )	V	180...1000	200...1100	200...1100
	MPP range at rated output ( $U_{MPPmin} - U_{MPPmax}$ )	V	480...800	540...800	540...800
	MPP working voltage range ( $U_{MPPworkmin} - U_{MPPworkmax}$ )	V	180...960	200...960	200...960
	Max. working voltage ( $U_{DCworkmax}$ )	V	960	960	960
	Max. input current ( $I_{DCmax}$ ) per MPPT	A	DC 1-3: 37,5 DC 4-6: 37,5	DC 1-3: 33 DC 4-6: 33 DC 7-8: 22 DC 9-10: 22	DC 1-3: 33 DC 4-6: 33 DC 7-9: 33 DC 10-12: 33
	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	A	14		
	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
	Max. active output power, $\cos \varphi = 1$ ( $P_{AC,max}$ )	kW	33	55	66
	Max. apparent output power, $\cos \varphi,_{adj}$	kVA	33	55	66
	Min. output voltage ( $U_{ACmin}$ )	V	277	277	277
	Max. output voltage ( $U_{ACmax}$ )	V	520	520	520
	Rated output current	A	48	83	90
	Max. output current ( $I_{ACmax}$ )	A	48	83	92
	Short-circuit current (peak/RMS)	A	48	83	92
	Grid connection		3N~, 400V, 50/60 Hz		
	Rated frequency ( $f_r$ )	Hz	50		
	Grid frequency ( $f_{min}/f_{max}$ )	Hz	47.5/52		
	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

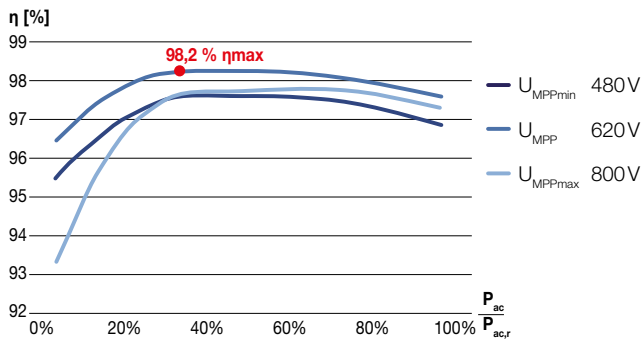
Power class		30	50	60	
System data	Topology: Without galvanic isolation – transformerless		✓		
	Protection class in accordance with EN 60529		IP 65		
	Protective class in accordance with EN 62109-1		I		
	Overvoltage category in accordance with IEC 60664-1, input side (PV generator)		II		
	Overvoltage 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)		M6	M8		
Interfaces	Ethernet LAN TCP/IP (RJ45)		2		
	W-LAN		✓		
	RS485		1		
	Digital inputs		4		
KOSTAL Smart Warranty / Warranty <sup>1)</sup>	Years	5 (2)			
Directives/Certification (*does not apply to all national annexes to EN 50438)		EN62109-1, EN62109-2, VDE-AR-N 4105:2018, 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			

<sup>1)</sup> KOSTAL Smart Warranty: 5-year warranty only after registration in the KOSTAL Solar online shop

## PIKO CI 30



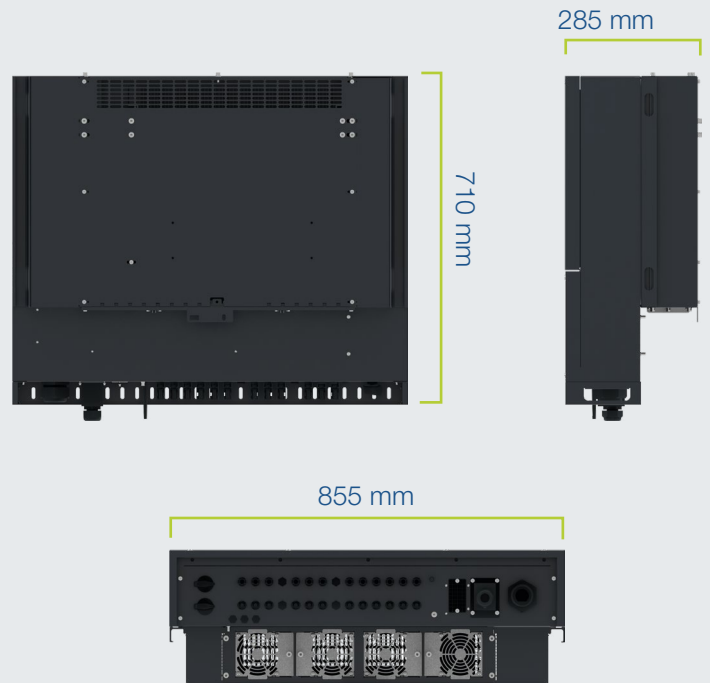
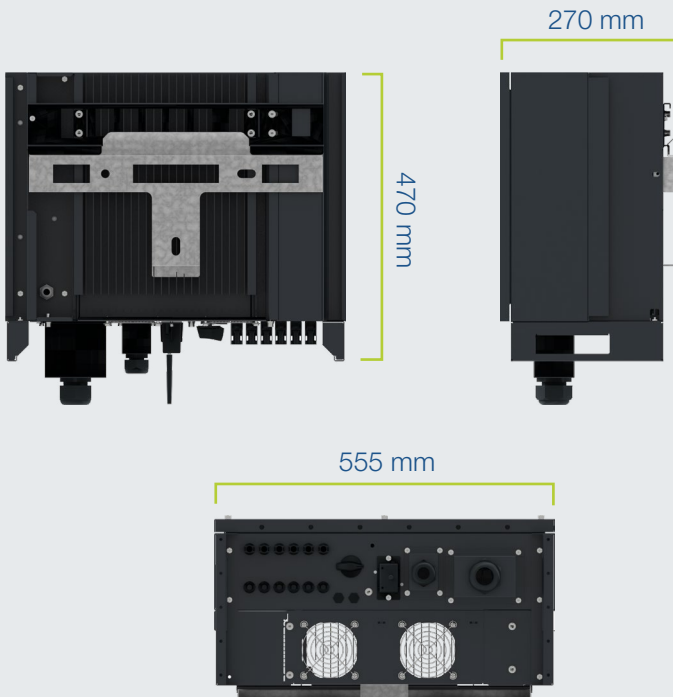
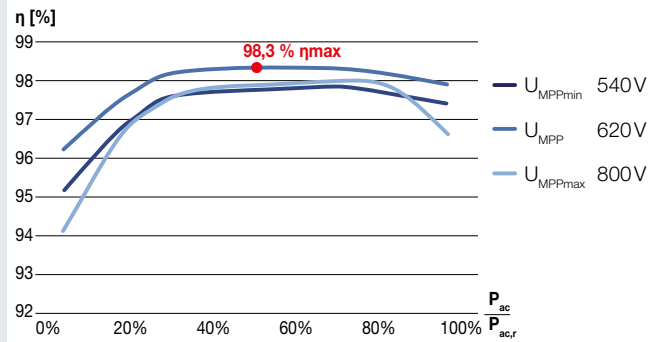
Efficiency characteristic PIKO CI 30



## PIKO CI 50 / 60



Efficiency characteristic PIKO CI 50 / 60



### Services for our products

FAQs: [kostal-solar-electric.com/Service\\_Support](http://kostal-solar-electric.com/Service_Support)

Product registration, KOSTAL Smart Warranty, warranty extension or purchase of accessories: [shop.kostal-solar-electric.com](http://shop.kostal-solar-electric.com)

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