

# PIKO

## 10-20



Smart connections.

Data sheet

# PIKO inverter: flexible, communicative and practical

## Flexible in use

- 3-phase feed-in
- Up to 3 MPP trackers suited to the layout of almost all roofs
- Wide input voltage range for flexible string design

## Smart connected

- Standard integrated communication package with data logger, system monitoring and Webserver
- Free Solar Portal and Solar App for monitoring the PV system
- Many interfaces without additional components: Display, network and control interfaces



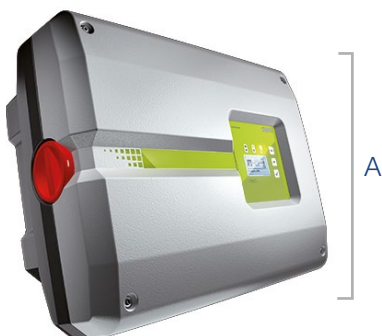
## Smart performance

- Fast, self-learning shadow management – adapts individually to the installation site
- Dynamic active power control and energy consumption measurement via optional KOSTAL Smart Energy Meter
- Integrated KOSTAL Smart AC Switch takes the place of the external circuit breaker (only Piko 15-20)

## Easy to install

- Simple device configuration using commissioning wizard
- Integrated switch contact for self-consumption optimisation
- Integrated electronic DC switch
- Quick, uncomplicated and tool-free AC and DC installation

## PIKO 10-20: compact and rapidly deployable



B

C

PIKO 10-12: (A) 44.5 cm, (B) 58.0 cm, (C) 24.8 cm  
 PIKO 15-20: (A) 54.0 cm, (B) 70.0 cm, (C) 26.5 cm

# Technical data PIKO 10-20

Power class		10	12	15	17	20	
Input side (DC)	Max. PV power <sup>2)</sup> (cos φ = 1)	kWp	15	18	22.5	25.5	30
	Nominal DC power	kW	10.8	12.3	15.3	17.4	20.4
	Rated input voltage (U <sub>DC,r</sub> )	V	680				
	Start-up input voltage (U <sub>DCstart</sub> )	V	180				
	Input voltage range (U <sub>DCmin</sub> - U <sub>DCmax</sub> )	V	160...1000				
	MPP range at rated output in single-tracker operation (U <sub>MPPmin</sub> - U <sub>MPPmax</sub> )	V	527...800	626...800	-	-	-
	MPP range at rated output in two-tracker operation (U <sub>MPPmin</sub> - U <sub>MPPmax</sub> )	V	sym: 290/290...800 unsym: 390/250...800	sym: 345/345...800 unsym: 490/250...800	390...800	440...800	515...800
	MPP range at rated output in three-tracker operation (U <sub>MPPmin</sub> - U <sub>MPPmax</sub> )	V	-	-	sym: 260/260/260...800 unsym: 325/325/250...800	sym: 290/290/290...800 unsym: 375/375/250...800	sym: 345/345/345...800 unsym: 450/450/250...800
	MPP working voltage range (U <sub>MPPworkmin</sub> - U <sub>MPPworkmax</sub> )	V	180...800				
	Max. working voltage (U <sub>DCworkmax</sub> )	V	950				
	Max. input current (I <sub>DCmax</sub> ) per DC input <sup>3)</sup>	A	sym: 18/18 unsym: 20/10		sym: 20/20/20 unsym: 20/20/10		
	Max. input current with parallel connection <sup>3)</sup> (DC1+DC2 / DC3 input)	A	36/-		40/20		
	Max. PV short-circuit current (I <sub>SC_PV</sub> ) per DC input <sup>3)</sup>	A	25				
	Number of DC inputs		2		3		
	Number of independent MPP trackers		2		3		
Output side (AC)	Rated power. cos φ = 1 (P <sub>AC,r</sub> )	kW	10	12	15	17	20
	Apparent output power (S <sub>AC,Nom</sub> , S <sub>AC,max</sub> )	kVA	10	12	15	17	20
	Min. output voltage (U <sub>ACmin</sub> )	V	320				
	Max. output voltage (U <sub>ACmax</sub> )	V	500				
	Rated output current (I <sub>AC,r</sub> )	A	14.6	17.4	21.7	24.6	29.0
	Max. output current (I <sub>ACmax</sub> )	A	16.2	19.3	24.2	27.4	32.2
	Short-circuit current (peak/RMS)	A	25/16.6	27.4/16.7	42/28.5	41.3/29	51/36.5
	Grid connection		3N~. 400V. 50 Hz				
	Rated frequency (f <sub>r</sub> )	Hz	50				
	Min./max. grid frequency (f <sub>min</sub> /f <sub>max</sub> )	Hz	47/53				
	Setting range of the power factor (cos φ <sub>AC,r</sub> )		0.8...1...0.8				
	Power factor for rated power (cos φ <sub>AC,r</sub> )		1				
	Max. THD	%	3				
	Standby (night-time consumption)	W	1.8				
	η	Max. efficiency	%	97.7	97.7	98.0	98.0
European efficiency		%	97.1	97.1	97.2	97.3	97.3
MPP adjustment efficiency		%	99.9	99.9	99.9	99.9	99.9

Power class		10	12	15	17	20
System data	Topology: Without galvanic isolation – transformerless	✓				
	Protection class according to IEC 60529 (housing / fan)	IP 65 / IP 55				
	Protective class in accordance with IEC 62103	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				
	Degree of contamination	4				
	Environmental category (outdoor installation)	✓				
	Environmental category (indoor installation)	✓				
	UV resistance	✓				
	AC cable diameter (min-max)	mm	9...17			
	AC cable cross-section (min-max)	mm <sup>2</sup>	4...6	6...16		
	DC cable cross-section (min-max)	mm <sup>2</sup>	4...6			
	Max. fuse protection on output side		B25/C25	B32/C32	B40/C40	
	Internal operator protection in accordance with EN 62109-2		RCCB type B			
	Independent disconnection device according to VDE 0126-1-1		✓			
	Height/width/depth	mm (in)	445/580/248 (17.52/22.83/9.76)	540/700/265 (21.26/27.56/10.43)		
	Weight	kg (lb)	37.5 (82.67)	48.5 (106.9)		
	Cooling principle – regulated fans		✓			
	Max. air throughput	m <sup>3</sup> /h	2 x 48	2 x 84		
	Max. noise emission	dBA	44	56		
Ambient temperature	°C (°F)	-20...60 (-4...140)				
Max. installation altitude above sea level	m (ft)	2000 (6562)				
Relative humidity	%	4...100				
Connection technology, DC side		SUNCLIX plug				
Connection technology, AC side		Spring-type terminal strip				
Interfaces	Ethernet LAN (RJ45) / RS485 / S0	2 / 1 / 1				
	Analogue inputs	1				
	Potential-free contact for self-consumption control	1				
	KOSTAL Smart AC Switch	-	✓			
	Webserver (user interface)	✓				
	Warranty (Smart Warranty / Smart Warranty plus <sup>1)</sup> )	Years	10 (5 + 5)			
Directives/Certification		CE, GS, EN 62109-1, EN 62109-2, EN 60529, IEC 61683, CEI 0-21, EN 50438 <sup>4)</sup> , G83/2, IEC 61727, IEC 62116, RD 1699, TOR D4, UNE 206006 IN, UNE 206007-1 IN, UNE 217001 IN, UTE C15-712-1, VDE 0126-1-1, VDE-AR-N 4105				

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> You should avoid operating the inverter continuously at above 110% of the DC rated output

<sup>3)</sup> The maximum permissible PV module nominal current is 10.5 A. The inverter automatically limits the input current to the specified values.

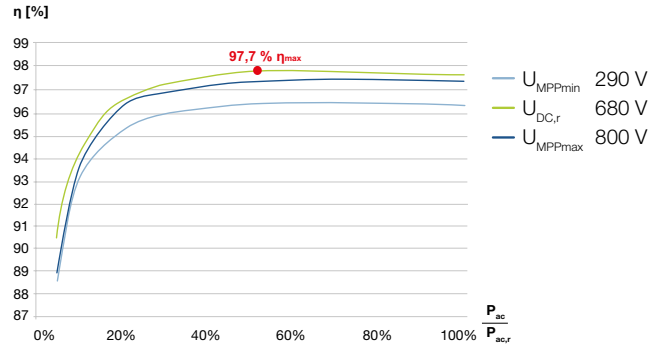
<sup>4)</sup> Does not apply to all national annexes to EN 50438

# PIKO inverters - the new generation

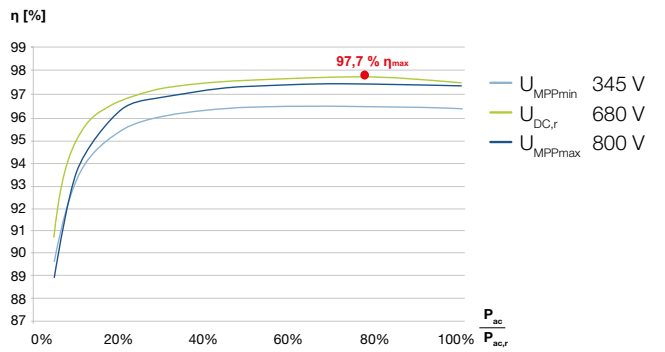


10    12    15    17    20

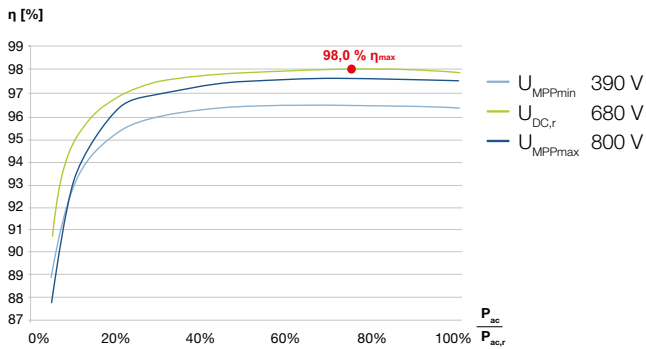
## PIKO 10



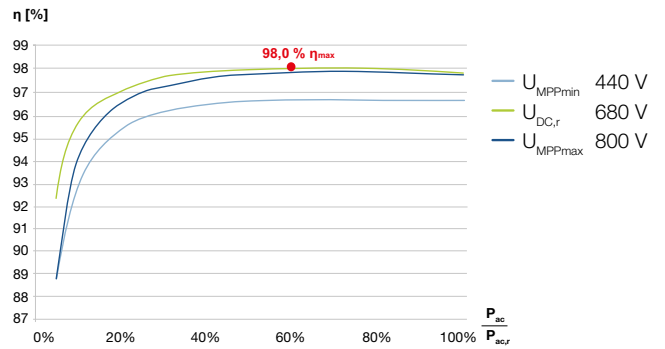
## PIKO 12



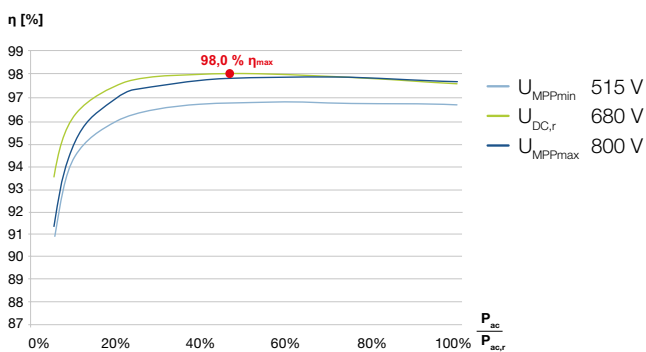
## PIKO 15



## PIKO 17



## PIKO 20



## 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)

Get in touch: [service-solar@kostal.com](mailto:service-solar@kostal.com)

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