

Smart  
connections.

Data sheet

PIKO 10-20

## 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 PIKO BA Sensor

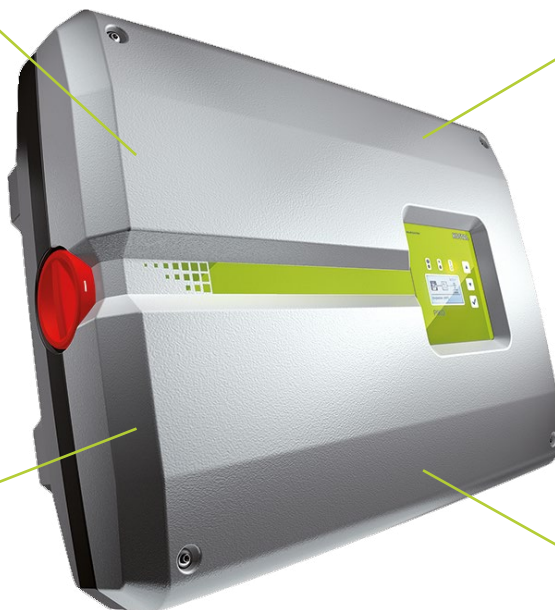
### Easy to install

Simple device configuration using commissioning wizard

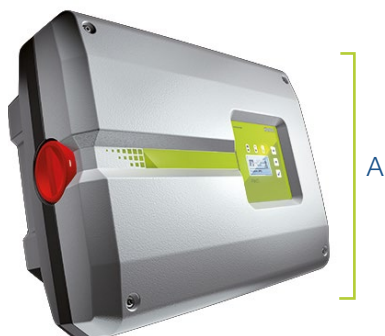
Integrated switch contact for self-consumption optimisation

Integrated electronic DC switch

Quick, uncomplicated and tool-free AC and DC installation



## PIKO 10-20: compact and rapidly deployable



PIKO 10-12: (A) 44.5 cm, (B) 58.0 cm, (C) 24.8 cm

PIKO 17-20: (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>1)</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: 450/450/450...800
	MPP working voltage range (U <sub>MPPworkmin</sub> - U <sub>MPPworkmax</sub> )	V	180...800				
	Max. working voltage (U <sub>DCworkmax</sub> )	V	800				
	Max. input current (I <sub>DCmax</sub> ) per DC input		sym: 18/18 unsym: 20/10		sym: 20/20/20 unsym: 20/20/10		
	Max. input current with parallel connection (DC1+DC2 / DC3 input)	A	36/-		40/20		
	Max. PV short-circuit current (I <sub>SC_PV</sub> ) per DC input	A	-				
	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
	Max. apparent output power. cos φ <sub>adj</sub>	kVA	10	12	15	17	20
	Min. output voltage (U <sub>ACmin</sub> )	V	184				
	Max. output voltage (U <sub>ACmax</sub> )	V	264.5				
	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	47/51.5				
	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	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)						2	
	RS485						1	
	S0						1	
	Analogue inputs						1	
	Potential-free contact for self-consumption control						1	
	PIKO BA Sensor Interface						1	
	Webserver (user interface)						✓	
	Warranty	Years	5					
Optional warranty extension for (years)		5 / 10 / 15						
Directives/Certification <sup>2)</sup>		CE, GS, EN 62109-1, EN 62109-2, EN 60529, IEC 61683, CEI 0-21, EN 50438*, 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						

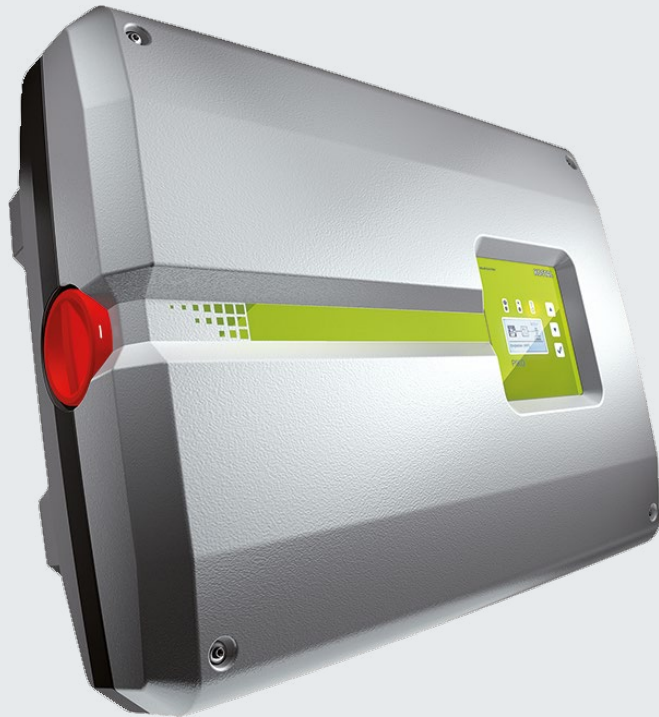
Subject to technical changes. Errors excepted. You can find current information at [www.kostal-solar-electric.com](http://www.kostal-solar-electric.com). Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

<sup>1)</sup> You should avoid operating the inverter continuously at above 110% of the DC rated output

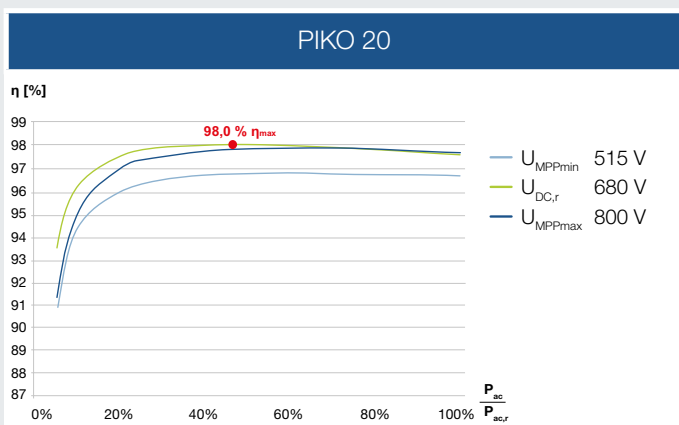
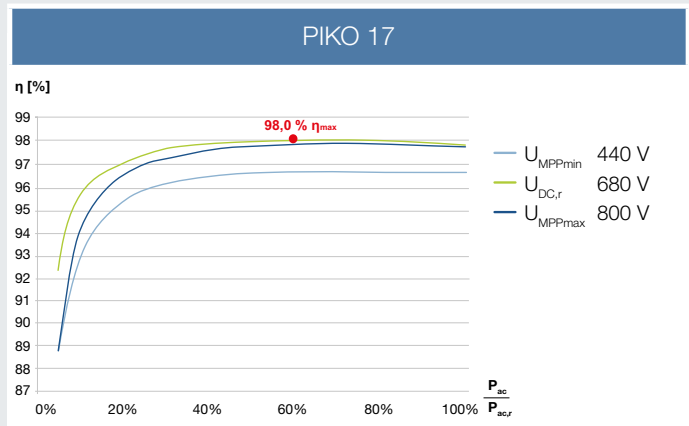
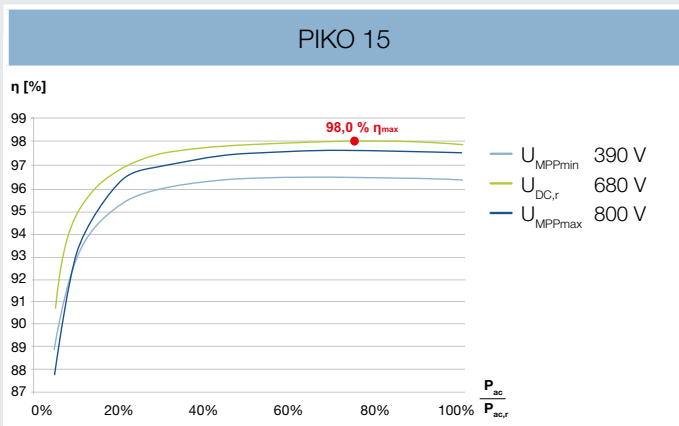
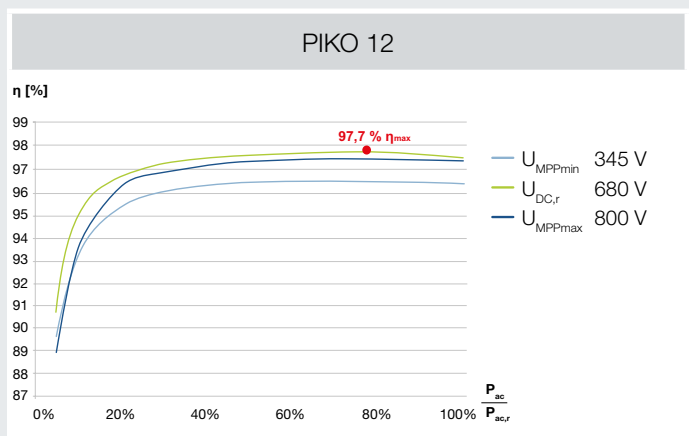
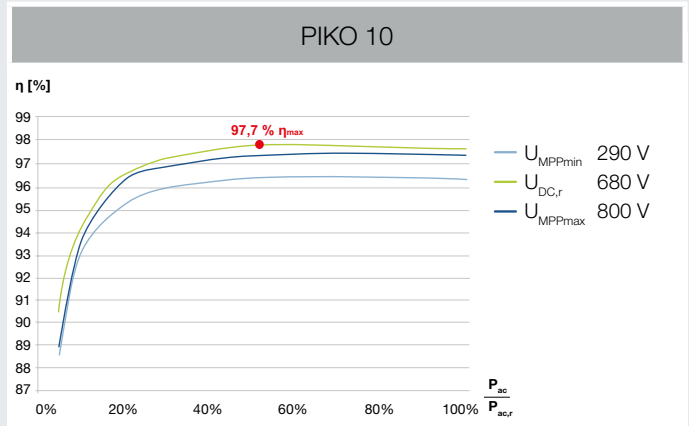
<sup>2)</sup> Does not apply to all national annexes to EN 50438



# PIKO inverters - the new generation



- 10
- 12
- 15
- 17
- 20



## Services for our products

FAQs:  
[kostal-solar-electric.com/service-support](http://kostal-solar-electric.com/service-support)

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

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