SOLAR ELECTRIC

KOSTAL

Smart connections.

Data sheet

PIKO 12-20

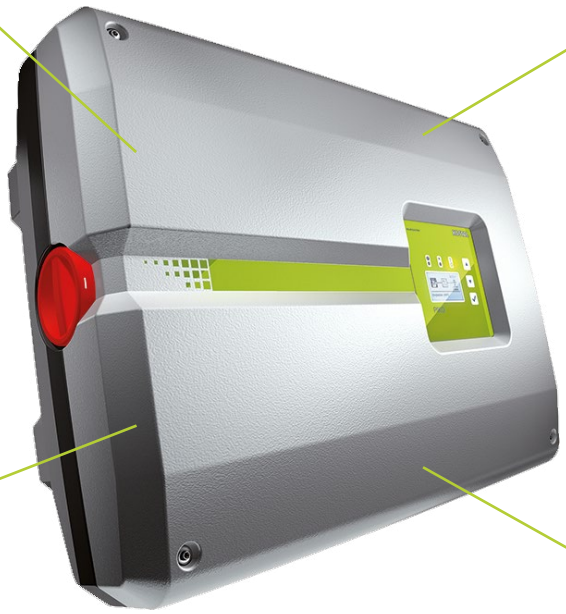
PIKO inverter: flexible, communicative and practical

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 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

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

Easy to install

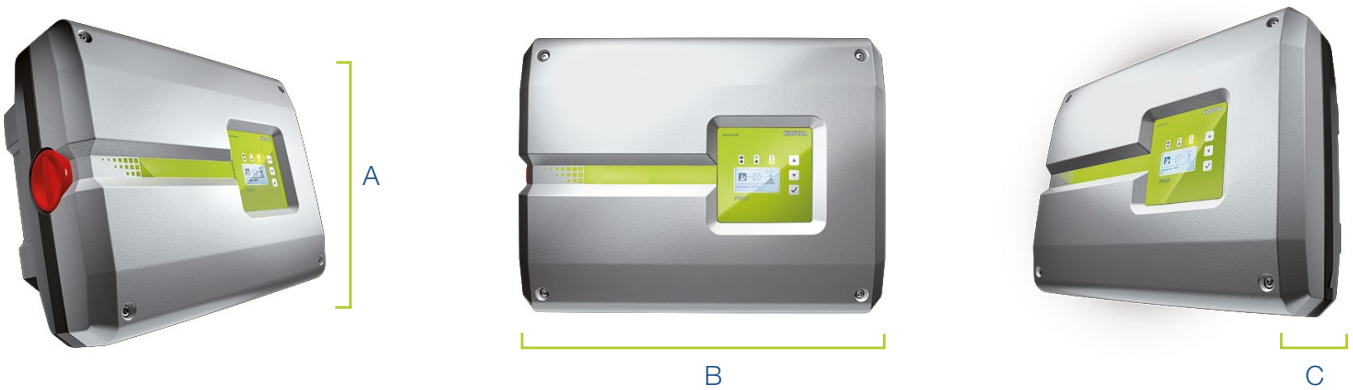
Simple device configuration using commissioning wizard

Integrated switch contact for self-consumption optimisation

Integrated electronic DC switch

Quick, uncomplicated and tool-free AC and DC installation

PIKO 12-20: compact and rapidly deployable



PIKO 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 12-20

	Power class		12	15	17	20
Input side (DC)	Max. PV power [1] (cos φ = 1)	kWp	18	22.5	25.5	30
	Nominal DC power	kW	12.3	15.3	17.4	20.4
	Rated input voltage ($U_{DC,r}$)	V	680			
	Start-up input voltage ($U_{DCstart}$)	V	180			
	Input voltage range (U_{DCmin} - U_{DCmax})	V	160...1000			
	MPP range at rated output in single-tracker operation (U_{MPPmin} - U_{MPPmax})	V	626...800	-	-	-
	MPP range at rated output in two-tracker operation (U_{MPPmin} - U_{MPPmax})	V	sym: 345/345...800 asym: 490/250...800	390...800	440...800	515...800
	MPP range at rated output in three-tracker operation (U_{MPPmin} - U_{MPPmax})	V	-	sym: 260/260/260...800 asym: 325/325/250...800	sym: 290/290/290...800 asym: 375/375/250...800	sym: 345/345/345...800 asym: 450/450/450...800
	MPP working voltage range ($U_{MPPworkmin}$ - $U_{MPPworkmax}$)	V	180...800			
	Max. working voltage ($U_{DCworkmax}$)	V	800			
	Max. input current (I_{DCmax}) per DC input		sym: 18/18 asym: 20/10	sym: 20/20/20 asym: 20/20/10		
	Max. input current with parallel connection (DC1+DC2 / DC3 input)	A	36/-	40/20		
	Max. PV short-circuit current (I_{SC_PV}) 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 ($P_{AC,r}$)	kW	12	15	17	20
	Max. apparent output power, cos Φ, adj	kVA	12	15	17	20
	Min. output voltage (U_{ACmin})	V	184			
	Max. output voltage (U_{ACmax})	V	264.5			
	Rated output current ($I_{AC,r}$)	A	17.4	21.7	24.6	29,0
	Max. output current (I_{ACmax})	A	19.3	24.2	27.4	32,2
	Short-circuit current (peak/RMS)	A	27.4/16.7	42/28.5	41.3/29	51/36,5
	Grid connection		3N~, 400 V, 50 Hz			
	Rated frequency (f_r)	Hz	50			
	Min./max. grid frequency (f_{min}/f_{max})	Hz	47/51.5			
	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	1.8			
η	Max. efficiency	%	97.7	98.0	98.0	98.0
	European efficiency	%	97.1	97.2	97.3	97.3
	MPP adjustment efficiency	%	99.9	99.9	99.9	99.9

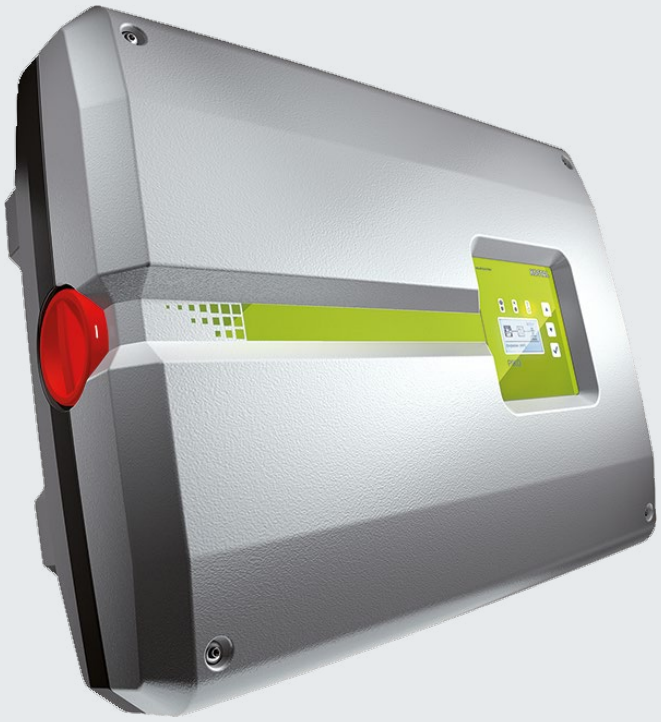
	Power class		12	15	17	20
System data	Topology: Without galvanic isolation – transformerless		✓			
	Protection class according to IEC 60529 (housing / fan)		IP 65/IP 55			
	Protective class in accordance with IEC 62103		I			
	Overvoltage category in accordance with IEC 60664-1, input side (PV generator)		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^2	4...6	6...16		
	DC cable cross-section (min-max)	mm^2	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^3/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[2]		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. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

[1] You should avoid operating the inverter continuously at above 110% of the DC rated output

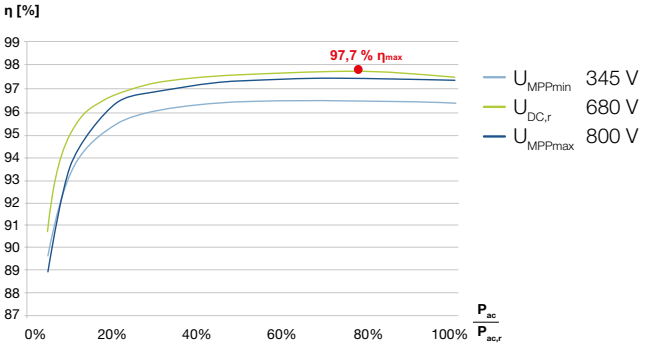
[2] Does not apply to all national annexes to EN 50438

PIKO inverters - the new generation

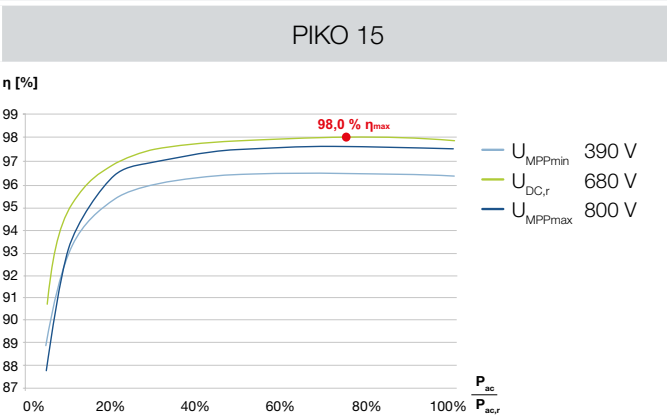


12	15	17	20

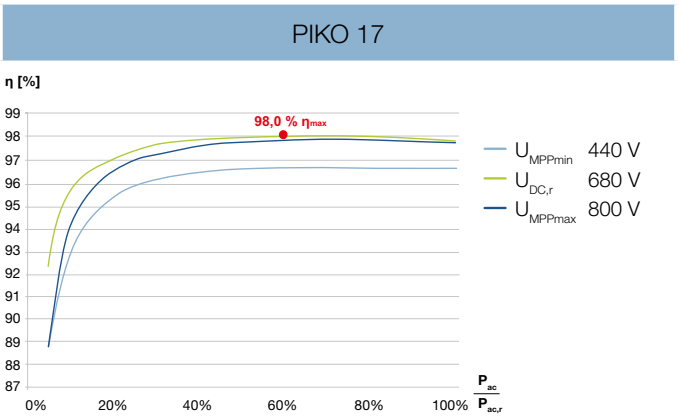
PIKO 12



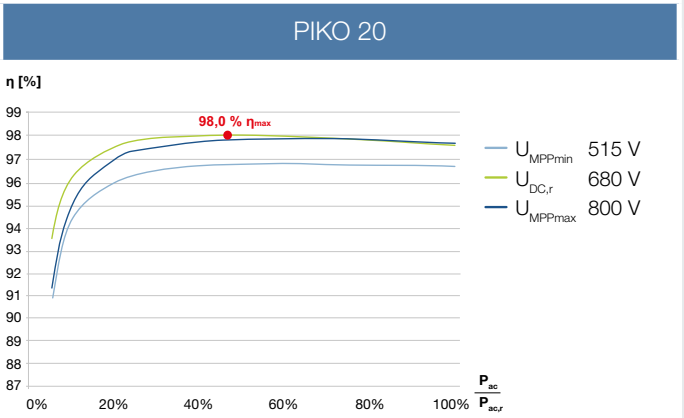
PIKO 15



PIKO 17



PIKO 20



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Product registration, warranty extension or purchase of accessories: shop.kostal-solar-electric.com

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