SOLAR ELECTRIC

KOSTAL

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

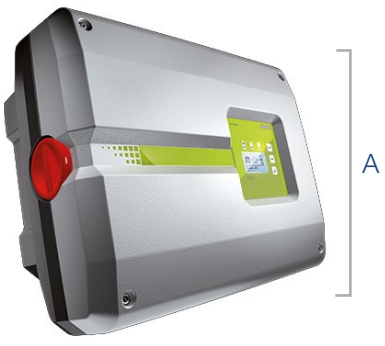
Smart performance

- 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



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 [2] (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 ($U_{DC,r}$)	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	527...800	626...800	-	-	-
	MPP range at rated output in two-tracker operation (U_{MPPmin} - U_{MPPmax})	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_{MPPmin} - U_{MPPmax})	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 ($U_{MPPworkmin}$ - $U_{MPPworkmax}$)	V	180...800				
	Max. working voltage ($U_{DCworkmax}$)	V	950				
	Max. input current (I_{DCmax}) per DC input [3]	A	sym: 18/18 unsym: 20/10		sym: 20/20/20 unsym: 20/20/10		
	Max. input current with parallel connection [3] (DC1+DC2 / DC3 input)	A	36/-		40/20		
	Max. PV short-circuit current (I_{SC_PV}) per DC input [3]	A	25				
	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	10	12	15	17	20
	Apparent output power ($S_{AC,Nom}$, $S_{AC,max}$)	kVA	10	12	15	17	20
	Min. output voltage (U_{ACmin})	V	320				
	Max. output voltage (U_{ACmax})	V	500				
	Rated output current ($I_{AC,r}$)	A	14.6	17.4	21.7	24.6	29.0
	Max. output current (I_{ACmax})	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_r)	Hz	50				
	Min./max. 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	1.8				
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^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) / 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 [1])	Years	10 (5 + 5)				
	Directives/Certification		CE, GS, EN 62109-1, EN 62109-2, EN 60529, IEC 61683, CEI 0-21, EN 50438[4], 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] 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.

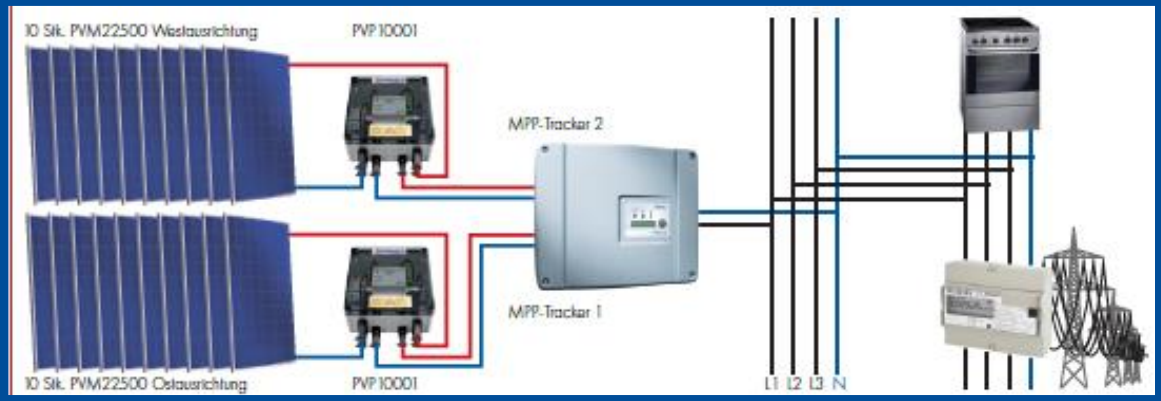
[2] You should avoid operating the inverter continuously at above 110% of the DC rated output

[3] The maximum permissible PV module nominal current is 10.5 A. The inverter automatically limits the input current to the specified values.

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

SISTEME FOTOVOLTAICE
ON GRID PENTRU LOCUINTE (KOSTAL)

Invertor Kostal Hybrid



Invertor Kostal Piko

Kostal Smart Meter

SCHRACK TECHNIK

Get Ready. **Get Schrack.**

SISTEME FOTOVOLTAICE
INVERTOARE KOSTAL PIKO ON GRID PENTRU LOCUINTE

PVI30120--

Kostal Piko 12,
2Mpp-Tracker, IP65. 3ph

PVI30150--

Kostal Piko 15,
3Mpp-Tracker, IP65. 3ph

PVI30170--

Kostal Piko 17,
3Mpp-Tracker, IP65. 3ph

PVI30200--

Kostal Piko 20,
3Mpp-Tracker, IP65. 3ph

PVI00300--

Kostal Piko CI 30,
2Mpp-Tracker, IP65. 3ph,
1100 VDC

PVI00500--

Kostal Piko CI 50,
4Mpp-Tracker, IP65. 3ph,
1100 VDC

PVI00600--

Kostal Piko CI 60,
4Mpp-Tracker, IP65. 3ph,
1100 VDC