SOLAR ELECTRIC

KOSTAL

PIKO MP plus

Hybrid inverter - 3.0–5.0 kW

Data sheet

PIKO MP plus: the new standard for single-phase inverters; flexible, communicative and with accessories; also usable as battery inverter

Flexible in use

- One or two MPP trackers
- 1 MPP tracker can be used as bidirectional input, optionally for PV generator or high-voltage battery[1,2)]
- Battery option possible with KOSTAL Smart Energy Meter
- Battery functionality for devices with an MPP tracker as AC-coupled battery connection – also ideal for retrofitting
- Battery functionality for devices with two MPP trackers for DC-coupled battery connection – ideal for new plants[1,2)]
- Extended MPP range – perfect for repowering

Smart connected

- Display, data logger, system monitoring, network and control interfaces integrated as standard
- Free monitoring of the PV system via KOSTAL Solar Portal, KOSTAL Solar App and internal web server

Smart performance

- Integration of energy meters possible
- High efficiency
- Efficient DC coupling of high-voltage batteries[1,2)]
- Dynamic active power control and 24h measurement
- Intergrated shadow management – adapts individually to the installation site
- Zero feed-in possible

Easy to install

- 1-phase supply
- Connection without opening the device
- Integrated DC disconnector
- Simple menu-guided operation and installation
- Optimum protection against dust and water for outdoor use (protection class IP65)

PIKO MP plus: compact and rapidly deployable

[1)] PIKO MP plus with 2 MPP trackers - Equipped with a bidirectional DC input - Accessories: KOSTAL Smart Energy Meter and activation code battery required
[2)] Available later on via software update
Product registration, KOSTAL Smart Warranty, warranty extension or purchase of accessories: shop.kostal-solar-electric.com

Technical data PIKO MP plus

	Power class		3.0-2	3.6-2	4.6-2	5.0-2
Input side (DC)	Max. PV power (cos φ = 1)	kWp	4.5	5.6	6.9	7.5
	Nominal DC power	kW	3.07	3.77	4.74	5.2
	Rated input voltage ($U_{DC,r}$)	V	350	350	350	350
	Start-up input voltage ($U_{DCstart}$)	V	75	75	75	75
	Input voltage range (U_{DCmin} - U_{DCmax})	V	75-750	75-750	75-750	75-750
	MPP working voltage range ($U_{MPPworkmin}$ - $U_{MPPworkmax}$)	V	75-600	75-600	75-600	75-600
	MPP range at rated output in single-tracker operation (U_{MPPmin} - U_{MPPmax})	V	230-600	280-600	360-600	360-600
	MPP range at rated output in two-tracker operation (U_{MPPmin} - U_{MPPmax})	V	115-600	140-600	180-600	180-600
	Max. working voltage ($U_{DCworkmax}$)	V	750	750	750	750
	Max. input current (I_{DCmax}) per DC input	A	13	13	13	13
	Max. PV short-circuit current (I_{SC_PV}) per DC input	A	15	15	15	15
	Number of DC inputs		2	2	2	2
	Number of bidirectional DC inputs		1	1	1	1
	Number of independent MPP trackers		2	2	2	2
Output side (AC)	Rated power, cos φ = 1 ($P_{AC,r}$)	kW	3.0	3.68	4.6	5.0
	Apparent output power ($S_{AC,Nom}$, $S_{AC,max}$)	kVA	3.0	3.68	4.6	5.0
	Min. output voltage (U_{ACmin})	V	184	184	184	184
	Max. output voltage (U_{ACmax})	V	288	288	288	288
	Rated output current ($I_{AC,r}$)	A	13.1	16	20	22
	Max. output current (I_{ACmax})	A	14	16	20	22
	Short-circuit current (peak/RMS)	A	24/16	27/16	20	22
	Grid connection		1N~, 230 V, 50 Hz	1N~, 230 V, 50 Hz	1N~, 230 V, 50 Hz	1N~, 230 V, 50 Hz
	Rated frequency (f_r)	Hz	50 / 60	50 / 60	50 / 60	50 / 60
	Min/max grid frequency (f_{min}/f_{max})	Hz	45 ... 65	45 ... 65	45 ... 65	45 ... 65
	Setting range of the power factor (cos $\varphi_{AC,r}$)		0,8…1…0,8	0,8…1…0,8	0,8…1…0,8	0,8…1…0,8
	Power factor for rated power (cos $\varphi_{AC,r}$)		1	1	1	1
	Max. THD	%	<3	<3	<3	<3
	Standby/standby incl. 24h home-consumption measurement	W	<3,0/<20,0	<3,0/<20,0	<3,0/<20,0	<3,0/<20,0
η	Max. efficiency	%	97.0	97.0	97.4	97.4
	European efficiency	%	96.3	96.3	96.9	96.8
	MPP adjustment efficiency	%	>99.8	>99.8	>99.8	>99.8

	Power class		3.0-2	3.6-2	4.6-2	5.0-2
System data	Topology: Without galvanic isolation – transformerless		yes	yes	yes	yes
	Protection class according to IEC 60529		IP 65	IP 65	IP 65	IP 65
	Protective class according to IEC 62103		II (RCD Typ A)	II (RCD Typ A)	II (RCD Typ A)	II (RCD Typ A)
	Overvoltage category according to IEC 60664-1, input side (PV generator)		II	II	II	II
	Overvoltage category according to IEC 60664-1, output side (grid connection)		III	III	III	III
	Degree of contamination		4	4	4	4
	Environmental category (outdoor installation)		yes	yes	yes	yes
	Environmental category (indoor installation)		yes	yes	yes	yes
	UV resistance		yes	yes	yes	yes
	AC cable diameter (min-max)	mm	10...14	10...14	10...14	10...14
	AC cable cross-section (min-max)	mm^2	2.5...4	2.5...4	2.5...4	2.5...4
	DC cable cross-section (min-max)	mm^2	2.5...6	2.5...6	2.5...6	2.5...6
	Max. fuse protection on output side		B16/C16	B25/C25	B25/C25	B25/C25
	Internal operator protection according to EN 62109-2		RCMU	RCMU	RCMU	RCMU
	Independent disconnection device according to VDE 0126-1-1		yes	yes	yes	yes
	Height/width/depth	mm	657/399/222	657/399/222	657/399/222	657/399/222
	Weight	kg	14.0	14.0	14.0	14.0
	Cooling principle – regulated fans		yes	yes	yes	yes
	Max. air throughput	m^3/h	-	-	-	-
	Max. noise emission	dBA	31	31	31	31
	Ambient temperature	°C	-25…60	-25…60	-25…60	-25…60
	Max. installation altitude above sea level	m	2000	2000	2000	2000
	Relative humidity (non-condensating)	%	0…100	0…100	0…100	0…100
	Connection technology, DC side		SUNCLIX plug	SUNCLIX plug	SUNCLIX plug	SUNCLIX plug
	Connection technology, AC side		Wieland RST25i3	Wieland RST25i3	Wieland RST25i3	Wieland RST25i3
Interfaces	Ethernet LAN (RJ45)		1	1	1	1
	Connection of energy meter for collecting energy data (Modbus RTU) (RJ45)		1	1	1	1
	RS485 (RJ45)		1	1	1	1
	Potential-free contact for self-consumption control		-	-	-	-
	Webserver (user interface)		yes	yes	yes	yes
	Warranty (Smart Warranty / Smart Warranty plus [1])	Years	10 (5 + 5)	10 (5 + 5)	10 (5 + 5)	10 (5 + 5)
	Directives/Certification		IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 60730, IEC 62116, VDE-AR-N 4105, DIN VDE 0126 1-1, G59/3-2, G83/2, G98/1-4, G99/1-6, UTE C 15-712-1, CEI 0-21,TOR D4, RD1699, RD 413, UNE 206007-1, IEC 61727, EN 50438[2]			

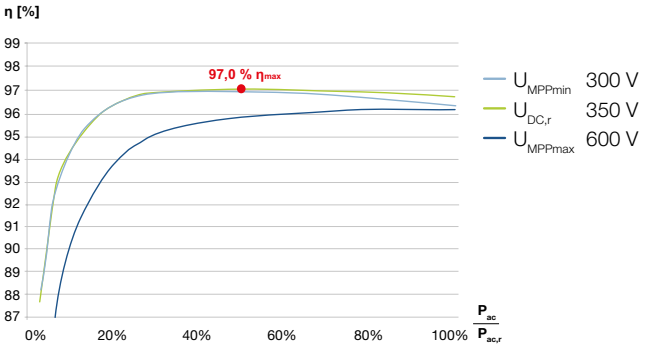
Subject to technical changes. Errors excepted. You can find current information at www.kostal-solar-electric.com. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

[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.

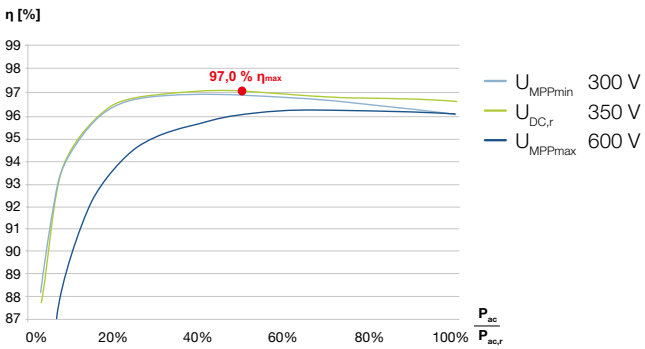
[2] Does not apply to all national annexes to EN 50438

PIKO MP plus available in 6 power classes

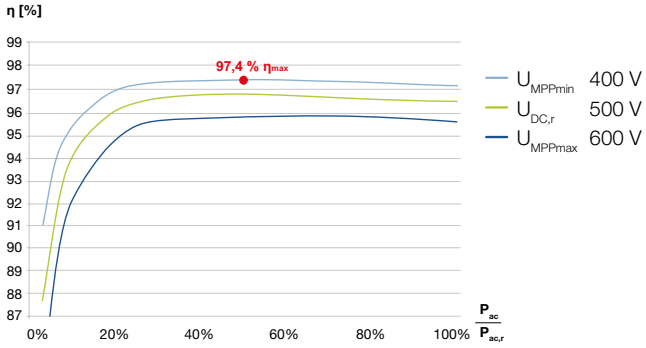
PIKO MP plus 3.0-2



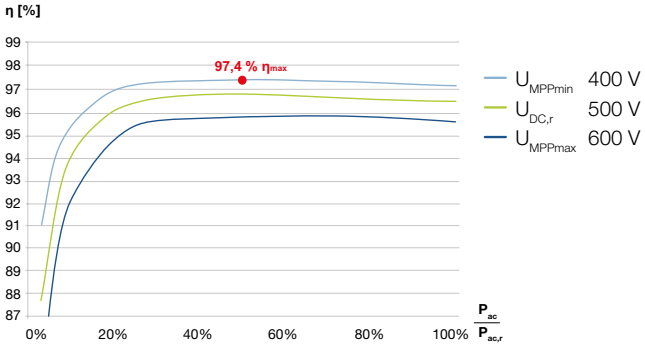
PIKO MP plus 3.6-2



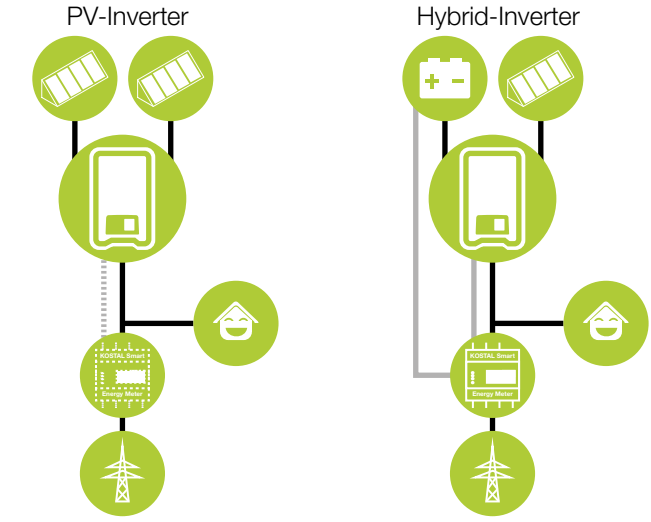
PIKO MP plus 4.6-2



PIKO MP plus 5.0-2



PIKO MP plus 3.0 to 5.0 with 2 MPP Tracker



Services for our products

Activation of the KOSTAL Smart Warranty via shop.kostal-solar-electric.com
You can find all further information at www.kostal-solar-electric.com

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