



Smart
connections.

Data sheet

PIKO MP plus 1.5 to 5.0

MP

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

Integrated 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 disconnect

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 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		1.5-1	2.0-1	2.5-1	3.0-1	3.0-2	3.6-1	3.6-2	4.6-2	5.0-2 ⁴⁾	
Input side (DC)	Max. PV power ($\cos \varphi = 1$)	kWp	2.3	3.0	3.75	4.5		5.4	6.9	7.5	
	Nominal DC power	kW	1.54	2.05	2.56	3.07		3.77	4.74	5.2	
	Rated input voltage ($U_{DC,r}$)	V	350								
	Start-up input voltage ($U_{DCstart}$)	V	75								
	Input voltage range ($U_{DCmin} - U_{DCmax}$)	V	75-450			75-750					
	MPP working voltage range ($U_{MPPworkmin} - U_{MPPworkmax}$)	V	75-360			75-600					
	MPP range at rated output in single-tracker operation ($U_{MPPmin} - U_{MPPmax}$)	V	120-360	160-360	200-360	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	450			750					
	Max. input current (I_{DCmax}) per DC input	A	13								
	Max. PV short-circuit current ($I_{SC,PV}$) per DC input	A	15								
	Number of DC inputs		1	1	1	1	2	1	2	2	2
	Number of bidirectional DC inputs		1	1	1	1	1	1	1	1	1
Number of independent MPP trackers		1	1	1	1	2	1	2	2	2	
Output side (AC)	Rated power, $\cos \varphi = 1$ ($P_{AC,r}$)	kW	1.5	2.0	2.5	3.0		3.68	4.6	5.0	
	Max. apparent output power, $\cos \varphi_{adj}$	kVA	1.5	2.0	2.5	3.0		3.68	4.6	5.0	
	Min. output voltage (U_{ACmin})	V	185								
	Max. output voltage (U_{ACmax})	V	276								
	Rated output current ($I_{AC,r}$)	A	6.6	8.7	10.9	13.1		16	20	22	
	Max. output current (I_{ACmax})	A	12	12	14	14		16	20	22	
	Short-circuit current (peak/RMS)	A	21/12	21/12	24/12	24/16		27/16	20	22	
	Grid connection		1N~, 230V, 50 Hz								
	Rated frequency (f_r)	Hz	50 - 60								
	Min/max grid frequency (f_{min}/f_{max})	Hz	45...65								
	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/standby incl. 24h home-consumption measurement	W	<3,0/<20,0									
η	Max. efficiency	%	97.4	97.4	97.4	97.0		97.0	97.4	97.4	
	European efficiency	%	96.1	96.5	96.6	96.3		96.3	96.9	96.8	
	MPP adjustment efficiency	%	>99.8								

Power class		1.5-1	2.0-1	2.5-1	3.0-1	3.0-2	3.6-1	3.6-2	4.6-2	5.0-2 ⁴⁾			
System data	Topology: Without galvanic isolation – transformerless						✓						
	Protection class according to IEC 60529						IP 65						
	Protective class according to IEC 62103						II (RCD Typ A)						
	Overvoltage category according to IEC 60664-1, input side (PV generator)						II						
	Overvoltage category according to 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						10...14					
	AC cable cross-section (min-max)	mm ²	1.5...4					2.5...4					
	DC cable cross-section (min-max)	mm ²						2.5...6					
	Max. fuse protection on output side		B16/C16				B25/C25						
	Internal operator protection according to EN 62109-2							RCMU					
	Independent disconnection device according to VDE 0126-1-1							✓					
	Height/width/depth	mm (in)	657/399/222 (25.87/15.71/8.74)										
	Weight	kg (lb)	12.6	12.6	12.6	13.8	14.0	13.8	14.0	14.0	14.0		
	Cooling principle – regulated fans							✓					
	Max. air throughput	m ³ /h						-					
	Max. noise emission	dB(A)						31					
Ambient temperature	°C (°F)						-25...60 (-13...140)						
Max. installation altitude above sea level	m (ft)						2000 (6562)						
Relative humidity (non-condensating)	%						0...100						
Connection technology, DC side							SUNCLIX plug						
Connection technology, AC side							Wieland RST25I3						
Interfaces	Ethernet LAN (RJ45)						1						
	Connection of energy meter for collecting energy data (Modbus RTU) (RJ45)						1						
	RS485 (RJ45)						1						
	Potential-free contact for self-consumption control						-						
	Webserver (user interface)						✓						
	KOSTAL Smart Warranty / Warranty ¹⁾	Years						5 (2)					
	Optional warranty extension for (years)							5/10/15					
Directives/Certification ²⁾		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, UTE C 15-712-1, CEI 0-21, TOR D4, RD1699, RD 413, UNE 206007-1, IEC 61727, EN 50438*											

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

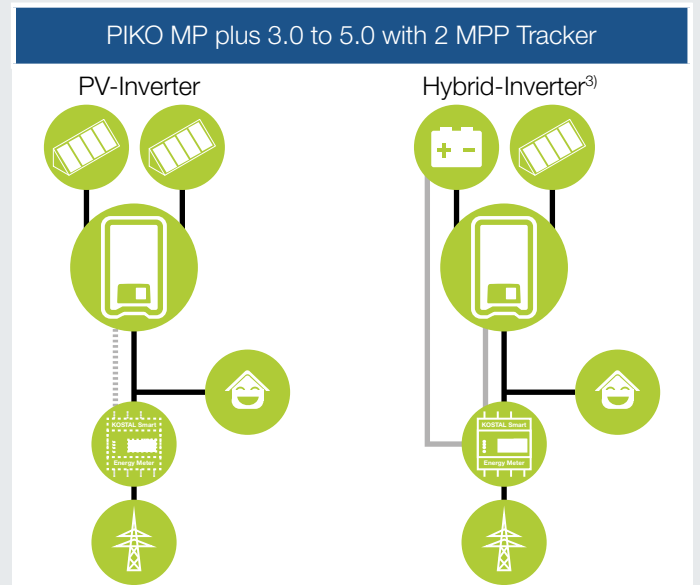
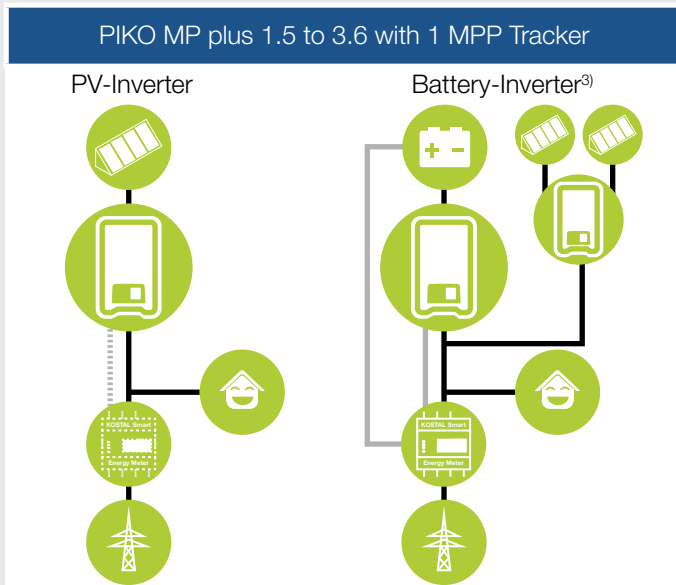
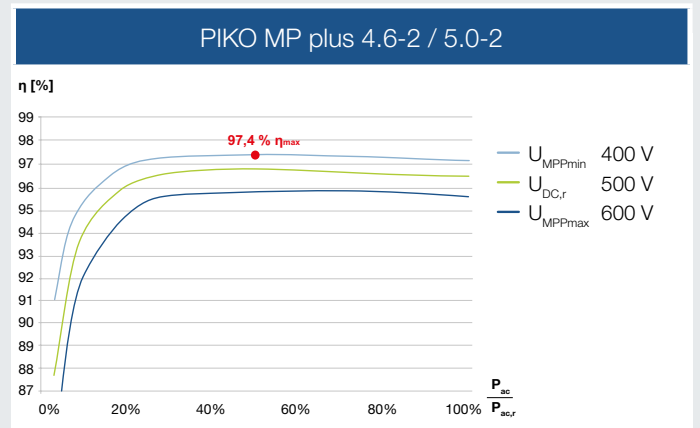
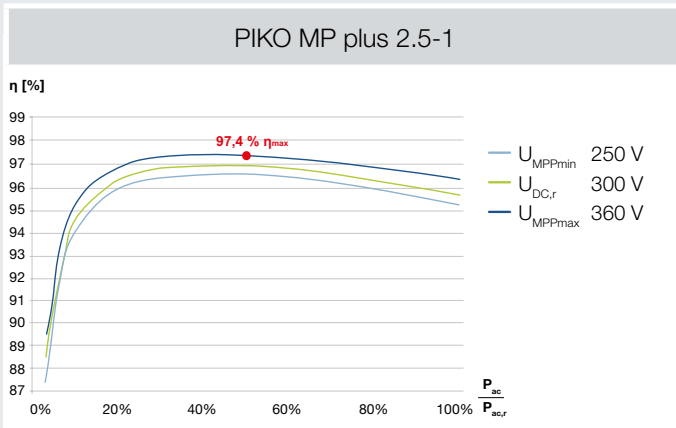
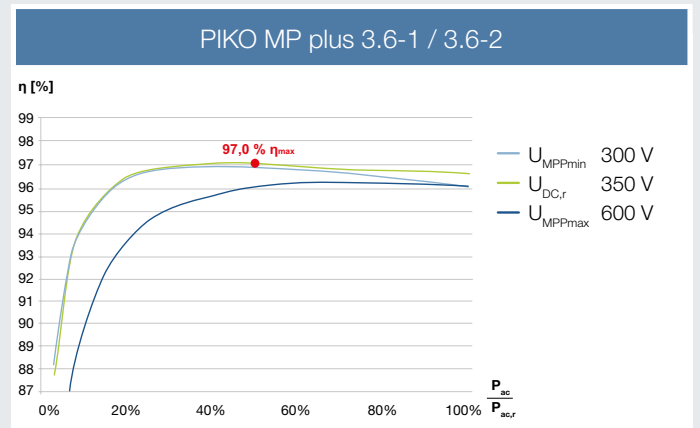
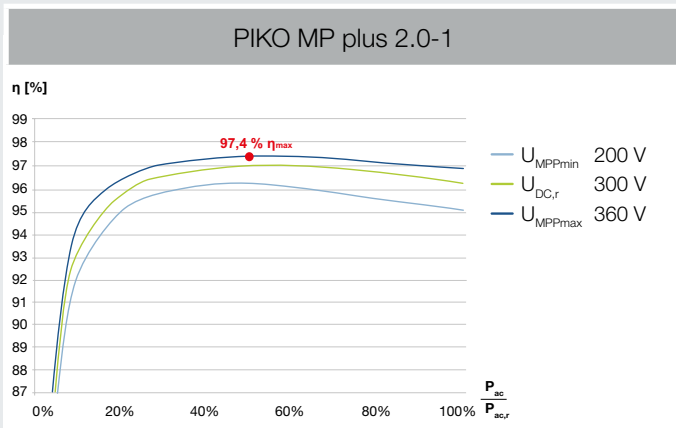
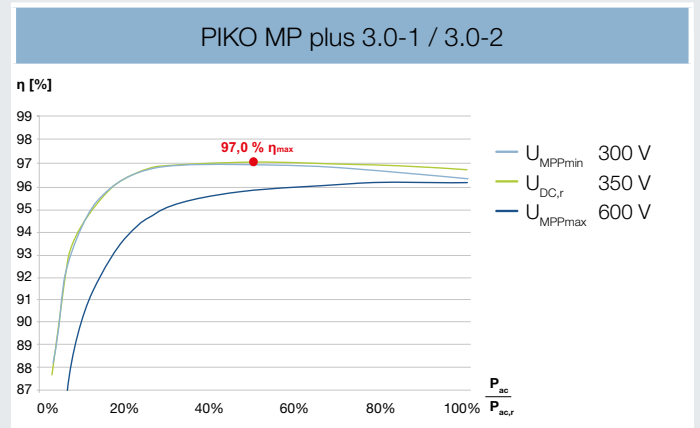
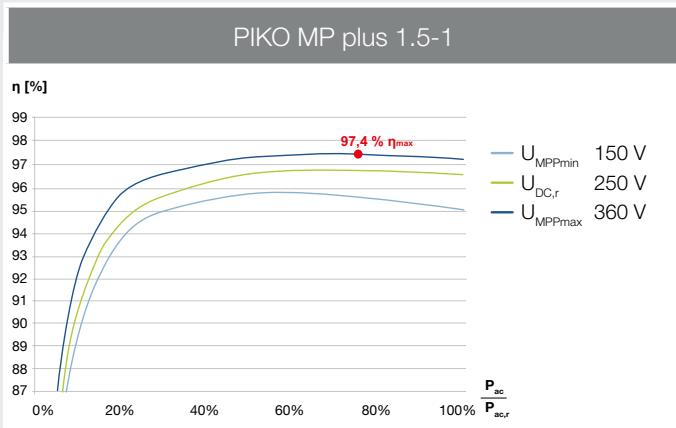
¹⁾ KOSTAL Smart Warranty: 5-year warranty only after registration in the KOSTAL Solar online shop

²⁾ Does not apply to all national annexes to EN 50438

³⁾ Available later on via software update - Accessories: KOSTAL Smart Energy Meter required

⁴⁾ PIKO MP plus 5.0-2: Available from Q2 / 2020

PIKO MP plus available in 7 power classes



KOSTAL

KOSTAL Solar Electric GmbH
Hanferstr. 6
79108 Freiburg i. Br.
Deutschland
Telefon: +49 761 47744 - 100
Fax: +49 761 47744 - 111

KOSTAL Solar Electric Ibérica S.L.
Edificio abm
Ronda Narciso Monturiol y Estarriol, 3 Torre
B, despachos 2 y 3
Parque Tecnológico de Valencia
46980 Valencia
España
Teléfono: +34 961 824 - 934
Fax: +34 961 824 - 931

KOSTAL Solar Electric France SARL
11, rue Jacques Cartier
78280 Guyancourt
France
Téléphone: +33 1 61 38 - 4117
Fax: +33 1 61 38 - 3940

KOSTAL Solar Electric Hellas E.Π.Ε.
47 Steliou Kazantzidi st., P.O. Box: 60080 1st
building – 2nd entrance
55535, Pilea, Thessaloniki
Ελλάδα
Τηλέφωνο: +30 2310 477 - 550
Φαξ: +30 2310 477 - 551

KOSTAL Solar Electric Italia Srl
Via Genova, 57
10098 Rivoli (TO)
Italia
Telefono: +39 011 97 82 - 420
Fax: +39 011 97 82 - 432

KOSTAL Solar Elektrik Turkey
Mahmutbey Mah. Taşocağı Yolu Cad.
No:3 (B Blok), Ağaoğlu My Office 212
Kat:16, Ofis No:269
Bağcılar - İstanbul / Türkiye
Telefon: +90 212 803 06 24
Faks: +90 212 803 06 25

www.kostal-solar-electric.com