



Smart  
connections.

## Data sheet

PIKO-Inverter

3.0 | 3.6 | 4.2 | 5.5 | 8.3 | 10.1



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The following applies for all products:	Single-phase inverters: PIKO 3.0   3.6	Three-phase inverters: PIKO 4.2   5.5   8.3   10.1
<ul style="list-style-type: none"> <li>■ Extremely wide input voltage range for maximum flexibility</li> <li>■ Simple installation thanks to lightweight design</li> <li>■ Simple adjustment of country setting</li> <li>■ Quality guarantee “Made by KOSTAL”</li> <li>■ Personalised service hotline with guaranteed assistance</li> <li>■ 5 year warranty (with the option of an extension to 10 or 20 years)</li> <li>■ Integrated web server as standard</li> </ul>	<ul style="list-style-type: none"> <li>■ Single-phase feed-in</li> <li>■ Up to 2 independent MPP trackers</li> <li>■ Transformerless converting</li> <li>■ Datalogging and various interfaces integrated as standard: Ethernet, RS485, S0 input and output, 4 analogue inputs</li> </ul>	<ul style="list-style-type: none"> <li>■ Three-phase symmetrical feed-in</li> <li>■ Up to 3 independent MPP trackers</li> <li>■ Transformerless converting</li> <li>■ Datalogging and various interfaces integrated as standard: Ethernet, RS485, S0 input and output, 4 analogue inputs</li> <li>■ 2 MPP trackers with option of parallel connection for higher input currents</li> </ul>

## Inverter PIKO 3.0

- Single-phase feed-in
- Transformerless topology
- Datalogging and diverse interfaces as standard: Ethernet, RS485, S0 input and output
- Integrated electronic DC circuit breaker
- Lead-free production according to EU Directive on RoHS



PIKO 3.0

## Technical data

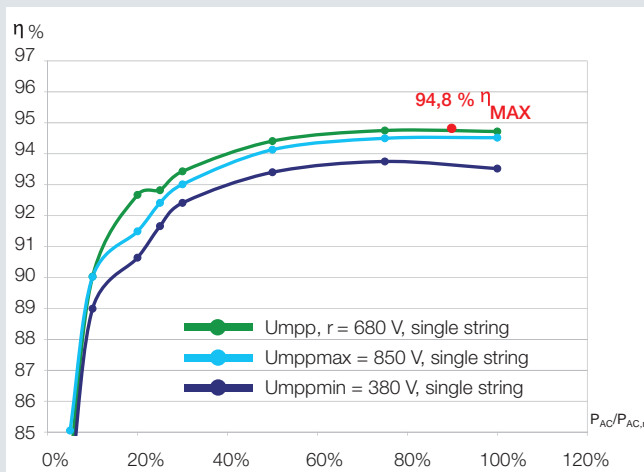
### Input side (DC)

Number of DC inputs / number of MPP trackers	1/1
Max. recommended DC power	3200 W
Max. input voltage (open circuit voltage)	950 V
Min. input voltage	180 V
Start-up input voltage	180 V
Rated input voltage	680 V
Max. MPP voltage at inverter DC rated power	850 V
Min. MPP voltage $U_{mppmin}$ , at inverter DC rated power	380 V
Max. input current	9 A

### Output side (AC)

Number of feed-in phases	1
Grid voltage	1/N/PE, AC, 230 V
Uacmax, upper voltage switch-off limit	253 V (ES) 264.5 V (AT, BE, CH, CZ, DE, GR, LU, NL, FR, PT), 276 V (IT)
Uacmin, lower voltage switch-off limit	184 V (AT, BE, CH, DE, GR, LU, IT, NL, FR), 195.5 V (ES, CZ, PT)
Max. output current	13.1 A
Rated AC output	2800 W
Max. AC power	3000 W
Max. efficiency	94.8 %
European-standard efficiency	93.6 %
Nominal frequency	50 Hz
Min. grid frequency $f_{min}$ ; switch-off limit	47 Hz (AT, PT), 47.5 Hz (DE, CH, FR, HU, BE), 48 Hz (NL), 49 Hz (ES), 49.7 Hz (IT), 49.5 Hz (GR, CZ)
Max. grid frequency $f_{max}$ ; switch-off limit	50.2 Hz (DE, CH), 50.3 Hz (IT), 50.5 Hz (GR, CZ), 51 Hz (HU, NL, ES, AT, FR, BE, PT)
Power loss at night	< 1 W
Protection class	I
Galvanic isolation	Transformerless
Nom. reactive power factor Cos phi	1
Type of grid monitoring	MSD, Frequency shifting
Reverse polarity protection	Short circuit diode at DC side
Personal protection	Universal current sensitive residual current circuit breaker and earth fault monitoring
Operational conditions	interior + exterior
Ambient temperature	-20°... 60° C
Max. humidity	0 ... 95 %
Type of cooling	Regulated ventilation
Max. sound	< 33 dBA
Ingress protection according to IEC 60529	IP 55
Connection technology at input side	MC 4
Connection technology at output side	Spring-loaded terminal strip
Dimensions (W x D x H)	420 x 211 x 350 mm
Weight	19.8 kg
Disconnection device	Integrated electronic circuit breaker

### Efficiency rate characteristic curves



Smart connections.



Configurable for: Deutschland, Österreich, España, Portugal, France, Italia, Suisse, Belgique, Luxembourg, Nederland, Ελληνική, България, Česko, Magyarország, România, Slovensko, Slovenija, Türkiye, United Kingdom, Κύπρος

Manufacturer's Declaration of Conformity: CE marc: EMV-Directive 2004/108/EC; DIN EN 61000-3-2, EN 61000-3-3, DIN EN 61000-6-2, DIN EN 61000-6-3, Low Voltage Directive, 2006/95/EC, DIN EN 50178, MSD document of compliance: Automatic switching device with three-phase (PIKO 3.0/3.6 single-phase), grid monitoring according to DIN V VDE V, 0126-1-1:2006-02, Test principles: DIN V VDE V 0126-1-1, (VDE V 0126-1-1):2006-02 and „Independent generation systems on the low voltage grid“, Document of compliance integrated electronic circuit breaker: IEC 60947-3:1999; DIN EN 60947-3; VDE 0660-107:2006-03, Low voltage switchgear Part 3: load switches, circuit breakers, load circuit breakers and switch fuse units; IEC 60364-7-712:2002-05; DIN VDE 0100-712:2006-06

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## Inverter PIKO 3.6

- Single-phase feed-in
- Transformerless topology
- Possible parallel connection of two MPP trackers to extend the input current range
- Datalogging and diverse interfaces as standard: Ethernet, RS485, S0 input and output
- Integrated electronic DC circuit breaker
- Lead-free production according to EU Directive on RoHS



PIKO 3.6

## Technical data

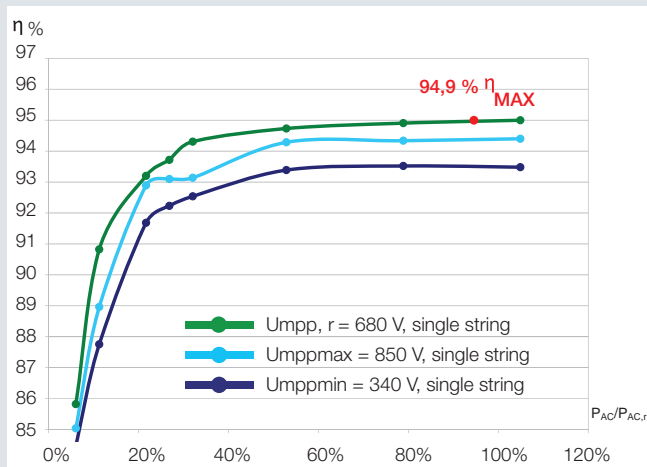
### Input side (DC)

Number of DC inputs / number of MPP trackers	2/2
Max. recommended DC power	3800 W
Max. input voltage (open circuit voltage)	950 V
Min. input voltage	180 V
Start-up input voltage	180 V
Rated input voltage	680 V
Max. MPP voltage at inverter DC rated power	850 V
Min. MPP voltage $U_{mppmin}$ , at inverter DC rated power, in symmetrical multistring, two-tracker or parallel operation	340 V
Min. MPP voltage $U_{mppmin}$ at inverter DC rated power, in single-tracker operation	440 V
Max. input current	9 A
Max. input current with parallel connection	13 A

### Output side (AC)

Number of feed-in phases	1
Grid voltage	1/N/PE, AC, 230 V
Uacmax, upper voltage switch-off limit	253 V (ES) 264.5 V (AT, BE, CH, CZ, DE, GR, LU, NL, FR, PT), 276 V (IT)
Uacmin, lower voltage switch-off limit	184 V (AT, BE, CH, DE, GR, LU, IT, NL, FR), 195.5 V (ES, CZ, PT)
Max. output current	15.7 A
Rated AC output	3300 W
Max. AC power	3600 W
Max. efficiency	94.9 %
European-standard efficiency	94 %
Nominal frequency	50 Hz
Min. grid frequency $f_{min}$ ; switch-off limit	47 Hz (AT, PT), 47.5 Hz (DE, CH, FR, HU, BE), 48 Hz (NL), 49 Hz (ES), 49.7 Hz (IT), 49.5 Hz (GR, CZ)
Max. grid frequency $f_{max}$ ; switch-off limit	50.2 Hz (DE, CH), 50.3 Hz (IT), 50.5 Hz (GR, CZ), 51 Hz (HU, NL, ES, AT, FR, BE, PT)
Power loss at night	< 1 W
Protection class	I
Galvanic isolation	Transformerless
Nom. reactive power factor Cos phi	1
Type of grid monitoring	MSD, Frequency shifting
Reverse polarity protection	Short circuit diode at DC side
Personal protection	Universal current sensitive residual current circuit breaker and earth fault monitoring
Operational conditions	interior + exterior
Ambient temperature	-20°... 60° C
Max. humidity	0 ... 95 %
Type of cooling	Regulated ventilation
Max. sound	< 33 dBA
Ingress protection according to IEC 60529	IP 55
Connection technology at input side	MC 4
Connection technology at output side	Spring-loaded terminal strip
Dimensions (W x D x H)	420 x 211 x 350 mm
Weight	20 kg
Disconnection device	Integrated electronic circuit breaker

### Efficiency rate characteristic curves



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## Inverter PIKO 4.2

- Three-phase feed-in to avoid voltage asymmetries
- Transformerless topology
- Possible parallel connection of two MPP trackers to extend the input current range
- Datalogging and diverse interfaces as standard: Ethernet, RS485, S0 input and output
- Integrated electronic DC circuit breaker
- Lead-free production according to EU Directive on RoHS



PIKO 4.2

## Technical data

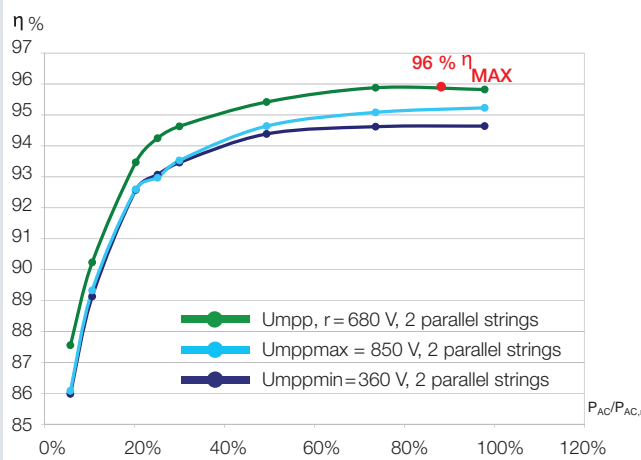
### Input side (DC)

Number of DC inputs / number of MPP trackers	2/2
Max. recommended DC power	4400 W
Max. input voltage (open circuit voltage)	950 V
Min. input voltage	180 V
Start-up input voltage	180 V
Rated input voltage	680 V
Max. MPP voltage at inverter DC rated power	850 V
Min. MPP voltage $U_{mppmin}$ , at inverter DC rated power, in symmetrical multistring, two-tracker or parallel operation	360 V
Min. MPP voltage $U_{mppmin}$ at inverter DC rated power, in single-tracker operation	500 V
Max. input current	9 A
Max. input current with parallel connection	13 A

### Output side (AC)

Number of feed-in phases	3
Grid voltage	3/N/PE, AC, 230 V / 400 V
Uacmax, upper voltage switch-off limit	253 V (ES) 264.5 V (AT, BE, CH, CZ, DE, GR, LU, NL, FR, PT), 276 V (IT)
Uacmin, lower voltage switch-off limit	184 V (AT, BE, CH, DE, GR, LU, IT, NL, FR), 195.5 V (ES, CZ, PT)
Max. output current per phase	6.1 A
Rated AC output	3800 W (PT 3680 W)
Max. AC power	4200 W
Max. efficiency	96 %
European-standard efficiency	94.7 %
Nominal frequency	50 Hz
Min. grid frequency $f_{min}$ ; switch-off limit	47 Hz (AT, PT), 47.5 Hz (DE, CH, FR, HU, BE), 48 Hz (NL), 49 Hz (ES), 49.7 Hz (IT), 49.5 Hz (GR, CZ)
Max. grid frequency $f_{max}$ ; switch-off limit	50.2 Hz (DE, CH), 50.3 Hz (IT) 50.5 Hz (GR, CZ), 51 Hz (HU, NL, ES, AT, FR, BE, PT)
Power loss at night	< 1 W
Protection class	I
Galvanic isolation	Transformerless
Nom. reactive power factor $\cos \phi$	1
Type of grid monitoring	MSD, three-phase monitoring
Reverse polarity protection	Short circuit diode at DC side
Personal protection	Universal current sensitive residual current circuit breaker and earth fault monitoring
Operational conditions	interior + exterior
Ambient temperature	-20°... 60° C
Max. humidity	0 ... 95 %
Type of cooling	Regulated ventilation
Max. sound	< 33 dBA
Ingress protection according to IEC 60529	IP 55
Connection technology at input side	MC 4
Connection technology at output side	Spring-loaded terminal strip
Dimensions (W x D x H)	420 x 211 x 350 mm
Weight	20.5 kg
Disconnection device	Integrated electronic circuit breaker

### Efficiency rate characteristic curves



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## Inverter PIKO 5.5

- Three-phase feed-in to avoid voltage asymmetries
- Transformerless topology
- Three independent MPP trackers
- Datalogging and diverse interfaces as standard: Ethernet, RS485, S0 input and output
- Integrated electronic DC circuit breaker
- Lead-free production according to EU Directive on RoHS



PIKO 5.5

## Technical data

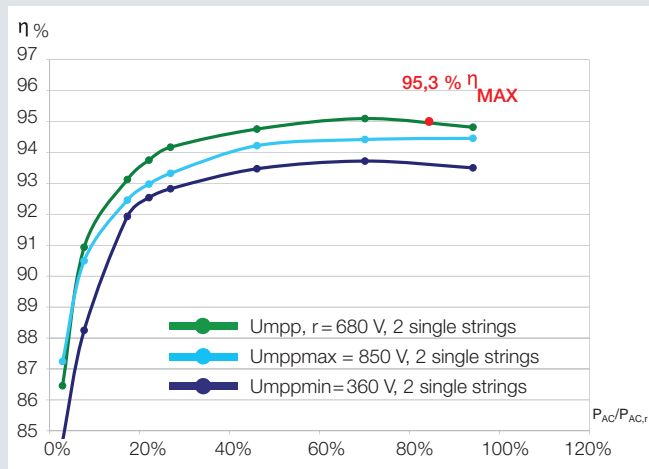
### Input side (DC)

Number of DC inputs / number of MPP trackers	3/3
Max. recommended DC power	5800 W
Max. input voltage (open circuit voltage)	950 V
Min. input voltage	180 V
Start-up input voltage	180 V
Rated input voltage	680 V
Max. MPP voltage at inverter DC rated power	850 V
Min. MPP voltage $U_{mppmin}$ , at inverter DC rated power, in symmetrical multistring and two-tracker operation	360 V
Min. MPP voltage $U_{mppmin}$ at inverter DC rated power, in single-tracker operation	660 V
Max. input current	9 A

### Output side (AC)

Number of feed-in phases	3
Grid voltage	3/N/PE, AC, 230 V / 400 V
$U_{acmax}$ , upper voltage switch-off limit	253 V (ES) 264.5 V (AT, BE, CH, CZ, DE, GR, LU, NL, FR, PT), 276 V (IT)
$U_{acmin}$ , lower voltage switch-off limit	184 V (AT, BE, CH, DE, GR, LU, IT, NL, FR), 195.5 V (ES, CZ, PT)
Max. output current per phase	8 A
Rated AC output	5000 W
Max. AC power	5500 W
Max. efficiency	95.3 %
European-standard efficiency	94.2 %
Nominal frequency	50 Hz
Min. grid frequency $f_{min}$ ; switch-off limit	47 Hz (AT, PT), 47.5 Hz (DE, CH, FR, HU, BE), 48 Hz (NL), 49 Hz (ES), 49.7 Hz (IT), 49.5 Hz (GR, CZ)
Max. grid frequency $f_{max}$ ; switch-off limit	50.2 Hz (DE, CH), 50.3 Hz (IT), 50.5 Hz (GR, CZ), 51 Hz (HU, NL, ES, AT, FR, BE, PT)
Power loss at night	< 1 W
Protection class	I
Galvanic isolation	Transformerless
Nom. reactive power factor $\cos \phi$	1
Type of grid monitoring	MSD, three-phase monitoring
Reverse polarity protection	Short circuit diode at DC side
Personal protection	Universal current sensitive residual current circuit breaker and earth fault monitoring
Operational conditions	interior + exterior
Ambient temperature	-20°... 60° C
Max. humidity	0 ... 95 %
Type of cooling	Regulated ventilation
Max. sound	< 33 dBA
Ingress protection according to IEC 60529	IP 55
Connection technology at input side	MC 4
Connection technology at output side	Spring-loaded terminal strip
Dimensions (W x D x H)	420 x 211 x 350 mm
Weight	21.1 kg
Disconnection device	Integrated electronic circuit breaker

### Efficiency rate characteristic curves



Smart connections.



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## Inverter PIKO 8.3

- Three-phase feed-in to avoid voltage asymmetries
- Transformerless topology
- Possible parallel connection of two MPP trackers to extend the input current range
- Datalogging and diverse interfaces as standard: Ethernet, RS485, S0 input and output
- Integrated electronic DC circuit breaker
- Lead-free production according to EU Directive on RoHS



PIKO 8.3

## Technical data

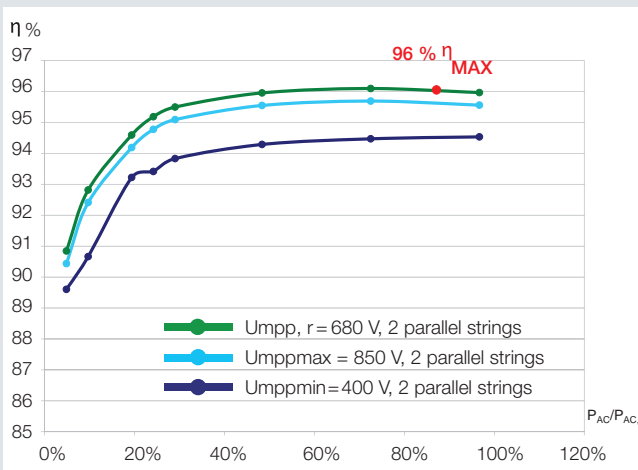
### Input side (DC)

Number of DC inputs / number of MPP trackers	2/2
Max. recommended DC power	8700 W
Max. input voltage (open circuit voltage)	950 V
Min. input voltage	180 V
Start-up input voltage	180 V
Rated input voltage	680 V
Max. MPP voltage at inverter DC rated power	850 V
Min. MPP voltage $U_{mppmin}$ , at inverter DC rated power, in symmetrical multistring, two-tracker or parallel operation	400 V
Max. input current	12.5 A
Max. input current with parallel connection	25 A

### Output side (AC)

Number of feed-in phases	3
Grid voltage	3/N/PE, AC, 230 V / 400 V
Uacmax, upper voltage switch-off limit	253 V (ES) 264.5 V (AT, BE, CH, CZ, DE, GR, LU, NL, FR, PT), 276 V (IT)
Uacmin, lower voltage switch-off limit	184 V (AT, BE, CH, DE, GR, LU, IT, NL, FR), 195.5 V (ES, CZ, PT)
Max. output current per phase	12 A
Rated AC output	7600 W
Max. AC power	8300 W
Max. efficiency	96 %
European-standard efficiency	95.3 %
Nominal frequency	50 Hz
Min. grid frequency $f_{min}$ ; switch-off limit	47 Hz (AT, PT), 47.5 Hz (DE, CH, FR, HU, BE), 48 Hz (NL), 49 Hz (ES), 49.7 Hz (IT), 49.5 Hz (GR, CZ)
Max. grid frequency $f_{max}$ ; switch-off limit	50.2 Hz (DE, CH), 50.3 Hz (IT), 50.5 Hz (GR, CZ), 51 Hz (HU, NL, ES, AT, FR, BE, PT)
Power loss at night	< 1 W
Protection class	I
Galvanic isolation	Transformerless
Nom. reactive power factor $\cos \phi$	1
Type of grid monitoring	MSD, three-phase monitoring
Reverse polarity protection	Short circuit diode at DC side
Personal protection	Universal current sensitive residual current circuit breaker and earth fault monitoring
Operational conditions	interior + exterior
Ambient temperature	-20°... 60° C
Max. humidity	0 ... 95 %
Type of cooling	Regulated ventilation
Max. sound	Ventilator 25 % -> 33 dB (A) Ventilator 50 % -> 41 dB (A) Ventilator 75 % .... 100% -> <46 dB (A)
Ingress protection according to IEC 60529	IP 55
Connection technology at input side	MC 4
Connection technology at output side	Spring-loaded terminal strip
Dimensions (W x D x H)	520 x 230 x 450 mm
Weight	33 kg
Disconnection device	Integrated electronic circuit breaker

### Efficiency rate characteristic curves



Smart connections.



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## Inverter PIKO 10.1

- Three-phase feed-in to avoid voltage asymmetries
- Transformerless topology
- Possible parallel connection of two MPP trackers to extend the input current range
- Datalogging and diverse interfaces as standard: Ethernet, RS485, S0 input and output
- Integrated electronic DC circuit breaker
- Lead-free production according to EU Directive on RoHS



PIKO 10.1

## Technical data

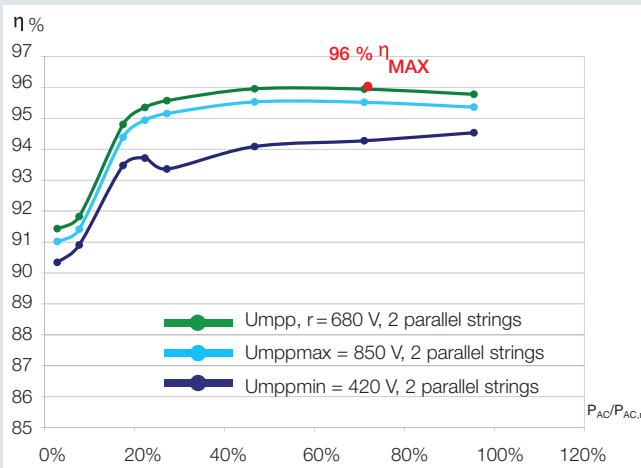
### Input side (DC)

Number of DC inputs / number of MPP trackers	3/3
Max. recommended DC power	11000 W
Max. input voltage (open circuit voltage)	950 V
Min. input voltage	180 V
Start-up input voltage	180 V
Rated input voltage	680 V
Max. MPP voltage at inverter DC rated power	850 V
Min. MPP voltage $U_{mppmin}$ , at inverter DC rated power, in symmetrical multistring, two-tracker or parallel operation	420 V
Max. input current	12.5 A
Max. input current with parallel connection	25 A

### Output side (AC)

Number of feed-in phases	3
Grid voltage	3/N/PE, AC, 230 V / 400 V
Uacmax, upper voltage switch-off limit	253 V (ES) 264.5 V (AT, BE, CH, CZ, DE, GR, LU, NL, FR, PT), 276 V (IT)
Uacmin, lower voltage switch-off limit	184 V (AT, BE, CH, DE, GR, LU, IT, NL, FR), 195.5 V (ES, CZ, PT)
Max. output current per phase	14.5 A
Rated AC output	10.000 W
Max. AC power	10.000 W
Max. efficiency	96 %
European-standard efficiency	95.4 %
Nominal frequency	50 Hz
Min. grid frequency $f_{min}$ ; switch-off limit	47 Hz (AT, PT), 47.5 Hz (DE, CH, FR, HU, BE), 48 Hz (NL), 49 Hz (ES), 49.7 Hz (IT), 49.5 Hz (GR, CZ)
Max. grid frequency $f_{max}$ ; switch-off limit	50.2 Hz (DE, CH), 50.3 Hz (IT), 50.5 Hz (GR, CZ), 51 Hz (HU, NL, ES, AT, FR, BE, PT)
Power loss at night	< 1 W
Protection class	I
Galvanic isolation	Transformerless
Nom. reactive power factor $\cos \phi$	1
Type of grid monitoring	MSD, three-phase monitoring
Reverse polarity protection	Short circuit diode at DC side
Personal protection	Universal current sensitive residual current circuit breaker and earth fault monitoring
Operational conditions	interior + exterior
Ambient temperature	-20°... 60° C
Max. humidity	0 ... 95 %
Type of cooling	Regulated ventilation
Max. sound	Ventilator 25 % -> 33dB (A) Ventilator 50 % -> 41 dB (A) Ventilator 75 % .... 100% -> <46dB (A)
Ingress protection according to IEC 60529	IP 55
Connection technology at input side	MC 4
Connection technology at output side	Spring-loaded terminal strip
Dimensions (W x D x H)	520 x 230 x 450 mm
Weight	34 kg
Disconnection device	Integrated electronic circuit breaker

### Efficiency rate characteristic curves



Smart connections.



Configurable for: Deutschland, Österreich, España, Portugal, France, Italia, Suisse, Belgique, Luxembourg, Nederland, Ελλάδα, България, Česko, Magyarország, România, Slovensko, Slovenija, Türkiye

Manufacturer's Declaration of Conformity: CE marc: EMV-Directive 2004/108/EC: DIN EN 61000-3-2, EN 61000-3-3, DIN EN 61000-6-2, DIN EN 61000-6-3, Low Voltage Directive, 2006/95/EC, DIN EN 50178, MSD document of compliance: Automatic switching device with three-phase (PIKO 3.0/3.6 single-phase), grid monitoring according to DIN V VDE V, 0126-1-1:2006-02, Test principles: DIN V VDE V 0126-1-1, (VDE V 0126-1-1):2006-02 and „Independent generation systems on the low voltage grid“, Document of compliance integrated electronic circuit breaker: IEC 60947-3:1999; DIN EN 60947-3; VDE 0660-107:2006-03, Low voltage switchgear Part 3: load switches, circuit breakers, load circuit breakers and switch fuse units; IEC 60364-7-712:2002-05; DIN VDE 0100-712:2006-06

Producer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

[www.kostal-solar-electric.com](http://www.kostal-solar-electric.com)

## Overview Technical Data

Input side (DC)						
Typ	PIKO 3.0	PIKO 3.6	PIKO 4.2	PIKO 5.5	PIKO 8.3	PIKO 10.1
Number of DC inputs / number of MPP trackers	1 / 1	2 / 2	2 / 2	3 / 3	2 / 2	3 / 3
Max. recommended DC power	3.200W	3.800W	4.400W	5.800W	8.700W	11.000W
Max. input voltage (open circuit voltage)	950 V					
Min. input voltage	180 V					
Max. input current	9A	9A	9A	9A	12,5A	12,5A
Output side (AC)						
Number of feed-in phases	1		3			
Grid voltage	1/N/PE, AC, 230V		3/N/PE, AC, 230/400V			
Max. output current (per phase)	13,1A	15,7A	6,1A	8A	12A	14,5A
Rated AC output	2.800W	3.300W	3.800W (PT 3.680 W)	5.000W	7.600W	10.000W
Max. AC power	3.000W	3.600W	4.200W	5.500W	8.300W	10.000W
Max. efficiency	94,8%	94,9%	96%	95,3%	96%	96%
European-standard efficiency	93,6%	94%	94,7%	94,2%	95,3%	95,4%
Nominal frequency	50Hz					
Galvanic isolation	Transformerless					
Type of grid monitoring	MSD, Frequency shifting		MSD, three-phase monitoring			
Ambient temperature	-20°...60°C					
Ingress protection according to IEC 60529	IP 55					
Connection technology at input side	MC 4					
Connection technology at output side	Spring-loaded terminal strip					
Dimensions (W x D x H)	420x211x350 mm				520x230x450 mm	
Weight	19,8kg	20kg	20,5kg	21,1kg	33kg	34kg
Disconnection device	Integrated electronic circuit breaker					



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