### **SolarMax P series**

The power package for residential solar plants





More than 20 years Swiss Quality and Experience



### The future-proof solution

The requirements for residential photovoltaic plants have increased continuously in the past years. Due to our 20 years of experience in the development and manufacture of transformerless inverters, as well as cooperation with long-standing customers, we are familiar with the needs of installers and plant operators. With the SolarMax P series, we have developed a string inverter adapted ideally to the current, but also the future requirements of small solar plants. Thanks to its comprehensive features allowing for simple and flexible installation in the house, this inverter sets new standards and is the durable, comfortable, and future-proof solution for private solar plants.





#### Individual tracker concept

Thanks to the new **dual tracker** concept, eastwest arrangements or an odd number of modules do not constitute any limitations. Even module tolerances can be compensated efficiently. This way, every roof surface can be used ideally for the production of power. Alternatively, a **single tracker** mode also is available.



## Safe and comfortable connection range

Due to the simple **connection concept**, the P series can be installed in the twinkling of an eye – this saves time and money. Thanks to the divided connection range, the communication connections also provide safe access for the plant operator. For instance, Firmware-Updates can be performed quickly and easily.





### Highest efficiency of its class

By using the highly efficient HERIC<sup>®</sup> topology, the SolarMax P series achieves maximum efficiencies of up to **98%** and provides the plant operator with the quickest possible returns. All devices are equipped with a low-noise **passive cooling system** and are therefore ideally suitable for being used in residential solar plants.







### **Direct internet connection**

The free **MaxView** web portal allows for long-term and location-independent plant monitoring without an external data logger. **Plug&Play** is used in order to directly connect the P series to commercially available internet routers. At maxview.solarmax.com the plant can be monitored at any time from anywhere.

## Plant check live from the couch

The free **MaxMonitoring** app for smartphones, tablets, and computers brings the inverter to the living room. The plant operator can use the home network in order to view current output and operating data, as well as the yield values of his plant. Several inverters can be summarised comfortably to become one plant.

## Professional configuration via notebook

In order to individually configure the inverter, the free **MaxTalk** software is available. This software offers numerous setting and diagnostics options – country-specific at that. The connection to the inverter is performed easily using **Plug&Play**.

# More independence in the future

By coupling PV system and controllable electrical loads, the share of **own consumption** of the self-generated current can be increased. With an advanced version of the optional **I/O module**, this will be possible in the future. This provides for more independence and reduces the annual electricity bill.







#### Maximum yield

Plant operators benefit from the high efficiency and the two MPP trackers.



With warranty extensions of up to 25 years, plant operators minimise their financial risk in the long run.



#### Maximum flexibility

The broad selection of device types and the optional interfaces allow for flexible and individual plant planning.



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## Maximum communication

By means of a direct internet interface, the plant data is available on numerous terminals and from everywhere.



### Maximum comfort

A simple connection concept and the Plug&Play installation render the installation extremely comfortable.

### **Specifications**



		SolarMax 2000P	SolarMax 3000P	SolarMax 4000P	SolarMax 4600P	SolarMax 5000P
Input values	MPP voltage range <sup>1)</sup>	210 480V	310 480V	190 480V	240 480V	260 480V
	Minimum DC voltage	120V	120V	120V	120V	120V
	Maximum DC voltage	600V	600V	600V	600V	600V
	Maximum DC current	10A	10A	10 + 10A	10 + 10A	10 + 10A
	Number of MPP trackers	1	1	2	2	2
	Number of string connections	1	1	2	2	2
	Connection type	Wieland PST40i1 (MC4 identical in design)				
Output values	Rated output power	2,000W	3,000W	4,000W	4,600W	5,000W
	Maximum apparent output power	2,000VA	3,000VA	4,000VA	4,600VA	5,000VA
	Maximum AC current	9A	13.5A	17.5A	22A	22A
	Nominal mains voltage / range	230V / 184 276V				
	Mains nominal frequency / range	50Hz / 45 55Hz				
	Power factor $cos(\phi)$	Adjustable from 0.9 overexcited to 0.9 underexcited				
	Distortion factor at rated output power	< 3%				
	Connection type	Terminal (2.5 – 10mm <sup>2</sup> )				
	Grid connection	Single phase (L / N / PE)				
	Power input at night	OW				
Efficiency	Max. efficiency	97.5%	97.5%	98.0%	98.0%	98.0%
	European efficiency	97.0%	97.0%	97.5%	97.5%	97.5%
Ambient conditions	Protection type	IP65				
	Ambient temperature range (for rated power output)	-20°C +60°C (+45°C)				
	Relative humidity	0 98% (no condensation)				
	Maximum altitude above sea level	2000m (without derating)				
	Fire protection class	VO				
Configuration	Display	Graphic LC display with backlighting and status LED				
	Inverter topology	HERIC <sup>®</sup> , transformerless				
	DC disconnector	Integrated				
	Data logger	Energy yield, peak output and operating hours of the last 31 days, 12 months, 10 years. Performance curves of the last 7 days.				
	Fault current monitoring	Internal, AC/DC sensitive				
	Housing / service cover	Aluminium / plastic ASA+PC				
	Surge protection DC and AC	Requirement class D (VDE 0675-6) and/or type 3 (EN 61643-11)				
Standards &	EMC	EN 61000-3-2 / EN 61000-3-3 / EN 61000-3-11 / EN 61000-3-12 / EN 61000-6-2 / EN 61000-6-3				
guideline compliance	Grid connection	VDE 0126-1-1 / VDE-AR-N 4105 <sup>2)</sup> / CEI 0-21 <sup>3)</sup> / RD 661 / RD 1699 / G83/2 / G59/2 / PPC Guide / C10/11 / EN 50438 <sup>4)</sup>				
	Device safety	IEC/ EN 62109-1/ -2				
Interfaces	Data communication	RS485 / Ethernet (Plug&Play)				
	Status signalling contact	optional				
	Connection ripple control signal receiver	optional				
	Connection external surge protection	optional				
	Connection external grid monitoring	optional				
Weight & dimensions	Weight	17kg	17kg	19kg	19kg	19kg
	Dimensions in (W x H x D)	476 x 360 x 180mm				
Warranty	Standard warranty	5 years				
	Warranty extensions	to 10, 15, 20, or 25 years				
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<sup>1)</sup> For AC rated power output

<sup>2)</sup> not for 5000P

<sup>3)</sup> for plants ≤ 6kW

<sup>4)</sup> Portugal and Czech Republic

### SolarMax 5000P efficiency curve





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