SolarMax MT series

The universal solution for trade and industry

Photon The Photovoltaic Magazine International
Solarmax 13MT
A
97,1 % at high irradiation 09/2011
www.photon-international.com

Photon The Photovoltaic Magazine International
Solarmax 13MT
A
96,8 % at medium irradiation 09/2011
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20
More than
20 years Swiss Quality
and Experience

SolarMax®
SWISS QUALITY

For us, reliability is the top priority!

For more than 20 years, we have been developing and producing transformer- less inverters. This long-term expertise was used by our engineers in the development of the SolarMax MT series. The result includes three-phase feeding string inverters with very good efficiency and high levels of reliability. Regardless of whether it is a medium-size private plant or an industrial large-scale project, they get the optimum from every PV power plant. In this, high levels of input voltage reduce the line losses and the required cabling. Thanks to the multi-tracking concept with up to three MPP trackers, different roof surfaces, angles of inclination and orientations can be coped with without any problems. Furthermore, all MT series inverters are lightweight, easy to install, and are equipped with standardised communication interfaces.

Maximum pay-back

With a Euro efficiency of 97.5 %, the SolarMax MT series inverters maximise the yields of every PV power plant. The high input voltage of up to 900V allows for longer strings than before. This reduces cable losses and the wiring expenditure – for maximum pay-back.

Swiss Quality

Each SolarMax MT series device satisfies all requirements of the GS mark of conformity for product safety. Thanks to the high quality standards, we can grant a standard five-year manufacturer's warranty for each string inverter which can be extended up to 25 years.

Clever multi-tracking

PV power plants equipped with Solar Max MT series inverters make more efficient use of the roof surfaces. Thanks to an innovative and flexible multi-tracking concept, the operating point of individual module fields can be set, and thus optimised, individually. The solar generator can be segmented specifically already during installation in order to also minimise losses in performance which may occur due to temporary shading.

Competent after-sales service

If a device fails to function normally, there is a competent hotline ready to help you find the source of the malfunction. If the device is the cause of the malfunction, we will replace the inverter without delay. In addition, we also support our partners with regular training and our free “MaxDesign” design software. This makes creating a power plant as easy as anything!

Innovative cooling system

A intelligent cooling concept dissipates the heat even more efficiently from the housing, thus reducing the rate the electronic components age. All SolarMax MT series inverters also work under the harshest conditions without any loss in performance – and up to ambient temperatures as high as 50° C. This is why sensors monitor the operating temperature to protect the inverters against overheating.

Smart operation and communication

All relevant information and settings are presented on the straight-forward graphics display. An integrated data logger stores all important data from the sensors. Every inverter is equipped with a standard RS485 and Ethernet interface and can be easily enhanced by adding on “MaxComm” components. For example, the free MaxMonitoring app represents the output data in a clear manner so that you can see at any time how much environmentally friendly solar energy a power plant is generating and has fed into the public grid.

Easier-than-ever installation

The SolarMax MT series inverters are light, compact and their plug-in, easily accessible connections can be installed in no time. Thanks to the included mounting plate they can be easily mounted on the wall. The integrated DC circuit breakers enable the inverters to be disconnected from the solar generator in one step.

MaxComm plant monitoring

MaxWeb

The MaxWeb xp data logger forms the core of the web-based plant monitoring; it enables multimedia communication with the photovoltaic power plant and sends information via the internet to freely selectable devices. MaxRemote enables remote-controlled performance reduction by the grid operator.

MaxMonitoring

The cost-free app visualises the performance data of the photovoltaic power plant and of individual inverters on site.

MaxTalk

User-friendly PC software for on site communication and for local plant monitoring.

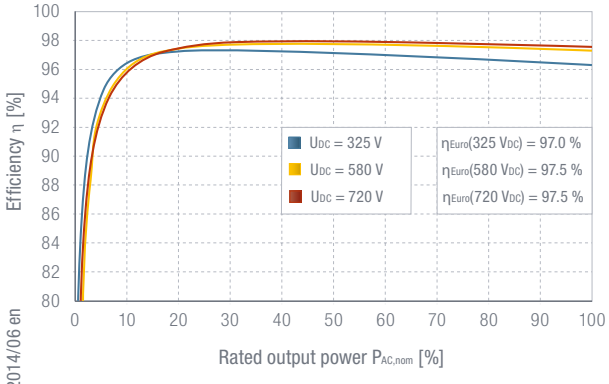
Specifications

		SM 6MT2	SM 8MT2	SM 10MT2	SM 13MT2	SM 15MT2	SM 13MT3	SM 15MT3
Input values	MPP voltage range [1]	340…750V	300…750V	290…750V	370…750V	430…750V	280…750V	320…750V
	Minimum DC voltage	250V	250V	250V	250V	250V	250V	250V
	Maximum DC voltage	900 V	900V	900V	900V	900V	900V	900 V
	Maximum DC current	1 x 9A / 1 x 9A	1 x 18A / 1 x 9A	2 x 18A	2 x 18A	2 x 18A	3 x 16A	3 x 16A
	Number of MPP-Trackers	2	2	2	2	2	3	3
	Max. PV generator output power per MPP tracker	5'000W	MPPT1: 9'000W MPPT2: 5'000W	9'000W	9'000W	9'000W	9'000W	9'000W
	String connections	1 x 2 / 1 x 1	1 x 2 / 1 x 1	2 x 2	2 x 2	2 x 2	3 x 2	3 x 2
	Connection type	MC 4	MC 4	MC 4	MC 4	MC 4	MC 4	MC 4
Output values	Rated output power at cos(φ) = 1	6'000W	8'000W	10'000W	13'000W	15'000W	13'000W	15'000W
	Maximum apparent output power	6'000VA	8'000VA	10'000VA	13'000VA	15'000VA	13'000VA	15'000VA
	Nominal mains voltage	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V
	Maximum AC current	3 x 9A	3 x 12A	3 x 16A	3 x 20A	3 x 22A	3 x 20A	3 x 22 A
	Mains nominal frequency / range	50Hz / 45Hz…55Hz						
	Power factor cos(φ)	Adjustable from 0.8 overexcited to 0.8 underexcited						
	Distortion factor at rated output power	< 3%						
	Connection type	Connector (locking)						
	Grid connection	Three-phase (L1 / L2 / L3 / N / PE)						
	Power input at night	0W						
Efficiency	Max. efficiency	98.0%						
	European efficiency	97.5%						
Ambient conditions	Protection type	IP65						
	Ambient temperature range for rated power output)	-20°C…+60°C (+50°C)						
	Relative humidity	0…98 % (no condensation)						
	Maximum altitude above sea level	2000m (without derating)						
	Noise emissions (↔ 1.5 m)	51 dB(A) fan off / 58 dB(A) fan on						
Configuration	Display	Graphic LC display with backlight and status LED						
	Circuit type	Two-stage, transformerless						
	Data logger	Data logger for energy yield, peak output, and operating duration for the last 31 days, 12 months, and 10 years						
	Fault current monitoring	Internal, AC/DC sensitive						
	Casing	Aluminium						
	Overvoltage conductor DC	Requirement class C (VDE 0675-6) and/or type 2 (EN 61643-11)						
	Overvoltage conductor AC	Requirement class D (VDE 0675-6) and/or type 3 (EN 61643-11)						
Standards & guidelines	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						
	Grid connection [2]	VDE-AR-N 4105 / VDE 0126-1-1 A1:2012 / BDEW MS-Richtlinie / CEI 0-21 / CEI 0-16 / RD 661 / RD 1699 / G59/2 / G83/2 / PPC Guide / C10/11 / EN 50438 / AS 4777						
	Device safety	IEC / EN 62109-1/-2						
Interfaces	Data communication	RS485 / Ethernet						
	Status signalling contact	M12 connector with relay as N/C contact / N/O contact						
	Connection of external grid monitoring	M12 connector						
Weight & dimensions	Weight	34 kg	37kg	39kg	39kg	39kg	42kg	42 kg
	Dimensions in mm (L x H x W)	550 x 750 x 200						
Warranty	Standard warranty	5 years						
	Warranty extensions	to 10, 15, 20, or 25 years						

[1] For AC rated power output

[2] Certificates are not available for all models. Details can be found at www.solarmax.com

SolarMax 15MT3 efficiency curve



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