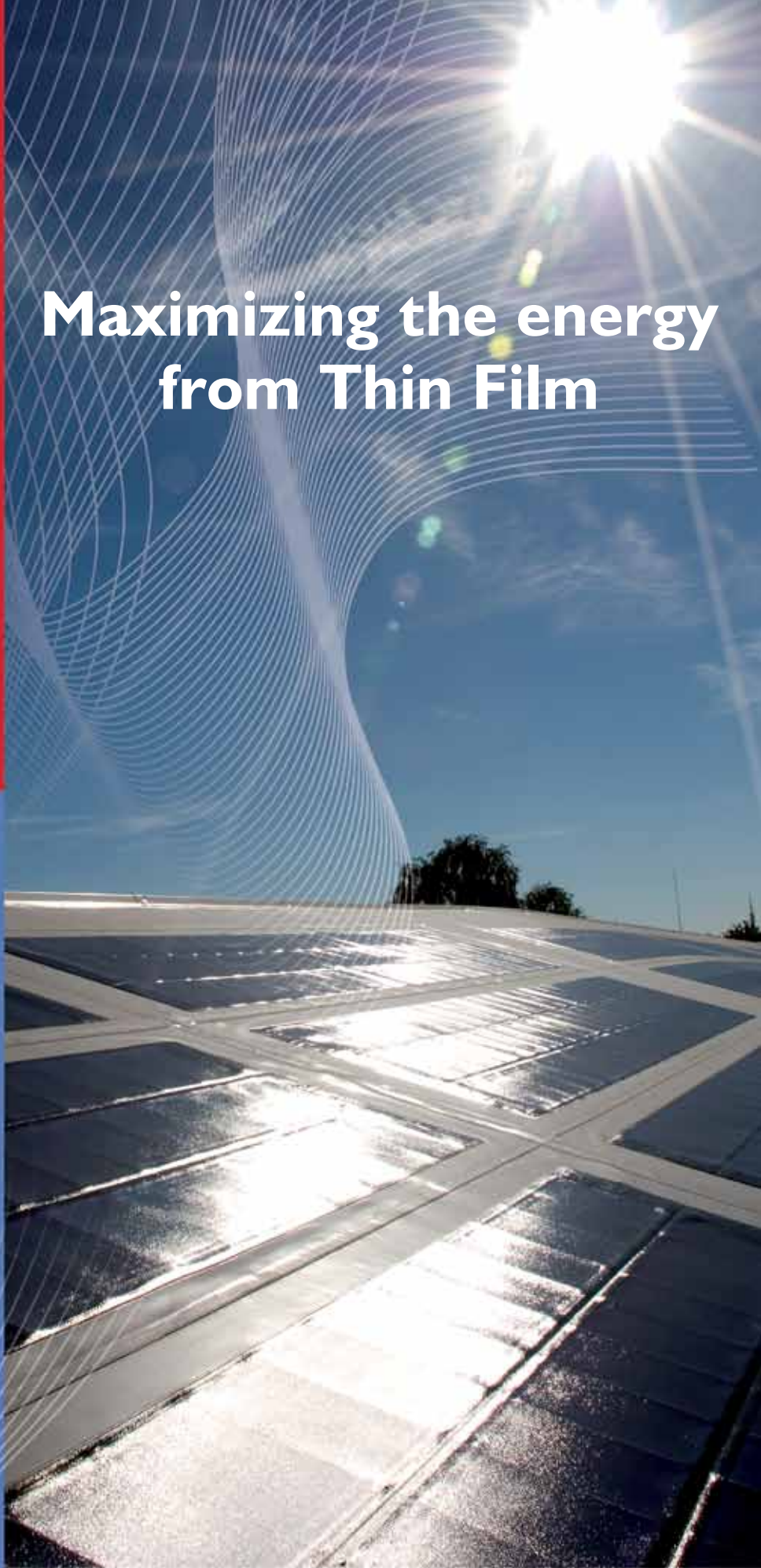


SunMaster IS



Maximizing the energy from Thin Film



- Galvanic isolated
- Reliable, modular
- Easy Mount concept
- Lightweight enclosure

Maximizing the power from the sun

The SunMaster IS range maximizes the energy production of Thin Film installations. The modular concept simplifies installation and ensures easy maintenance, resulting in reduced overall Cost of Ownership. Each power module incorporates the proven technology of Mastervolt. The power modules have been designed to provide high efficiency and extremely low losses, resulting in a very high annual yield.

Flexible design

- Compatible with any type of solar module: CIGS, CdTe, amorphous silicon, mono- and poly-silicon and back contact technology.
- Integrated HF transformer provides galvanic isolation, no grounding kit needed.

High yield

- 100% power, up to 45 °C ambient temperature.
- High efficiency over full power range.
- More production due to early startup and late shutdown.
- Adaptive cooling technology.
- 3 Independent MPP trackers for multi orientation or shaded conditions.

Easy & safe installation

- Ventilation from bottom to top: They can be placed side by side.
- Wall mounted enclosure.
- Segmental mounting of backbone, power modules and front cover.
- Power modules are equipped with 4 mm² Multi Contact connectors and cables.
- Integrated DC switch and over voltage protection (optional connection kits).

Reliable

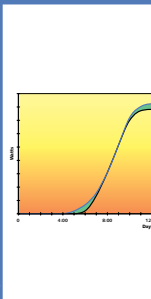
- Standard 5 years warranty, 10 or 20 years as option.
- Proven Mastervolt concept.
- High cooling efficiency extends operating life and increases yield.
- Replaceable air filter.

Advanced monitoring

Extensive monitoring solutions available. Please visit www.mastervoltsolar.com/monitoring

Ordering procedure

Various country specific models are available. Isolation monitoring may be disabled for functional grounding purposes. Please visit www.mastervoltsolar.com for applicable article numbers.



Mastervolt SunMaster IS

supreme benefits

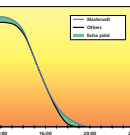
Advanced monitoring

The SunMaster IS stores the daily energy production of your solar power system for reading on PC or laptop. Optional monitoring via Internet as option.



High yield

Three highly efficient MPP trackers generate maximum yield from the solar panels, even at low light conditions. A low self consumption ensures early start-up and late shutdown.



Guaranteed reliability

Besides the standard warranty of 5 years, a warranty of 10 and 20 years is available, underlining our confidence in the product's reliability.



Connection kit options

The SunMaster IS comes standard with AC and DC terminal blocks. Two pre-assembled connection kits are available as an option:

- **Switch:** AC & DC terminals + DC switch.
- **SW+OVP:** AC & DC terminals, DC switch and over voltage protection.

Please specify when ordering.



- 1 Front.
- 2 LED display.
- 3 Air filter.
- 4 Power module.
- 5 Backbone.
- 6 Optional connection kits.

Modular design

Three identical modules ensure easy maintenance.

Easy Mount concept

The hinged design of the cabinet combines ample room for installation with a compact installed product.

Functional grounding option

Isolation monitoring may be disabled for functional grounding purposes. Please visit www.mastervoltsolar.com for applicable article numbers.



Specifications SunMaster IS



IS10



IS15

Model

Article number

Various country specific models are available. Isolation monitoring may be disabled for functional grounding purposes.

Contact Mastervolt for applicable article numbers or visit www.mastervoltsolar.com

GENERAL SPECIFICATIONS

Operating temperature	-20 °C to 60 °C ambient, full power up to 45 °C ambient air temperature, derating -3%/°C above 45 °C
Relative humidity	0-90% non condensing; protective PCB coating
Protection degree	IP23 for indoor use
Safety class	class I (metal housing with earth connection)
Galvanic isolation	safety transformer
Weight	61 kg (22 kg enclosure + 3x 13 kg modules)
Dimensions (hwxwx d)	862.5 x 511.5 x 405 mm
Connections	Power module: DC input is fitted with 4 mm ² Multi Contact connectors / AC output fitted with 100 cm AC cable / 2 RS485 communication ports Connection plate: DC input 16 mm ² , AC output 16 mm ² connection terminals
Product warranty	5 years

SOLAR INPUT (DC)

Recommended PV power range	9 kW _p - 13 kW _p	14 kW _p - 20 kW _p
Maximum input power	11.200 W DC	16.800 W DC
Start-up power	< 3 x 10 W	< 3 x 10 W
Operating voltage	100-550 V DC; nominal 400 V DC	100-600 V DC; nominal 400 V DC
MPP voltage range @ nominal power	230-440 V DC	180-480 V DC
Maximum voltage	550 V DC	600 V DC
Number of inputs	3	3
Rated current	3 x 15 A	3 x 30 A
MPP tracker	3 MPP trackers with 99.9% MPP efficiency	
DC connectors	six 4 mm ² Multi Contact connectors	

GRID OUTPUT (AC)

Voltage	230 V AC 3-phase	230 V AC 3-phase
Nominal power at 45 °C	10.000 W	15.000 W
Maximum power	10.500 W*	15.750 W
Nominal current	3 x 15 A	3 x 22 A
Frequency	50 / 60 Hz	
Power factor	> 0.99 at full power	
Night consumption	< 1 W	
EU efficiency	95% @ U _{nom}	
Maximum efficiency	96%	
AC connector	16 mm ² connection terminal	
Fuse	Internal PCB fuse in power modules	

SAFETY DEVICES

General	Galvanic separation between DC and AC side by means of class II HF transformers
Island protection	An AC fault in any of the phases will disable all three power modules. Redundant voltage and frequency window monitoring (QNS); Independent cut-off by means of 2 pole relay and solid state switch (ENS) according to VDE 0126-1-1
Temperature protection	Thermal switch off at power module internal over temperature
Safety devices DC side	Isolation resistance monitoring, over voltage detection, inverse polarity protection, current limiting, temperature controlled power derating, type 3 surge protection
Safety devices AC side	AC current limiting, DC injection protection, short circuit (ceramic fuse), type 3 surge protection
Optional	DC switch and type 2 over voltage protection

MONITORING

User interface	6 status LEDs on each power module
External communication	<ul style="list-style-type: none"> • 2x RS485 connections (max. 10 IS units can be connected to one Data Control Pro datalogger) • 2x MasterBus field service interface

APPROVALS

CE conformity	yes
National grid interface requirements	VDE 0126-1-1 / DK5940 / RD1663-2000 / K SC 8536 / G83-1 / Synegrid C10/11 compliant

* In Belgium max. 10.000 W.

Subject to alterations. For our complete product range please visit www.mastervoltsolar.com/sunmaster-is