

Sunmaster IS



**Modular concept
maximum yield**

Isolated string inverter
Advanced monitoring
Easy and safe installation
Reliable

 **MASTERVOLT**

THE POWER TO BE INDEPENDENT

Maximizing the power from the sun

The Mastervolt IS range maximizes the production of solar installations. The involvement of specialised service technicians is minimised reducing the costs of ownership.

Each module incorporates the electronics of a proven technology platform of Mastervolt. This means a flexible design, high yield and simple installation have been taken into consideration already at the initial design of this inverter.

Flexible design

- Compatible with any type of solar module.
- Integrated isolation.

High yield

- 100% power up to 45 °C.
- High efficiency using HF technology.
- More production due to early startup and late shutdown.
- Unique adaptive cooling technology.

Advanced monitoring

- Extensive monitoring solutions available.

Easy & safe installation

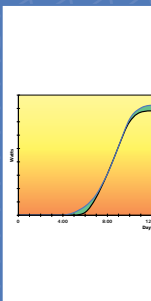
- The lightweight outercasing can be easily mounted, even before the three modules are inserted.
- MC connections.
- Integrated DC switch.
- Integrated stringbox for up to 9 strings.

Reliable

- Standard 5 years warranty with optional 10 or 20 years.
- Designed based on a proven Mastervolt concept.
- Long life due to advanced cooling.
- Outstanding price/quality ratio.

More information?

Feel free to contact Mastervolt or one of our business partners, or visit www.mastervolt.com



Warranty	
Model	IS 10
Output power	1000W
Input power	1500W
Efficiency	96.5%
Max. DC voltage	150V
Max. DC current	10A
Max. DC power	1500W

Mastervolt Sunmaster IS

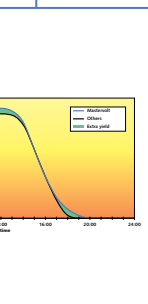
supreme benefits



The Mastervolt IS series stores the daily energy production of your solar power system for reading on PC or laptop. Optional monitoring via Internet is possible so you can ensure that your system is functioning at all times.

High yield

The MPP trackers (99.9%) ensure a maximum output from the solar panels, even at low light conditions. Start-up only requires 5 to 10 W, the inverters will start working early in the morning until the end of the day. The active cooling provides full power output in temperatures up to 45 °C.



Modular design

The three equal modules ensure easy maintenance.

Easy installation

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

Guaranteed reliability

A wide selection of warranty options is available for the Sunmaster IS series. Besides the standard warranty of 5 years, a warranty of 10 and 20 years is available, under-lining our confidence in the product's reliability; an indispensable quality of sustainable power systems.



Technical specifications

GENERAL

Description	integrated 3-phase solar inverter, enclosure and modules to be shipped separately.
Operating temperature	-20 °C to 60 °C ambient, full power up to 45 °C ambient air temperature, derating -3%/°C above 45 °C
Storage temperature	-20 °C to 60 °C
Relative humidity	protected against humidity and condensing air by PCB coating
Protection degree	IP23
Safety class	class I (metal housing with earth connection)
Galvanic isolation	class II (safety transformer)
Weight	61 kg (22 kg enclosure + 3x 13 kg modules)
Dimensions (hwxwd)	862.5 x 511.5 x 405 mm
Connections	power module: DC input is fitted with MC2/4mm connectors / AC output fitted with 100 cm AC cable / 2 RS485 communication ports, DC input 16 mm ² , AC output 16 mm ² connection terminals
Product warranty	60 months

SOLAR INPUT (DC)	model IS10	model IS15
Recommended PV power range	9 kWp - 13 kWp	14 kWp - 20 kWp
Maximum input power	11.200 W DC	16.800 W DC
Continuous power @ 45 °C	10.650 W DC	15.975 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	180 - 480 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 (Fraunhofer algorithm)	
DC connectors	6 Multi Contact 4mm connectors	

GRID OUTPUT (AC)		
Voltage	230 V AC 3-phase	230 V AC 3-phase
Nominal power	10.000 W	15.000 W
Maximum power	10.000 W	15.750 W
Nominal current	3 x 15 A	3 x 22 A
Frequency	50 Hz models: 48 - 52 Hz programmable / 60 Hz models: 57 - 63 Hz programmable	
Power factor	> 0.99 at full power	
Harmonic distortion	THD < 3% at full power; UL1741 / IEEE1547(2003) / IEEE 1547.1(2005) compliant	
DC current injection	galvanic grid disconnection at 1000 mA DC (to VDE 0126-1-1:2006)	
Stand-by power	< 5 W	
EU efficiency	95% @ Unom	
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 0126-1-1:2006.
Temperature protection	thermal switch off at power module internal over temperature
Safety devices DC side	DC-to-earth isolation resistance monitoring, DC over-voltage detection (LED warning and switch off), DC inverse polarity protection (diodes), DC current limiting by up-shifting operating voltage, transients (varistors and buffer capacitor), overload (power limiting and temperature controlled power derating)
Safety devices AC side	AC current limiting, DC current injection protection, short circuit (ceramic fuse), transients / surge up to 4 kV (varistors)
Reclosure time	wait 10 - 300 s (model dependant) after AC grid fault
Optional	DC switch and over-voltage protection

SYSTEM INFORMATION / DIAGNOSTICS / COMMUNICATION	
User interface	6 status LED's on each power module
External communication	2 surge protected RS485 connections, max. 10 IS units can be connected to 1 Data Control Pro datalogger

REGULATIONS AND DIRECTIVES	
CE Conformity	yes
Dips, variations, flicker	EN 61000-4-11 ; EN 61000-3-3
Immunity	EN 61000-6-2
LV directive	73/23/EEG
Electrical safety	EN 60950
National grid interface requirements	VDE 0126-1-1 / DK5940 / RD1663-2000 / K SC 8536 / G83-1 compliant

Subject to alterations. For our complete product range please visit www.mastervolt.com