

SMART MS 300 SERIES

■ MS 300

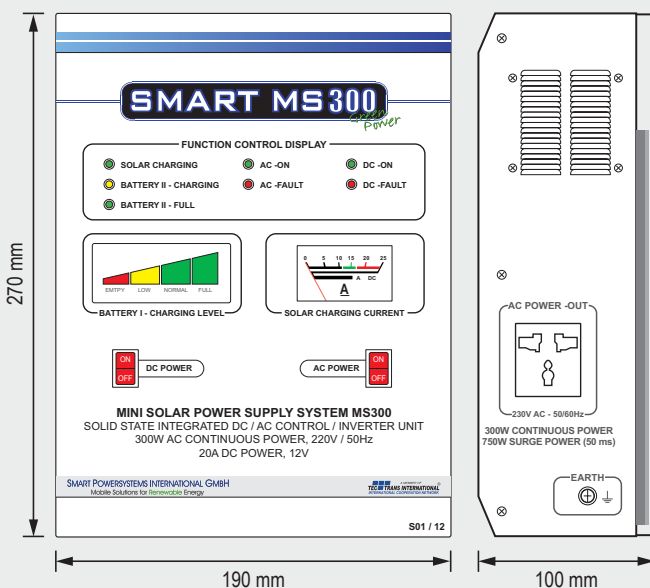
S01 / S02

COMPACT DC/AC CONTROL/INVERTER UNIT FOR BASIC POWER SUPPLY BY SOLAR ENERGY

SMART MS 300
isometric view



SMART MS 300
Dimensions



Key Information

Mini Solar power supply system especially designed for the use as extendable Solar Home System. Compact “plug and play” performance with newly developed solar charging and inverter system for easy installation. It can manage two independent 12V DC battery banks and a total of 30A solar charging power. Thus the Solar Home System can easily be extended later on just by adding additional solar modules without changing the control unit. Furthermore the SMART MS 300 disposes of a 230V AC (S01) resp. 110V AC (S02) - 50/60Hz and 12V DC power output for direct connection of DC/AC consumers.

Special Features

- Powerful 2-channel, 2-step solar charge controller for connection of solar modules up to 30A and one or two separate 12V battery banks
- Built-in DC/AC inverter (mod. sine), 300W continuous power, 750W surge (50ms) power, 50/60Hz frequency switch
- Guaranteed AC power availability during standby of inverter at any time through minimum “no load consumption” (< 3,0Ah per day)
- Switchable 12V DC power output, max. 20A with electronic overload protection and low voltage disconnection
- Switchable multinorm AC output power socket with electronic overload protection and low voltage disconnection
- Function control display, battery charging level indicator and solar charging current meter for optimum installation and safe operation
- Battery terminals protected against overload, reverse polarity and short circuit by standard fuses
- Electronic parts protected against corrosion, suitable for cold, moderate and tropical climates
- Certifications: ISO9001/2000 production standard, CE declaration of conformity

Sample applications for AC consumers:

- Household items: incandescent and fluorescent lamps, sewing machine, desk fan, worklight, curling iron, dorm style refrigerator, etc.
- Power tools: jigsaw, soldering gun, pump, tool charger, etc.
- Home entertainment: 25" colour TV, VCR, camcorder, stereo, video games, DVD-player, etc.



SMART MS 300 S01/12

12V DC / 230V AC - 50/60Hz

Technical Data Sheet

DC-AC Inverter		
Current wave form	modified sine	
Max. AC output power (continuous)	300W + 10%	
Max. AC output power (surge)	750W + 10% / 50ms	
AC output voltage	at nominal load: 230V ± 5%	
Frequency	by switch: 50Hz or 60Hz ± 2%	
Efficiency	90% at nominal load	
Nominal DC input system voltage	12V DC	
I-Standby	≤ 100mA	
Low voltage disconnect (L.V.D.) factory setting	≤ 10.5V ± 2%	
Manual reset voltage	≥ 11V ± 2%	
DC Output		
Nominal DC input voltage	12V DC	
DC output voltage	10.5 - 14.2V	
DC output current	max. 20A	
Low voltage disconnect (L.V.D.)	≤ 10.5V ± 2%	
Manual reset voltage	≥ 11V ± 2%	
DC output protection	≥ 20A by electronic shutdown	
Solar Charge Controller		
Charging current	I _{max} 30A, V < 20V	
Boost charging	14.5V ± 2%	
Float charge (constant voltage)	13.8V ± 2%	
Recharge voltage	13.2V ± 2%	
Charging Sources / Monitor		
Solar	LED Yellow	DC current meter
Battery I Level Indicator		
Full	≥ 14.5V ± 2% / LED Green	
Normal	≥ 12.3V ± 2% / LED Green	
Low	≥ 11.2V ± 2% / LED Yellow	
Empty	≤ 10.5V ± 2% / LED Red	
Battery II LEDs		
Charging active	LED Red	
Full	LED Green	
Switches / Meter / Fan / Fuses & Others		
DC power "ON"	LED Green	
DC power "Fault"	LED Red	
AC power "ON"	LED Green	
AC power "Fault"	LED Red	
DC charging current meter	30A	
Battery I fuse protection (overload, reverse polarity)	60A / 2x 30A flat fuses	
Battery II fuse protection (overload, reverse polarity)	30A / 2x 15A flat fuses	
Solar charging current protection (overcharging)	30A / 2x 15A flat fuses	
Fan	thermally controlled	
Operating temperature range	-10° - 50°C	
Dimensions (l x w x h)	270 x 190 x 100 mm ³	
Net weight	3.5 kg	
Certifications	ISO9001/2000 production standard (March 2005) CE Declaration of Conformity	

Specifications subject to change without notice