



## Single Phase Hybrid Inverter Datasheet

Omnis S-3000LV  
Omnis S-3680LV  
Omnis S-4600LV  
Omnis S-5000LV  
Omnis S-6000LV

### Description

The Omnis S Series is a high-performance single-phase hybrid inverter with excellent reliability, including power class from 3 kW to 6 kW.

The intelligent EMS function supports self-consumption mode, economic mode, and backup mode for multi-scenario applications.

Module-level monitoring management through Omnis Power Cloud allows users to remotely diagnose and track individual modules' performance over time, maximizing the total solar power production.

### Features

- |           |   |           |  |
|-----------|---|-----------|--|
| <b>01</b> | Max. Efficiency 97.6%, European Efficiency 97.0%  | <b>05</b> | Support both DC-coupled and AC-coupled system  |
| <b>02</b> | Double MPPT tracker, up to 14A MPPT current       | <b>06</b> | EMS integrates with self-consumption, economic mode, backup mode for multi-scenario applications |
| <b>03</b> | DC/AC ratio up to 150%                            | <b>07</b> | Built in dry contact flexibly set to earth fault alarm, load control or generator control        |
| <b>04</b> | Ultralight for easy installation and space-saving | <b>08</b> | Remote monitoring through Omnis Power Cloud  |

## Technical Specifications

Model	Omnis S-3000LV	Omnis S-3680LV	Omnis S-4600LV	Omnis S-5000LV	Omnis S-6000LV
<b>Battery</b>					
Battery Type	Li-ion / Lead-acid				
Rated Battery Voltage (V)	48				
Voltage Range (V)	40-60				
Max. Charge Current (A)	75	90	100	100	100
Max. Discharge Current (A)	75	90	100	100	100
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
Charging Curve	3 Stages / Equalization				
External Temperature Sensor	Optional				
<b>PV Input</b>					
Max. PV Input Power (W)	4500	6000	7500	7500	7500
Max. PV Input Voltage (V)	550				
Nominal Input Voltage (V)	360				
MPPT Voltage Range (V)	125-500				
Start-up Voltage (V)	150				
Number of MPPTs	1	2	2	2	2
Max. Number of PV String per MPPT	1/1	1/1	1/1	1/1	1/1
Max. PV Input Current (A)	14/14	14/14	14/14	14/14	14/14
Short-circuit Current of PV Input (A)	17/17	17/17	17/17	17/17	17/17
<b>AC Input and Output (On-grid)</b>					
Nominal Output Apparent Power (VA)	3000	3680	4600	5000 <sup>(1)</sup>	6000 <sup>(1)</sup>
Max. Output Apparent Power (VA)	3000	3680	4600	5000 <sup>(1)</sup>	6000 <sup>(1)</sup>
Max. Input Apparent Power (VA)	6000	7360	7360	7360	7360
Nominal AC Voltage (V)	230				
Nominal Grid Frequency (Hz)	50/60				
Max. Output Current (A)	13.0	16.0	20.0	21.7	26.0 <sup>(2)</sup>
Max. Input Current (A)	26.1	32.0	32.0	32.0	32.0
Power Factor	0.8 leading ... 0.8 lagging				
Total Harmonic Distortion (@ nominal output)	<3%				
<b>AC Output (Off-grid)</b>					
Max. Output Apparent Power (VA)	3000	3680	4600	5000	6000
Peak Output Apparent Power (VA) <sup>(3)</sup>	6000, 10s	7360, 10s	9200, 10s	10000, 10s	10000, 10s
Nominal AC Voltage (V)	230				
Nominal AC Frequency (Hz)	50/60				
Max. Output Current (A)	13.0	16.0	20.0	21.7	26.0
Total Harmonic Distortion (@ linear load)	<3%				

# Technical Specifications

Model	Omnis S-3000LV	Omnis S-3680LV	Omnis S-4600LV	Omnis S-5000LV	Omnis S-6000LV
<b>Efficiency</b>					
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%
Euro Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%
Max. Battery to Load Efficiency	95.0%	95.0%	95.0%	95.0%	95.0%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>					
Anti-islanding Protection				Integrated	
PV String Input Reverse Polarity Protection				Integrated	
Insulation Resistor Detection				Integrated	
Residual Current Monitoring Unit				Integrated	
AC Over Current Protection				Integrated	
AC Short Current Protection				Integrated	
AC Over-voltage and Under-voltage Protection				Integrated	
Surge Protection				DC Type II / AC Type III	
<b>General</b>					
Dimension (W × H × D) [mm]				502 × 461 × 202	
Weight (kg)				25	
Mounting				Wall Mounting	
Operation Temperature (°C)				-25 to +65 (>45, derating)	
Relative Humidity				0-95%, no condensing	
Altitude (m)				≤4000	
Cooling				Natural convection	
Protection Degree				IP65	
Noise (dB [A])				<40	
User Interface				LED & APP	
Communication with BMS				RS485, CAN	
Communication with Meter				RS485	
Communication Interface				RS485, Wi-Fi/WLAN/GPRS (optional)	
Digital Input/output				DRM, 1 × DI, 2 × DO	
Isolation Method (Solar/Battery)				Transformerless / High-frequency Isolation	
<b>Certifications and Standards</b>					
Grid Regulation				EN 50549, VDE-AR-N 4105, AS/NZS 4777.2	
Safety Regulation				IEC 62109-1, IEC 62109-2	
EMC				EN 61000-6-1, EN 61000-6-3	

(1) 4600 for VDE-AR-N 4105 & VDE0126-1-1; 4999 for AS/NZS 4777.2

(2) 21.7A for AS/NZS 4777.2

(3) Can be achieved only if PV and battery power are sufficient