



AURORA[®]

Photovoltaic Inverter
& Wind Inverter

**Renewable Energy
Power Solutions**



AURORA[®]

**The right answer
to all your requirements**



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AURORA® Wind Inverter

GENERAL SPECIFICATIONS OUTDOOR MODELS PVI-3.0-OUTD-XX-W PVI-3.6-OUTD-XX-W PVI-4.2-OUTD-XX-W



Wind Interface Box
optional



AURORA BENEFITS

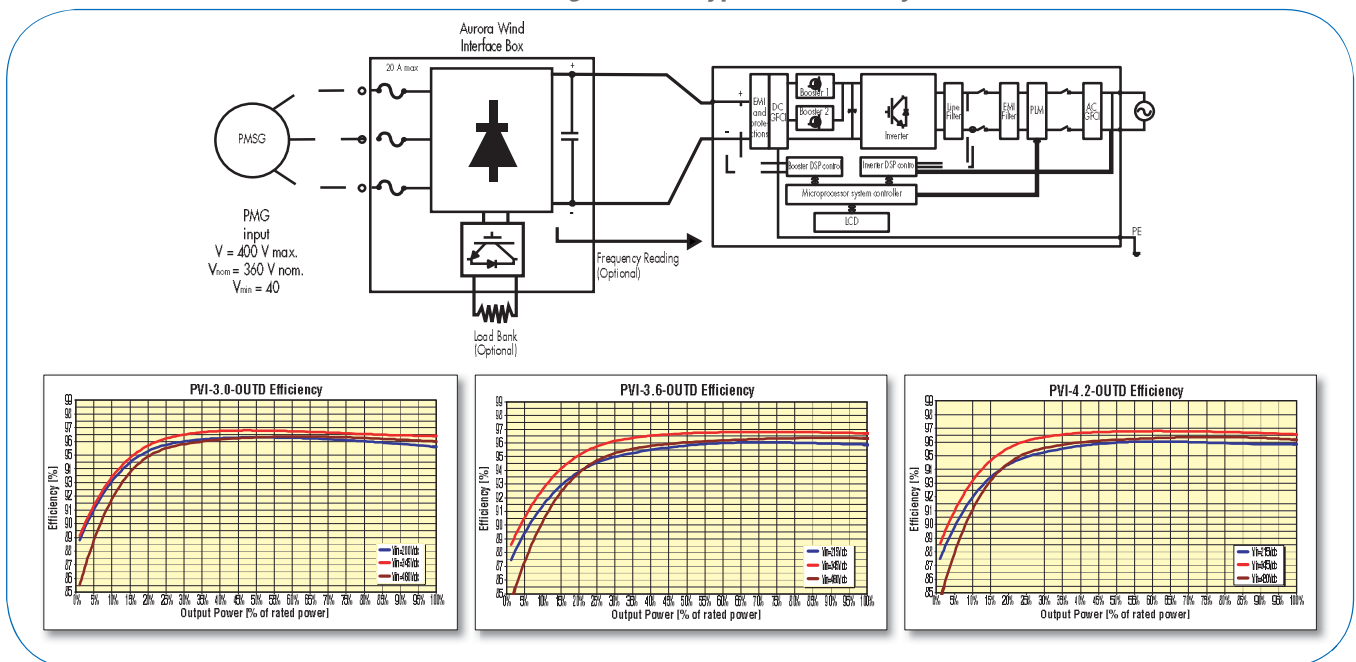
- Transformerless operation for highest efficiency: up to 96.8% (96% Euro; 96% CEC)
- IP65 (NEMA 4), completely sealed unit to withstand the harshest environmental conditions
- Compact size and high power density: up to 4.2KW of output power in a box just 547mm x 325mm x 208mm and 17Kg weight.
- optimized real time power curve tracking algorithm and improved energy harvesting
- Heatsink keeps the unit cleaner and more efficient over time
- Reverse polarity protection minimizes chance of damage due to incorrect wiring, when used in conjunction with Aurora PVI-WIND-INTERFACE BOX.
- High overload capability: works up the power max limits under most ambient conditions
- True Sine Wave Output
- Anti-islanding Protection
- Certified grid connected operation according to the International standards
- LCD Display on the front to monitor the main parameters
- Integrated RS-485 serial communication
- WIND INTERFACE BOX is optional

HIGH PERFORMANCE REDEFINED

The revolutionary switching technology utilized in the Aurora inverter includes state-of-the-art silicon Power devices such as CoolMOS™ and Insulated Gate Bi-polar Transistors (IGBT's) to reduce switching losses. Aurora has been designed with substantial de-rating of all critical components, achieving an extremely robust and reliable inverter, designed to last for 25 years and to deliver rated maximum output power on a continuous basis. With this design concept we achieve peak efficiencies of over 96.8%.

Best in class with an outstanding input voltage range (50V to 580V) and ambient temperature range (-25°C to +60°C). Dedicated software to upload the wind generator power curve (16 points interpolation). WIND INTERFACE BOX is optional

Block Diagram and typical efficiency



CHARACTERISTICS	PVI-3.0-OUTD-XX-W	PVI-3.6-OUTD-XX-W	PVI-4.2-OUTD-XX-W
Output Power Rating Ac [W]	3000	3600	4200
Absolute Max Input Voltage [Vdc]	600	600	600
Max. Power Tracking Window range [Vdc]	50 to 580 (360 nominal)	50 to 580 (360 nominal)	50 to 580 (360 nominal)
Max Input current [Ade]	20	32	32
Max Power Voltage Range	180Vdc-530Vdc	180Vdc-530Vdc	180Vdc-530Vdc
Input Configuration	Two channels parallel with common power curve	Two channels parallel with common power curve	Two channels parallel with common power curve
Nominal AC Voltage (Range) [Vrms]	Single-phase 200-245 Vac (180-264Vac)	Single-phase 200-245 Vac (180-264Vac)	Single-phase 200-245 Vac (180-264Vac)
Nominal AC Frequency [Hz]	50	50	50
Line Power Factor	1	1	1
Maximum AC Line Current [Arms]	14.5	17.2	20
AC Current Distortion [%]	<2% THD at rated power with finewave voltage	<2% THD at rated power with finewave voltage	<2% THD at rated power with finewave voltage
Max Efficiency [%]	96.8% (96.0% Euro; 96.0% CEC)	96.8% (96.0% Euro; 96.0% CEC)	96.8% (96.0% Euro; 96.0% CEC)
Operating Ambient Temperature [°C]	-25 to +60 Derating per Tamb>55°C	-25 to +60 Derating per Tamb>55°C	-25 to +60 Derating per Tamb>45°C
Losses [W]	<8	<8	<8
Enclosure Environmental Rating	IP65	IP65	IP65
Relative Humidity	0-100% condensing	0-100% condensing	0-100% condensing
Elevation	derated above 2.000 m (6,600ft)	derated above 2.000 m (6,600ft)	derated above 2.000 m (6,600ft)
Audible Noise [dBA]	<50@ 1m	<50@ 1m	<50@ 1m
Size (height x width x depth) [mm]	547 x 325 x 208	547 x 325 x 208	547 x 325 x 208
Weight [kg]	17	17	17

SMART CONTROLS

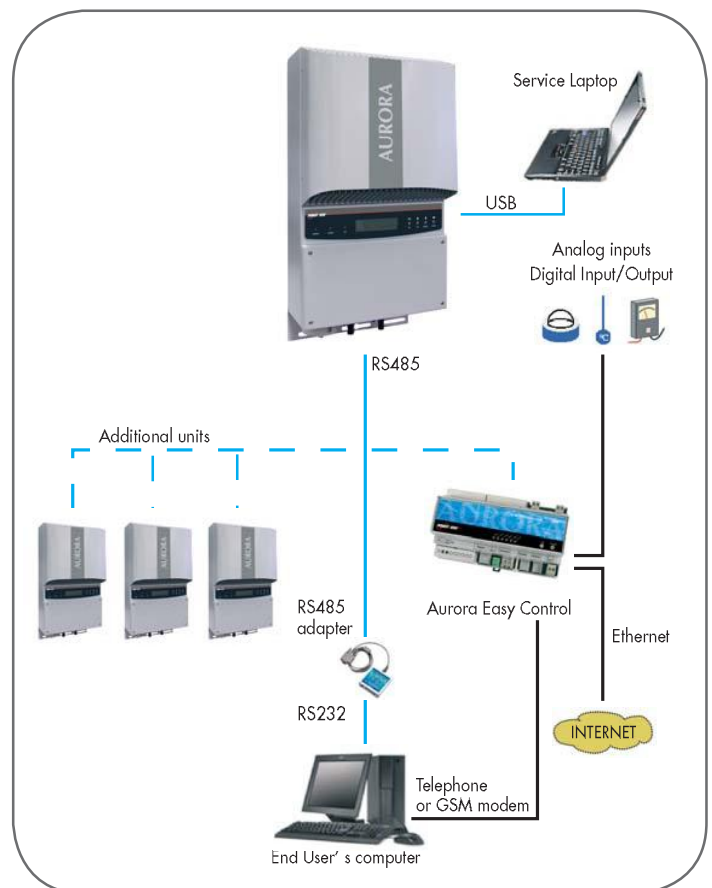
Aurora controls are DSP (Digital Signal Processor) based with sophisticated control and self-diagnostics algorithms. An LCD shows the main operational parameters. Three LED's indicate the operating status.

BEST IN CLASS COMMUNICATION CAPABILITIES

Aurora features an integrated RS485 Communication link and a USB port. An RS485 to RS232 converter (optional) is available to monitor the unit. AURORA Easy-Communicator (optional) allows remote monitoring via internet, GSM or analog modem.

STANDARDS AND CODES

Aurora inverters comply with standards set for grid-tied operation, safety and electromagnetic compatibility including: CSA- C22.2 N.107.1-01, UL1741, G83/1, CEI 11-20 IV ed, DK5940, IEC61683, IEC61727, EN50081, EN50082, EN61000, Certification CE, El Real decreto RD 1663/200 De Espana, EN50438.



Rev. 1.1 - 05/10/09 - Aurora is a trademark by Power-One - Product is subject to technical improvements

PVI-6000-OUTD-W

AURORA® Wind Inverter

General Specifications
Outdoor models
PVI-6000-OUTD-US-W
PVI-6000-OUTD-IT-W
PVI-6000-OUTD-ES-W



Wind Interface Box
opzionale



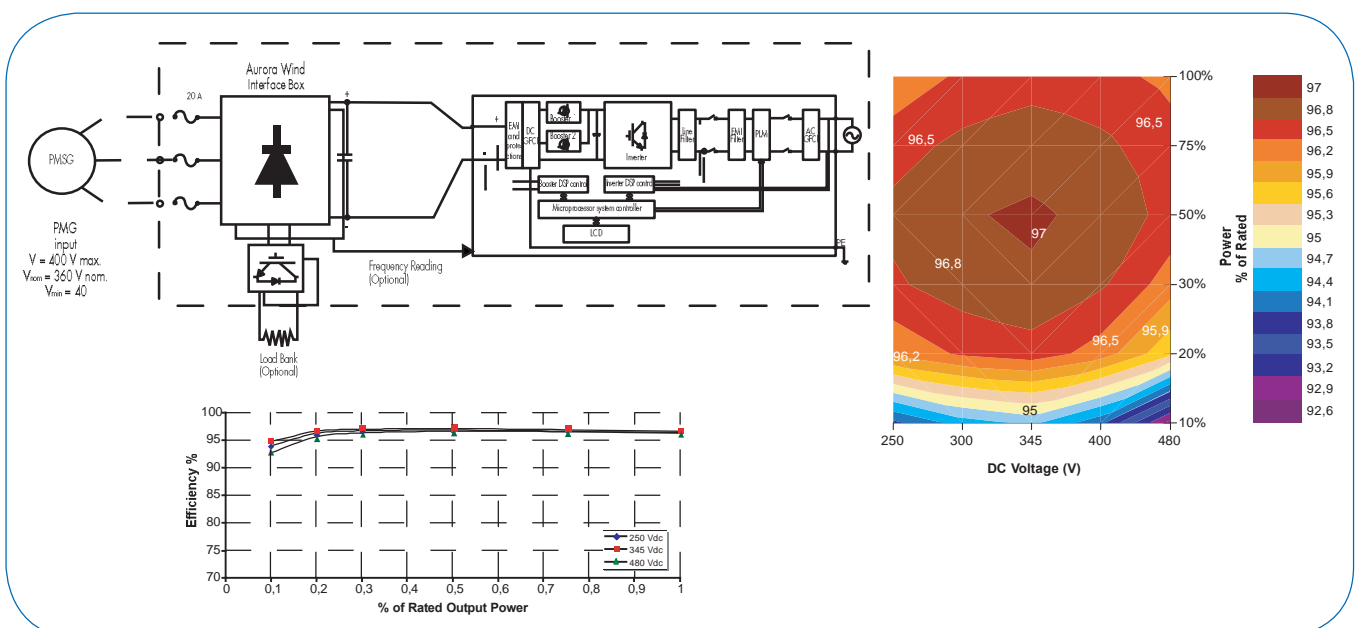
AURORA BENEFITS

- IP65 (NEMA 4) ruggedized, completely sealed unit to stand the harshest environmental conditions
- High speed MPPT for real time power tracking and improved energy harvesting
- Compact size and high power density: 6000W (6000W max) of output power in a box just 740mm x 325mm x 195mm (29 1/8" x 12 3/4" x 7 5/8")
- Front heatsink keeps the unit cleaner and more efficient over time
- Transformerless operation for highest efficiency: up to 97% (96,5% Euro; 96,5% CEC)
- Reverse polarity protection minimizes chance of damage due to incorrect wiring, when used in conjunction with Aurora PVI-WIND-INTERFACE BOX.
- High overload capability: works up to 6000W under most ambient conditions
- True Sine Wave Output
- Anti-islanding Protection
- Certified grid connected operation according to the International standards
- LCD Display on the front to monitor the main parameters
- Integrated RS-485 serial communication
- WIND INTERFACE BOX is optional

HIGH PERFORMANCE REDEFINED

The revolutionary switching technology utilized in the Aurora inverter includes state-of-the-art for silicon Power Devices such as CoolMOS™ and Insulated Gate Bi-polar Transistors (IGBT's) to reduce switching losses. Aurora has been designed with substantial derating of all critical components, achieving an extremely robust and reliable inverter designed to last for 25 years and to deliver rated maximum output power on a continuous basis. With this design concept we achieve peak efficiencies of over 97% . Total current harmonic distortion, on the other hand, is typically less than 1% thanks to the use of high-frequency switching techniques.

Block Diagram and typical efficiency



CHARACTERISTICS	PVI-6000-OUTD-US-W	PVI-6000-OUTD-IT-W	PVI-6000-OUTD-ES-W
Output Power Rating Ac [W]	6000	6000	6000
Absolute Max Input Voltage [Vdc]	600	600	600
Max. Power Tracking Window range [Vdc]	50 to 580 (360 nominal)	50 to 580 (360 nominal)	50 to 580 (360 nominal)
Input Configuration (Max. Idc =18 A for each channel)	Two channel in parallel with common MPPT	Two channel in parallel with common MPPT	Two channel in parallel with common MPPT
Nominal AC Voltage (Range) [Vrms]	240V split phase, Optional - 208V or 277V Single Phase	Single-phase 200-245 (180-264) (may vary to comply with regulations in each country)	Single-phase 200-245 (180-264) (may vary to comply with regulations in each country)
Nominal AC Frequency [Hz]	60	50	50
Line Power Factor	1	1	1
Maximum AC Line Current [Arms]	30	30	30
AC Current Distortion [%]	<2% THD at rated power with finewave voltage	<2% THD at rated power with finewave voltage	<2% THD at rated power with finewave voltage
Max Efficiency [%]	97 (96.5% CEC)	97 (Euro 96.4)	97 (Euro 96.4)
Tare Losses [mW]	250	<1500	250
Operating Ambient Temperature [°C]	-25 to +60	-25 to +60	-25 to +60
Enclosure Environmental Rating	NEMA 4X	IP65	IP65
Relative Humidity	0-100% condensing	0-100% condensing	0-100% condensing
Elevation	derated above 2.000 m (6,600ft)	derated above 2.000 m (6,600ft)	derated above 2.000 m (6,600ft)
Audible Noise [dBA]	<50@ 1m	<50@ 1m	<50@ 1m
Size (height x width x depth) [mm]	740 x 325 x 195 (29 1/8" x 12 3/4" x 7 5/8")	740 x 325 x 195	740 x 325 x 195
Weight [kg]	26 (57.3 lbs)	26	26

SMART CONTROLS

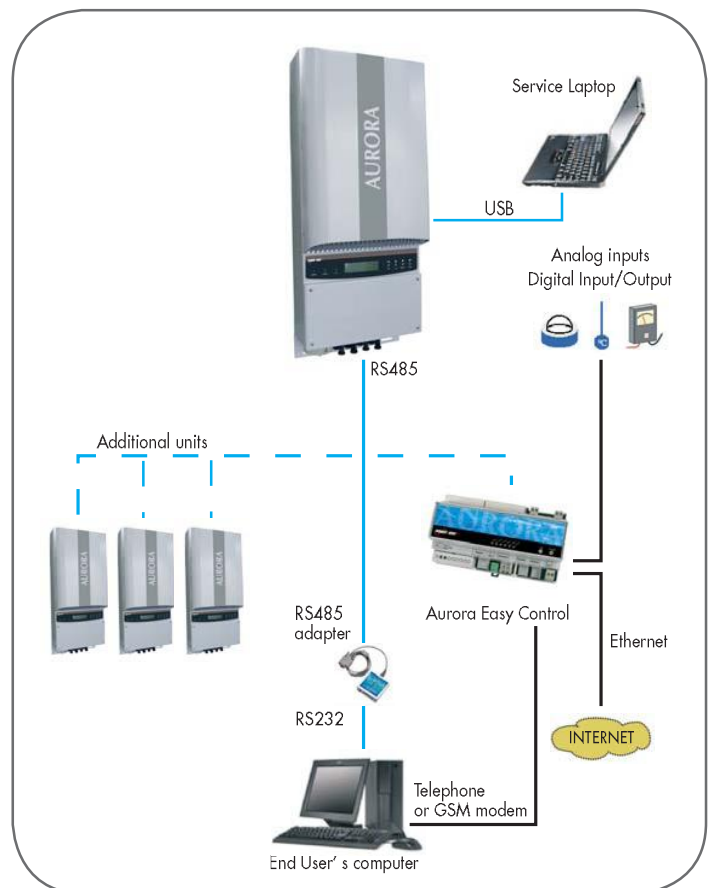
Aurora controls are DSP (Digital Signal Processor) based with sophisticated control and self-diagnostics algorithms. An LCD shows the main operational parameters. Three LED's indicate the operating status.

BEST IN CLASS COMMUNICATION CAPABILITIES

Aurora features an integrated RS485 Communication link. An RS485 to RS232 converter (optional) is available to monitor the unit.

STANDARDS AND CODES

Aurora inverters comply with standards set for grid-tied operation, safety and electromagnetic compatibility including: CE Certification, CSA- G22.2 N.107.1-01, UL1741, CLEAR SKIES G83/1, CEI 11-20 IV ed, DK 5940, IEC 61683, IEC 61727, EN 50081, EN50082, EN61000.



Rev. 1.1 - 08/04/08 - Aurora is a trademark by Power-One - Product is subject to technical improvements

GENERAL SPECIFICATIONS PVI-WIND-INTERFACE

Wind Interface Box

The Power-One Aurora Wind Interface Box represents an application of the successful Aurora inverter to small wind applications. The compact wind interface box is designed for a grid-connected application. The Aurora inverter can be configured to an OEM's specific power curve.

The model PVI-Windbox is used in combination with the Aurora Wind Inverter.

AURORA Wind Interface Features

- Conversion efficiency at rating: 99.4%
- 3-Phase input from PMG
- High output power at full rating 7200W
- Fused wind input
- Automatic brake function above 530 Vdc
- External brake resistor options



Wind Interface Box

Description	Parameters
Input Voltage Range (no damage)	0 to 400 VAC
Operating Input Voltage range from PMG (permanent Magnet Generator)	40-400Vac / 0-600Hz
Max. Operating Input Current	16.6A RMS
Input Overcurrent (fuse protected)	20A RMS
Max. Output Power (@400 VAC, PFC>0.7)	7200W
Output Voltage Range (operating)	50-600 Vdc
Automatic Brake Function	>530 Vdc
Efficiency (@400 VAC, PFC>0.7)	99.4%
DC Output Voltage Range	0-600 Vdc
Max. Current in the Brake Resistor	30 A
Operating Ambient Temperature	-25°C to +55°C
Enclosure Type	NEMA 4X
Relative Humidity	0-100% condensing
Audible Noise	< 40 dBA
Size (height x width x depth)	290x260x95 (mm)

MODELS SUMMARY

MODEL CODE	POWER
PVI-7200-WIND-INTERFACE	7200W
PVI-4000-WIND-INTERFACE	4000W

STANDARDS AND CODES

WIND-INTERFACE BOX comply with standards set for grid-tied operation, safety and electromagnetic compatibility including: UL1741 and CSA C22.2 N.107.1-01

Block Diagram

