

PVI-5000-OUTD-US-W PVI-6000-OUTD-US-W

GENERAL SPECIFICATONS

PVI-5000-OUTD-US-W
PVI-6000-OUTD-US-W

Aurora grid-tie transformerless wind inverters offer a unique combination of high efficiencies, installer-friendly designs and long service life. A major selling point of the Aurora Wind inverter is its very wide input voltage range ensuring power is continuously harvested from the lightest breeze to the strongest wind.

The competitive initial acquisition costs matched with the high efficiencies of up to 97.0% significantly increase return on investment on wind-power installations.

This compact, weather-sealed inverter has a 16-point profile to best match the power curve of each wind turbine.

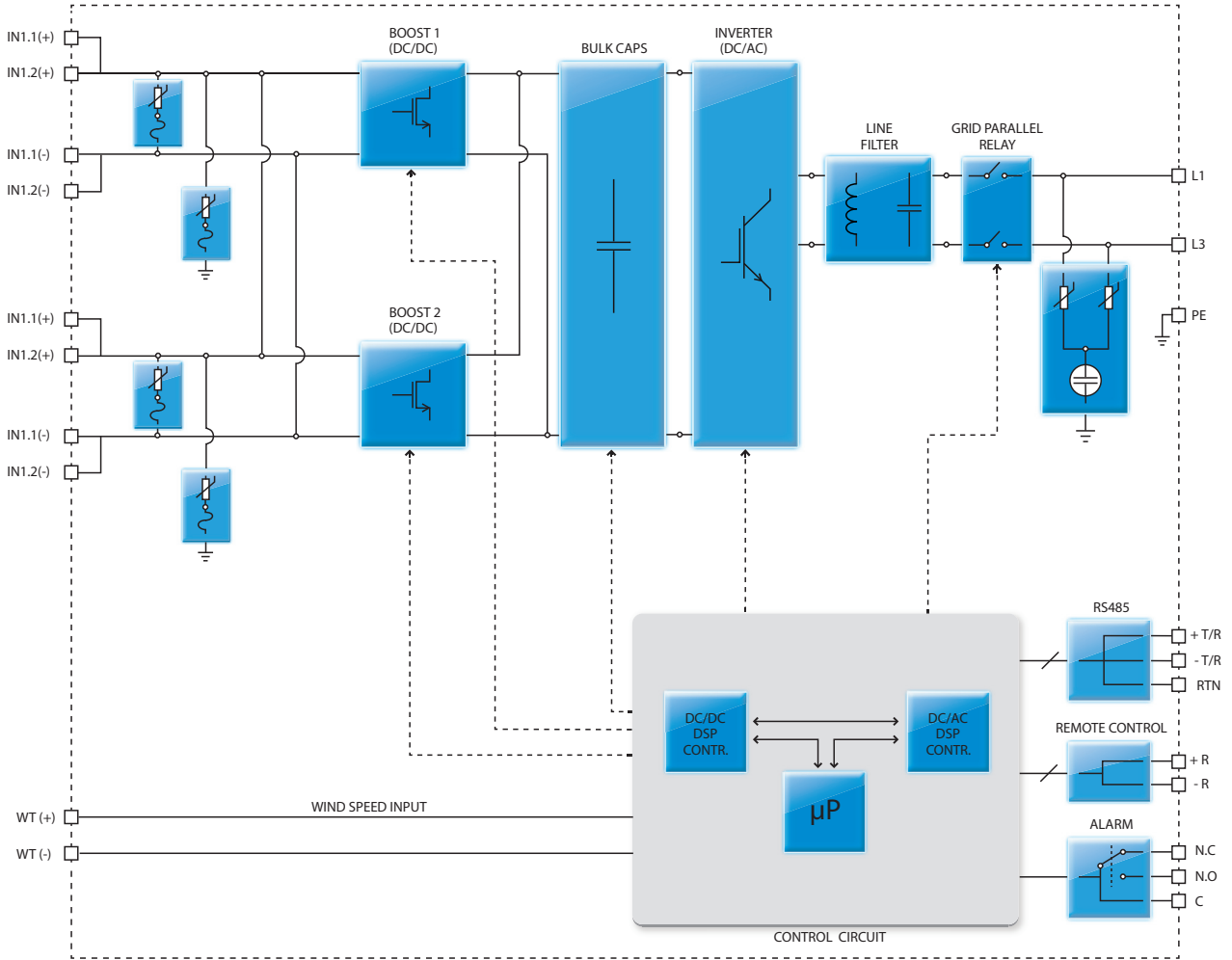


AURORA WIND

Features

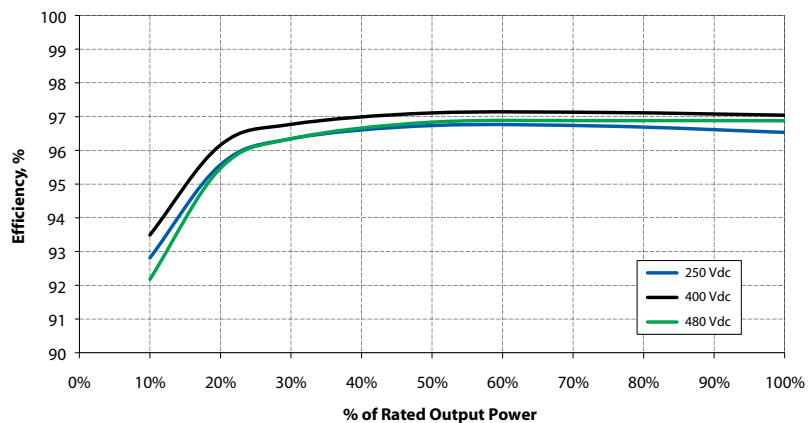
- Single Phase Output
- Transformerless operation for highest efficiency
- Power curve customization with high granularity to reach high level of power production yield
- Outdoor enclosure for unrestricted use under any environmental conditions
- Compact size and high power density
- Optimized real time power curve tracking algorithm and improved energy harvesting
- High overload capability: works up the power max limits under most ambient conditions
- Compatible with 25kW Wind Interface
- Compatible with 7200 Wind Interface

BLOCK DIAGRAM OF PVI-5000-TL-OUTD-W AND PVI-6000-TL-OUTD-W



Block Diagram and Efficiency Curves

PVI-6000-OUTD-US-W



PARAMETER	PVI-5000-OUTD-US-W			PVI-6000-OUTD-US-W		
Input Side						
Maximum Absolute DC Input Voltage $V_{(dc,abs)}$	600 V			600 V		
Operating DC Input Range ($V_{dcmin}...V_{dcmax}$)	50...580 V			50...580 V		
DC Input range at full power ($V_{fp,min}...V_{fp,max}$)	150...530 V			180...530 V		
Dc Power Limitation	Linear Derating From MAX to Null [530V≤Vdc≤580V]			Linear Derating From MAX to Null [530V≤Vdc≤580V]		
Maximum DC Input Current ($I_{dc,max}$)	36 A			36 A		
Maximum Input Short Circuit Current	44 A			44 A		
DC Connection Type	Screw Terminal Block 3 Knock-Outs: 1 ½" or 1" (w/ Ring Red.)			Screw Terminal Block 3 Knock-Outs: 1 ½" or 1" (w/ Ring Red.)		
Input Protection						
Reverse Polarity Protection	No			No		
Input Over Voltage Protection - Varistor	4			4		
Generator Isolation Control	Yes			Yes		
Output Side						
	208	240	277	208	240	277
AC Grid Connection	Single Phase / Split Phase			Single Phase / Split Phase		
Rated AC Power ($P_{ac,r}$)	5000 W			6000 W		
Maximum AC Output Power ($P_{ac,max}$)	5000 W			6000 W		
Rated Grid AC Voltage ($V_{ac,r}$)	208 V	240 V	277 V	208 V	240 V	277 V
AC Voltage Range	183...228 V	211...264 V	244...304 V	183...228 V	211...264 V	244...304 V
Maximum Output AC Current ($I_{ac,max}$)	27 A	23 A	20 A	30 A	28 A	24 A
Rated Frequency (f_r)	60 Hz			60 Hz		
Frequency Range ($f_{min}...f_{max}$)	59.3...60.5 Hz			59.3...60.5 Hz		
Nominal Power Factor ($\cos\phi_{i,ac,r}$)	> 0.995			> 0.995		
Total Harmonic Distortion	< 2%			< 2%		
AC Connection Type	Screw Terminal Block 3 Knock-Outs: 1 ½" or 1" (w/ring reducer) Wire Size: Max. AWG8			Screw Terminal Block 3 Knock-Outs: 1 ½" or 1" (w/ring reducer) Wire Size: Max. AWG8		
Output Protection						
	208	240	277	208	240	277
Anti-islanding protection	According to UL 1741/IEE1547			According to UL 1741/IEE1547		
Maximum AC Overcurrent Protection	35 A	30 A	25 A	40 A	35 A	30 A
Output Over Voltage Protection - Varistor	2 (L-N/L-PE)			2 (L-N/L-PE)		
Operating Performance						
Maximum Efficiency (η_{max})	97.0%			97.0%		
Stand-by Consumption	< 8W			< 8W		
Communication						
Wired Local Monitoring	PVI-USB-RS485_223 (opt.), PVI-DESKTOP (opt.)			PVI-USB-RS485_223 (opt.), PVI-DESKTOP (opt.)		
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA-UNIVERSAL (opt.)			PVI-AEC-EVO (opt.), AURORA-UNIVERSAL (opt.)		
Wireless Local Monitoring	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)			PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)		
User Interface	16 characters x 2 lines LCD display			16 characters x 2 lines LCD display		
Environmental						
Ambient Temperature Range	-25...+ 60°C / -13...140°F with derating above 50°C/122°F			-25...+ 60°C / -13...140°F with derating above 50°C/122°F		
Noise Emission	< 50 dB(A)			< 50 dB(A)		
Maximum Operating Altitude with Derating	2000 m / 6560 ft			2000 m / 6560 ft		
Physical						
Environmental Protection Rating	NEMA 4X			NEMA 4X		
Cooling	Natural			Natural		
Dimension (H x W x D)	810mm x 325mm x 228mm / 31.9" x 12.8" x 8.7"			810mm x 325mm x 228mm / 31.9" x 12.8" x 8.7"		
Weight	26.3 kg / 58 lb			26.3 kg / 58 lb		
Safety						
Isolation Level	Transformerless			Transformerless		
Marking	cCSAus			cCSAus		
Safety and EMC standard	UL 1741, CSA - C22.2 N. 107.1-01			UL 1741, CSA - C22.2 N. 107.1-01		
Grid Standard	IEEE 1547			IEEE 1547		
Available Products Variants						
Standard	PVI-5000-OUTD-US-W			PVI-6000-OUTD-US-W		