

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

GENERAL SPECIFICATIONS OUTDOOR MODELS

Designed for residential and small commercial PV installations, this inverter fills a specific niche in the Aurora product line to cater for those installations producing between 5kW and 20kW.

This inverter has all the usual Aurora benefits, including dual input section to process two strings with independent MPPT, high speed and precise MPPT algorithm for real-time power tracking and energy harvesting, as well as transformerless operation for high performance efficiencies of up to 97.1%.

The wide input voltage range makes the inverter suitable to low power installations with reduced string size. This outdoor inverter has been designed as a completely sealed unit to withstand the harshest environmental conditions.

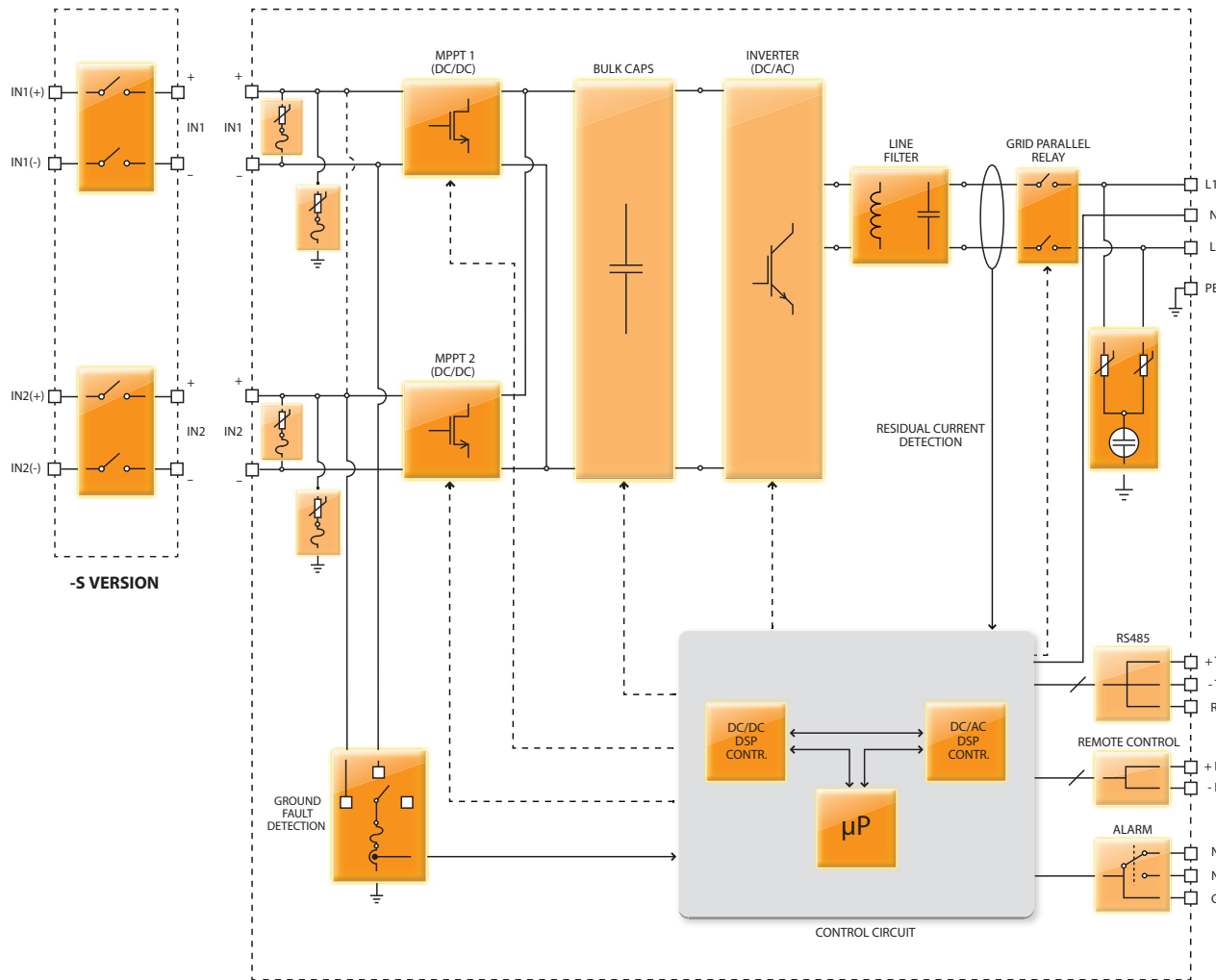
Features

- Each inverter is set on specific grid codes which can be selected in the field
- Single phase output
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP



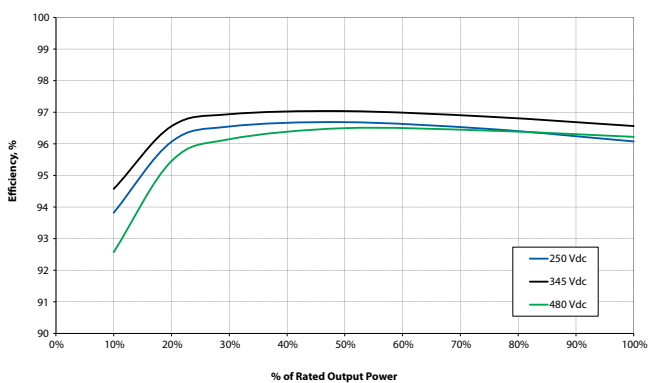
AURORA UNO

BLOCK DIAGRAM OF PVI-5000-OUTD AND PVI-6000-OUTD FOR NORTH AMERICA

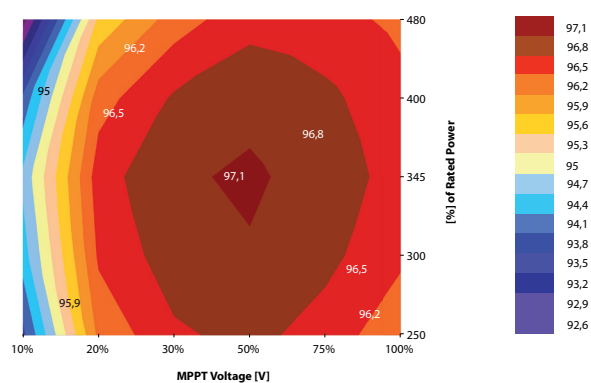


Block Diagram and Efficiency Curves

PVI-6000-OUTD-US



PVI-6000-OUTD-US



PARAMETER	PVI-5000-OUTD-US			PVI-6000-OUTD-US		
Input Side						
Absolute Maximum DC Input Voltage (V _{max,abs})	600 V					
Start-up DC Input Voltage (V _{start})	200 V (adj. 120...350 V)					
Operating DC Input Voltage Range (V _{dcmín...V_{dcmáx}})	0.7 x V _{start} ...580 V					
Rated DC Input Power (P _{dcr})	5150 W			6180 W		
Number of Independent MPPT	2					
Maximum DC Input Power for each MPPT (P _{MPPTmax})	4000 W					
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	200...530 V					
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [530V≤V _{MPPT} ≤580V]					
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	4000 W [225V≤V _{MPPT} ≤530V] the other channel: P _{dcr} -4000W [90V≤V _{MPPT} ≤530V]			4000 W [230V≤V _{MPPT} ≤530V] the other channel: P _{dcr} -4000W [120V≤V _{MPPT} ≤530V]		
Maximum DC Input Current (I _{dcmáx}) / for each MPPT (I _{MPPTmax})	36.0 A / 18.0 A					
Maximum Input Short Circuit Current for each MPPT	22.0 A					
Number of DC Inputs Pairs for each MPPT	1					
DC Connection Type	Screw Terminal Block, 3 Knock-Outs: 1 ½" or 1" (w/ Ring Reducer)					
Input Protection						
Reverse Polarity protection	Yes, from limited current source					
Input Over Voltage Protection for each MPPT - Varistor	2					
Photovoltaic Array Isolation Control	GFDI (for use with either Positive or Negative Grounded Arrays)					
DC Switch Rating for each MPPT (-S Version)	25 A / 600 V					
Output Side	208 V	240 V	277 V	208 V	240 V	277 V
AC Grid Connection Type	Single phase / Split phase					
Rated AC Power (P _{acr})	5000 W			6000 W		
Maximum AC Output Power (P _{acmáx})	5000 W			6000 W		
Rated AC Grid Voltage (V _{acr,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 AC Output Current (I _{ac,máx})	27.0 A	23.0 A	20.0 A	30.0 A	28.0 A	24.0 A
Rated Output Frequency (f _r)	60 Hz					
Output Frequency Range (f _{mín...f_{máx}})	59.3...60.5 Hz					
Nominal Power Factor (Cosphi _{acr,r})	> 0.995					
Total Current Harmonic Distortion	< 2%					
AC Connection Type	Screw terminal block					
Output Protection	208 V	240 V	277 V	208 V	240 V	277 V
Anti-Islanding Protection	According to UL 1741/IEE1547					
Maximum AC Overcurrent Protection	35.0 A	30.0 A	25.0 A	40.0 A	35.0 A	30.0 A
Output Overvoltage Protection - Varistor	2 (L1 - L2 / L1 - PE)					
Operating Performance	208 V	240 V	277 V	208 V	240 V	277 V
Maximum Efficiency (η _{máx})	97.1%			97.1%		
Weighted Efficiency (EURO/CEC)	96.0%	96.5%	96.5%	96.0%	96.5%	96.5%
Feed In Power Threshold	20.0 W					
Stand-by Consumption	< 8.0 W					
Communication						
Wired Local Monitoring	PVI-USB-RS485_232 (opt.), PVI-DESKTOP (opt.)					
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA-UNIVERSAL (opt.)					
Wireless Local Monitoring	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)					
User Interface	16 characters x 2 lines LCD display					
Environmental						
Ambient Temperature Range	-25...+60°C (-13...+ 140°F) with derating above 50°C (122°F)					
Relative Humidity	0...100% condensing					
Noise Emission	<50 db(A) @ 1 m					
Maximum Operating Altitude without Derating	2000 m / 6560 ft					
Physical						
Environmental Protection Rating	IP 65					
Cooling	Natural					
Dimension (H x W x D)	1052mm x 325mm x222mmm / 41.4" x 12.8" x 8.7"					
Weight	< 27.0 kg / 59.5 lb					
Mounting System	Wall bracket					
Safety						
Isolation Level	Transformerless					
Marking	cCSAus					
Safety and EMC Standard	UL 1741, CSA - C22.2 N. 107.1-01					
Grid Standard	IEEE 1547					
Available Products Variants						
With DC Switch	PVI-5000-OUTD-US			PVI-6000-OUTD-US		



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