

PVI-5000-OUTD PVI-6000-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS

PVI-5000-OUTD-US

PVI-6000-OUTD-US



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 25kW.

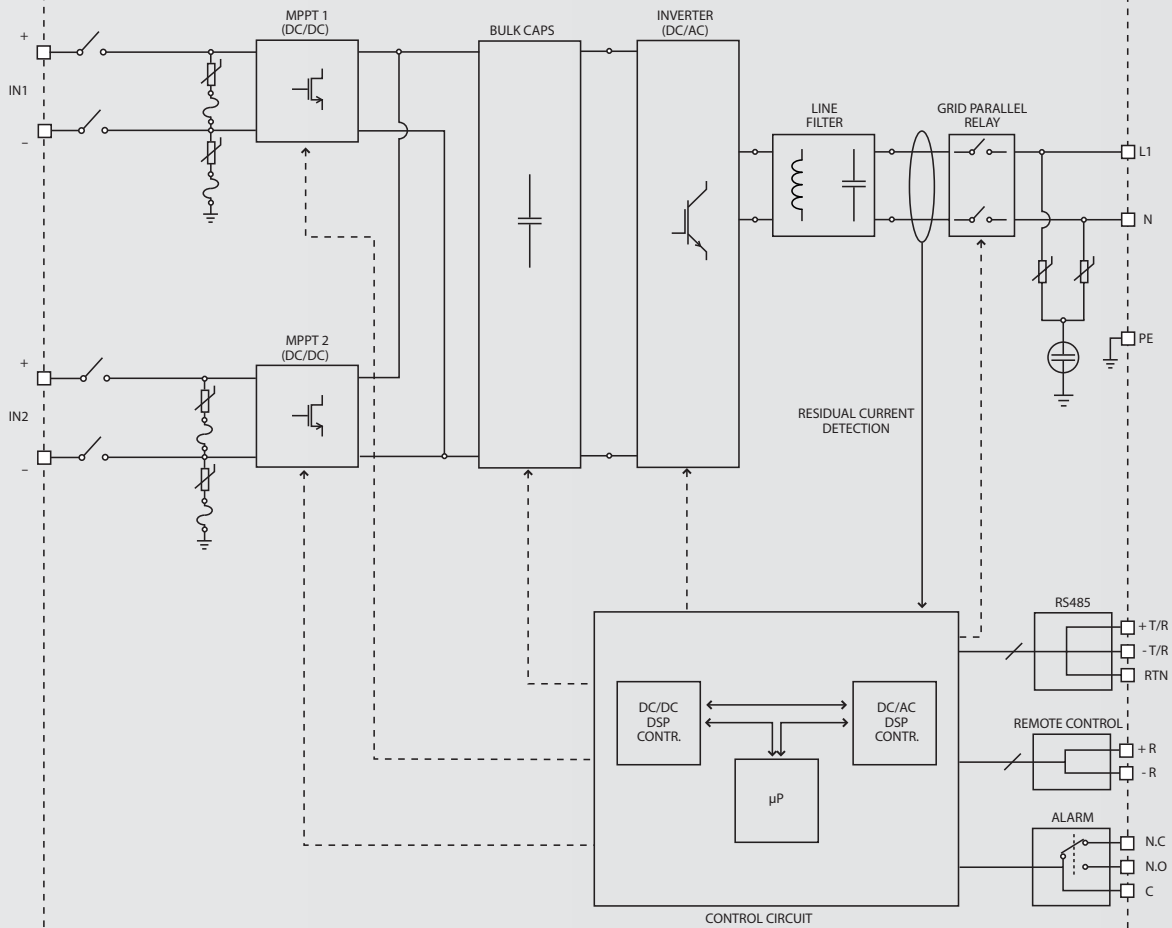
This inverter has all the usual Aurora benefits, including dual input section to process two strings with independent MPPT, high speed and precise MPPT algorithm for real-time power tracking and energy harvesting, as well as transformerless operation for high performance efficiencies of up to 97.1%.

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

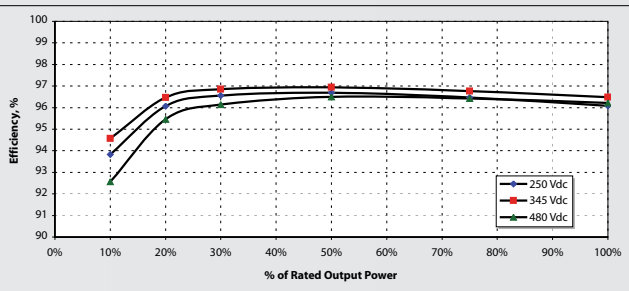
- Single Phase 208/240/277 Vac
- Dual input section to process two strings with independent MPPT, optimize energy harvesting from multiple arrays oriented in different directions
- Widest input range in industry
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- High efficiencies deliver more energy. Flat efficiency curves to ensure consistent and stable performance across the whole input voltage and output power range
- Transformerless operation for highest efficiency
- Anti-Islanding Protection
- Watertight NEMA 4X (IP65) enclosure
- Available only with integrated DC switch in compliance with US standard
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP

BLOCK DIAGRAM OF SINGLE PHASE INVERTER

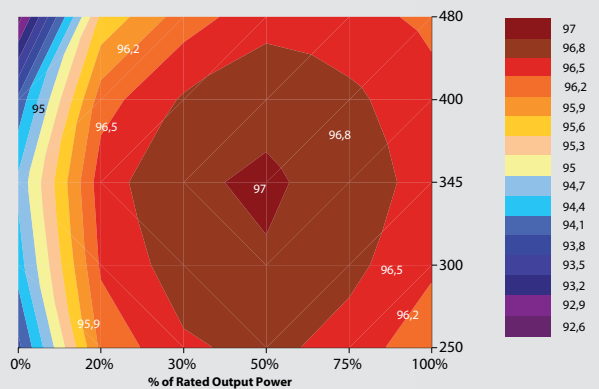


Block Diagram and Typical Efficiency

EFFICIENCY PVI-6000-OUTD



EFFICIENCY PVI-6000-OUTD



CHARACTERISTICS	PVI-5000-OUTD-US			PVI-6000-OUTD-US		
INPUT PARAMETERS						
Rated DC Power	5150 Wp			6180 Wp		
Rated Input Voltage	360 V					
Operating Input Voltage Range	0.7 x Vstart - 580 V ⁽¹⁾					
Activation Voltage "Vstart"	200 V (adj. 120-350 V)					
Maximum Absolute Input Voltage (Input OV Threshold)	600 V					
No. of Independent MPPT Trackers	2					
No. of DC Inputs	2 pairs (Standard Version) or 1 pairs (-S Version) for each MPPT					
Maximum DC Rated Current for Each Input DC Connector	20.0 A					
Maximum DC Current, each MPPT	18.0 A					
Max. Input Power, each MPPT	4000 W			4000 W		
Input Voltage Range for Power Operation with Parallel Configuration of MPPT	150 - 530 V			180 - 530 V		
Input Voltage Range for Power Operation with Independent Configuration of MPPT	230 - 530 V (@ 4000 W) / 120 - 530 V (@ 1150 W)			230 - 530 V (@4000 W) / 130 - 530 V (@2180 W)		
DC Connections	Screw Terminal Block 3 Knock-Outs: 1 ½" or 1" (w/ ring red.)					
INPUT PROTECTION						
Reverse Polarity Protection	Yes					
Maximum DC Overcurrent Protection	22.0 A					
DC Side Varistor	4 (2 for each MPPT)					
Allallowable Array Ground Reference	Floating Array Only - Ground Reference not Allowed					
PV Array Isolation Control	GFDI ⁽²⁾					
DC Switch (-S Suffix Version Only)	600 V / 25 A					
OUTPUT PARAMETERS	208 V	240 V	277 V	208 V	240 V	277 V
AC Grid Connection	Single Phase / Split Phase					
Rated AC Power	5000 W			6000 W		
Maximum AC Power	5000 W			6000 W		
Rated AC Voltage	208 V	240 V	277 V	208 V	240 V	277 V
Maximum AC Voltage Range	183-228 V	211-264 V	244-304 V	183-228 V	211-264 V	244-304 V
Rated AC Frequency	60 Hz					
Maximum AC Line Current	27.0 A	23.0 A	20.0 A	30.0 A	28.0 A	24.0 A
Power Factor	> 0.99					
AC Current Distorsion (THD)	< 2%					
AC Connection	Screw Terminal Block 3 Knock-Outs: 1 ½" or 1" (w/ ring reducer)					
OUTPUT PROTECTION						
AC Side Varistor	2 (L - N / L - PE)					
Maximum AC Overcurrent Protection	40.0 A	35.0 A	30.0 A	40.0 A	35.0 A	30.0 A
Anti Islanding Protection	According to UL 1741/IEE1547			According to UL 1741/IEE1547		
CONVERSION EFFICIENCY						
Maximum Efficiency	97.1%			97.1%		
CEC Efficiency	96.0%	96.5%	96.5%	96.0%	96.5%	96.5%
ENVIRONMENTAL PARAMETERS						
Cooling	Natural Cooling					
Ambient Temperature Range	-25/+60°C (-13/+140 °F) with derating above 50°C(122°F)					
Operating Altitude	6000 ft					
Acustical Noise	< 50 dB					
Environmental Protection Rating	NEMA 4X (IP65)					
Relative Humidity	< 100% Condensing					
MECHANICAL						
Dimensions (H x W x D)	31.9" x 12.8" x 8.3" 41.4" x 12.8" x 8.3" (-S version)					
Weight	54 lb 66 lb (-S Version)					
OTHERS						
Stand -By Consumption	< 8 W					
Feed In Power Threshold	20.0 W					
Night Time Consumption	< 0.3 W					
Isolation Level	NONE due Transformerless Topology					
Display	Alphanumeric -2 Lines					
Communication	RS 485 Wireless (Optional, AURORA® PVI-RADIOMODULE for communication with AURORA® PVI-DESKTOP)					
AVAILABLE PRODUCT VARIANTS						
With DC Switch	PVI-5000-OUTD-US			PVI-6000-OUTD-US		
STANDARD & CODES						
	UL 1741, IEEE 1547, CSA - C22.2 N. 107.1-01					

(1) Each MPPT is activated when its input voltage exceeds Vstart and operates within the limits defined by "Operating Input Voltage Range". Default factory setting 200 V, adjustable from 120 to 350 V.

(2) GFDI - Ground Fault Detector Interrupter