

PVI-3.8-OUTD Isolated PVI-4.6-OUTD Isolated

ÉNERGIE
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GENERAL SPECIFICATIONS OUTDOOR MODELS

PVI-3.8-I-OUTD-US
PVI-3.8-I-OUTD-S-US

PVI-4.6-I-OUTD-US
PVI-4.6-I-OUTD-S-US



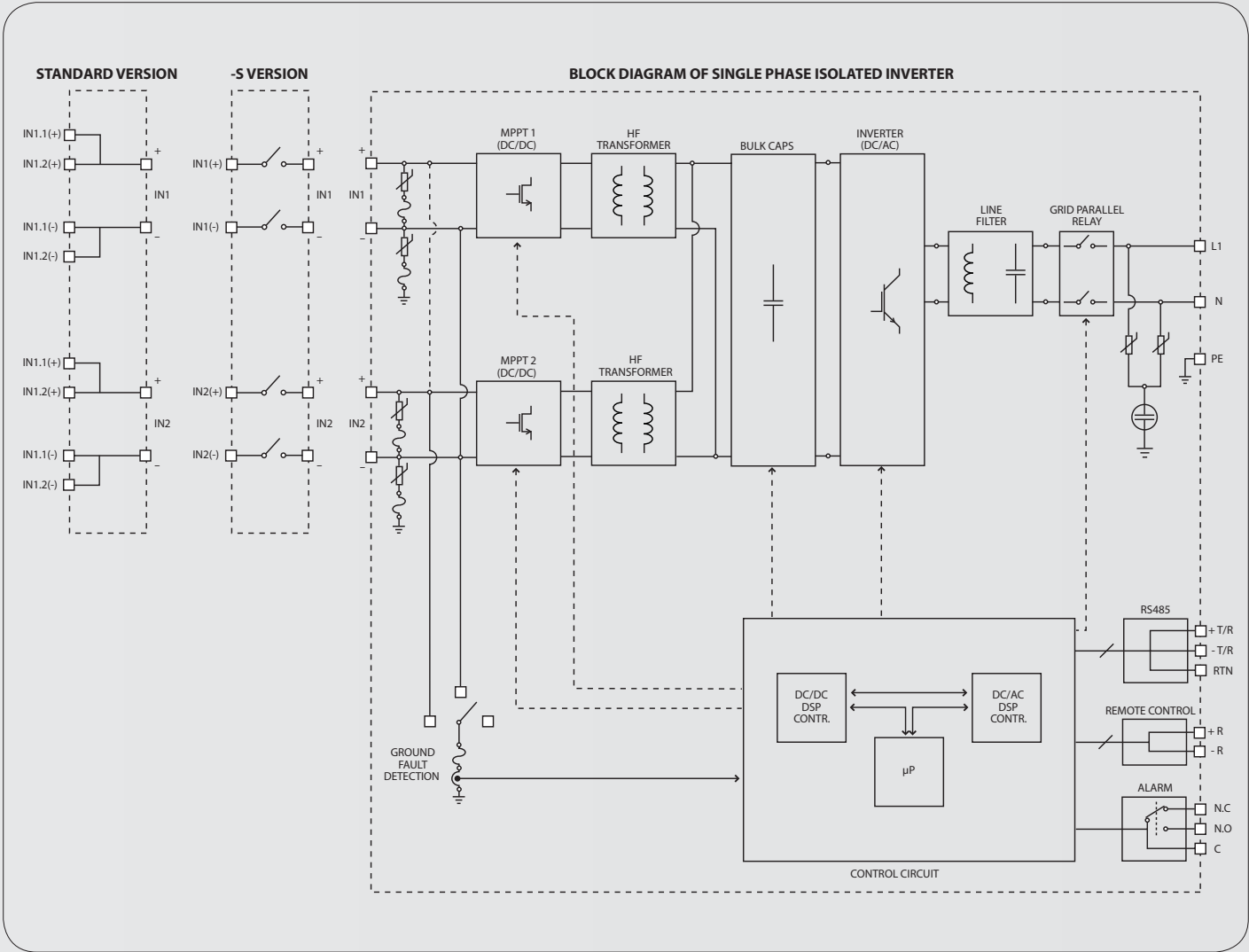
This isolated inverter is optimized for use in residential applications requiring PV array grounding, such as some thin-film modules. This inverter has also been designed to serve all countries and regions with specific field-configurable set-ups available for all major country grid codes and display languages.

The 3.8/4.6kw inverters have 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 regular high performance efficiencies of up to 96.9%. The wide input voltage range makes the inverter suitable to low power installations with reduced string size.

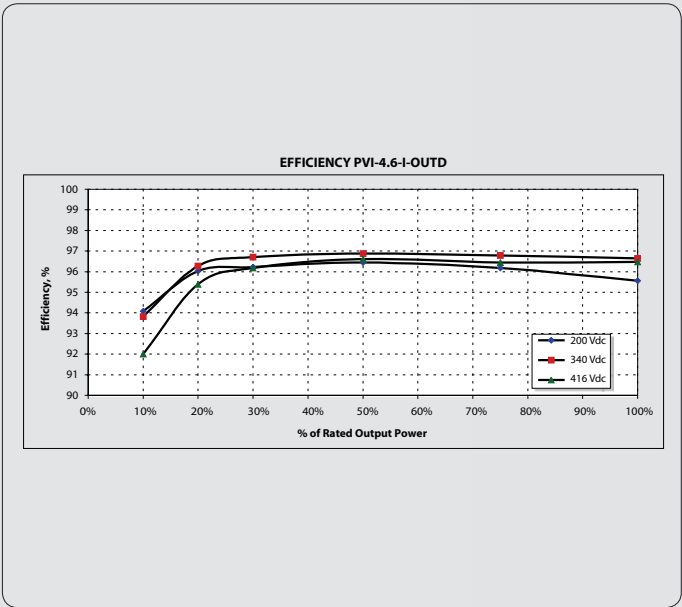
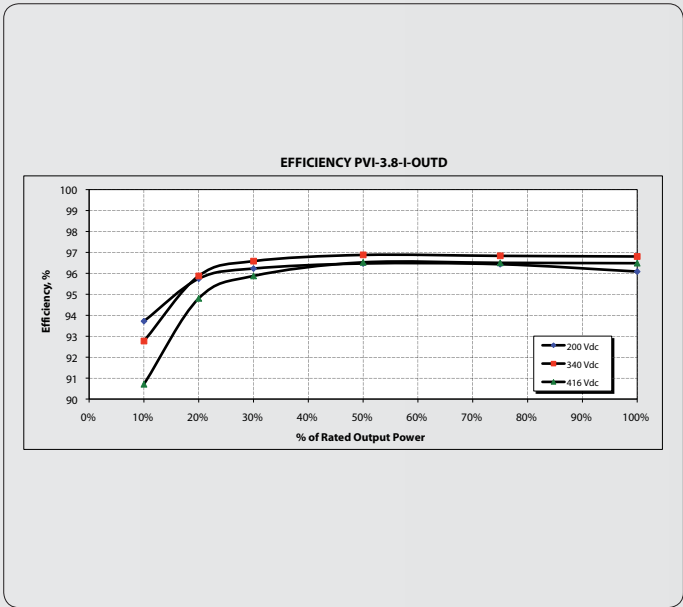
Its high frequency isolated topology allows this unit to be lightweight and compact in size to help with transportation and installation. This rugged outdoor inverter has been designed as a completely sealed unit to withstand the harshest environmental conditions.

Features

- Single Phase 208/240/277 Vac
- Night Wake up button to access energy harvesting data and error log
- Dual input section to process two strings with independent MPPT, optimize energy harvesting from multiple arrays oriented in different directions
- 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
- Anti-Islanding Protection
- Watertight NEMA 4X (IP65) enclosure
- Integrated DC switch in compliance with US Standards (-S Versions)
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP



Block Diagram and Typical Efficiency



CHARACTERISTICS	PVI-3.8-I-OUTD-US			PVI-4.6-I-OUTD-US		
INPUT PARAMETERS						
Rated DC Power	4000 Wp			4800 Wp		
Rated Input Voltage	330 V					
Operating Input Voltage Range	0.7 x Vstart - 520 V ⁽¹⁾					
Activation Voltage "Vstart"	200 V (adj. 120-350 V)					
Maximum Absolute Input Voltage (Input OV Threshold)	520 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	12.5 A			14.0 A		
Max. Input Power, each MPPT	2600 W			3000 W		
Input Voltage Range for Power Operation with Parallel Configuration of MPPT	160 - 470 V			170 - 470 V		
Input Voltage Range for Power Operation with Independent Configuration of MPPT	180 - 470 V (@2600 W) / 100 - 470 V (@1400 W)			210 - 470 V (@3000 W) / 130 - 470 V (@1800 W)		
DC Connections	Screw Terminal Block 3 Knock-Outs: ¾" or 1" (w/ ring red.)					
INPUT PROTECTION						
Reverse Polarity Protection	Yes					
Maximum DC Overcurrent Protection	15.6 A			17.0 A		
DC Side Varistor	4 (2 for each MPPT)					
Allallowable Array Ground Reference	Yes					
PV Array Isolation Control	GFDI ⁽²⁾ (for use with either Positive or Negative Grounded Arrays)					
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			Single Phase / Split Phase		
Rated AC Power	3300 W	3800 W		4600 W		
Maximum AC Power	3300 W	3800W	4200 V	5000 W	5000 W	5000 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	16.0 A	16.0 A	16.0 A	22.5 A	20.0 A	20.0 A
Power Factor	> 0.99					
AC Current Distorsion (THD)	< 2%					
AC Connection	Screw Terminal Block 3 Knock-Outs: ¾" or 1" (w/ ring red.)					
OUTPUT PROTECTION						
AC Side Varistor	2 (L - N / L - PE)					
Maximum AC Overcurrent Protection	20.0 A	20.0 A	20.0 A	30.0 A	25.0 A	25.0 A
Anti Islanding Protection	According to UL 1741/IEE1547					
CONVERSION EFFICIENCY						
Maximum Efficiency	96.9%			96.9%		
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 45°C (113°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)	25.2" x 12.8" x 8.3" 34.6" x 12.8" x 8.3" (-S Version)					
Weight	53 lb 61 lb (-S Version)					
OTHERS						
Stand -By Consuption	< 8W					
Feed In Power Threshold	24.0 W					
Night Time Consumption	< 0.3 W					
Isolation Level	HF Transformer					
Display	Alphanumeric -2 Lines					
Communication	RS 485; Wireless (Optional, AURORA® PVI-RADIOMODULE for communication with AURORA® PVI-DESKTOP)					
AVAILABLE PRODUCT VARIANTS						
Standard - No Options	PVI-3.8-I-OUTD-US			PVI-4.6-I-OUTD-US		
With DC Switch	PVI-3.8-I-OUTD-S-US			PVI-4.6-I-OUTD-S-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