

PVI-3.0-OUTD PVI-3.6-OUTD PVI-4.2-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS

The most common residential inverter is the ideal size for an average-sized family home. This family of single-phase string inverter complements the typical number of rooftop solar panels, allowing home-owners to get the most efficient energy harvesting for the size of the property. This rugged outdoor inverter has been designed as a completely sealed unit to withstand the harshest environmental conditions.

One of the key benefits of the Uno family of single-phase inverters is the dual input section to process two strings with independent MPPT especially useful for rooftop installations with two different orientations (ie East and West). The high speed MPPT offers real-time power tracking and improved energy harvesting.

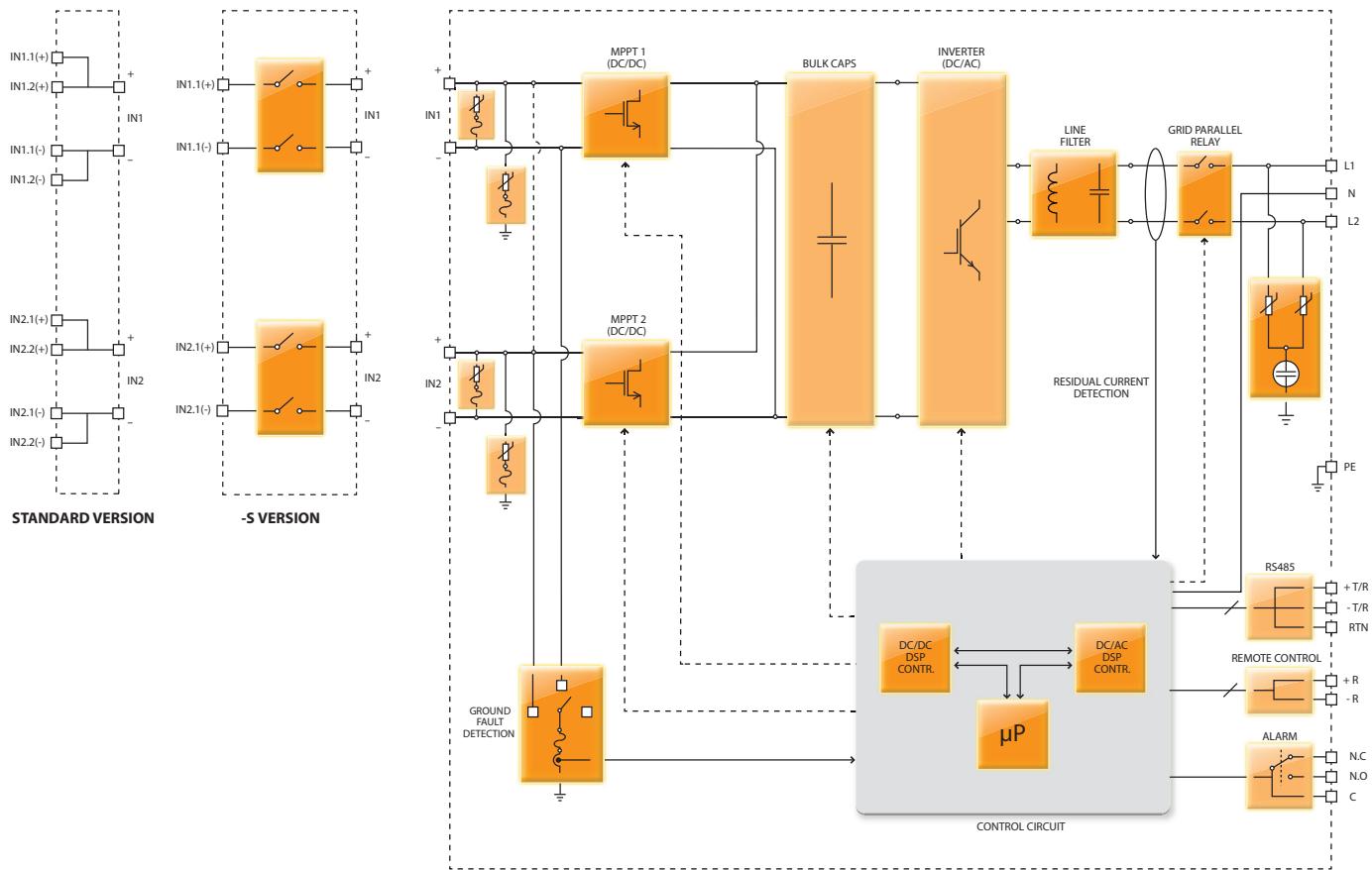
The transformerless operation gives the highest efficiency of up to 97.0%. The wide input voltage range makes the inverter suitable to low power installations with reduced string size.



Features

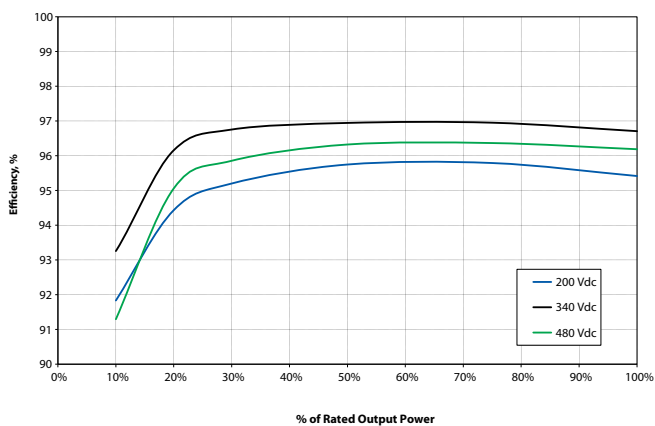
- Each inverter is set on specific grid codes which can be selected in the field
- Single phase output
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- High speed and precise MPPT algorithm 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
- Integrated DC disconnect switch in compliance with international Standards (-S Version)
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP

BLOCK DIAGRAM OF PVI-3.0-OUTD, PVI-3.6-OUTD AND PVI-4.2-OUTD FOR NORTH AMERICA

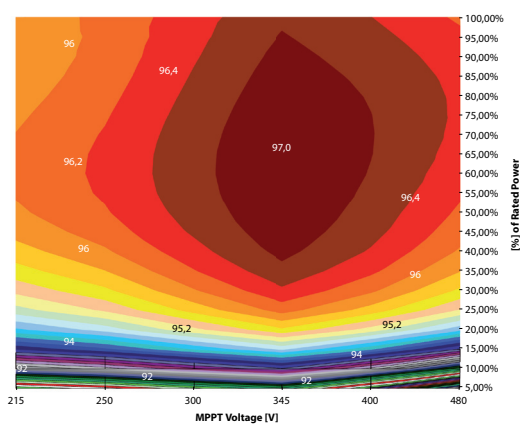


Block Diagram and Efficiency Curves

PVI-4.2-OUTD-US



PVI-4.2-OUTD-US



TECHNICAL DATA	Values	PVI-3.0-OUTD-US			PVI-3.6-OUTD-US			PVI-4.2-OUTD-US		
Rated Grid AC Voltage	V	208	240	277	208	240	277	208	240	277
Input Side (DC)										
Maximum Usable Power for Each Channel	W	2000			3000			3000		
MPPT Voltage Range	V	160-530			120-530			140-530		
Start- Up Voltage	V	200 (adj. 120-350)			200 (adj. 120-350)			200 (adj. 120-350)		
Absolute Maximum Voltage (Vmax)	V	600			600			600		
Maximum Current (Idcmax) for both MPPT in Parallel	A	20			32			32		
Maximum Usable Current per Channel	A	10			16			16		
Number of Wire Landing Terminals per Channel		2 (1 on -S Version)			2 (1 on -S Version)			2 (1 on -S Version)		
Number of Independent MPPT Channels		2			2			2		
Array Wiring Termination		Screw terminal block 3 Knock-Outs: 1 ½" or 1" (w/ Ring Reducer)								
Output Side (AC)										
Grid Standard		1Ø/2W or Split-Ø/3W			1Ø/2W or Split-Ø/3W			1Ø/2W or Split-Ø/3W		
Nominal Power	W	3000			3600			4200		
Voltage Range (Vmin-Vmax)	V	183-228	211-264	244-304	183-228	211-264	244-304	183-228	211-264	244-304
Grid Frequency; Range**	Hz	60;(59.3-60.5)			60;(59.3-60.5)			60;(59.3-60.5)		
Maximum Current (Iac, max)	A _{RMS}	14.5	14.5	12	17.2	16	16	20	20	20
Power Factor		> 0.995			> 0.995			> 0.995		
Total Harmonic Distortion At Rated Power	%	< 2			< 2			< 2		
Efficiency										
Maximum Efficiency	%	96.9			97			97		
CEC Efficiency	%	96			96			96		
Operating Parameters		208	240	277	208	240	277	208	240	277
Consumption in Stand By (Night)	W _{RMS}	< 8.0			< 8.0			< 8.0		
Consumption During Operation	W _{RMS}	20			20			20		
Topology		Transformerless			Transformerless			Transformerless		
Mechanical Specifications										
Enclosure rating		NEMA 4X			NEMA 4X			NEMA 4X		
Cooling		Natural Convection			Natural Convection			Natural Convection		
Conduit Connections		Trade size KOs: (2eax1/2") and (2ea x 1-1/4",3 places side, front, rear)			Trade size KOs: (2eax1/2") and (2ea x 1-1/4",3 places side, front, rear)			Trade size KOs: (2eax1/2") and (2ea x 1-1/4",3 places side, front, rear)		
Grid Wiring Termination Type		Screw Terminal Block Single wire, 90°C terminal wiring			Screw Terminal Block Single wire, 90°C terminal wiring			Screw Terminal Block Single wire, 90°C terminal wiring		
Dimensions (W/H/D)	in(mm)	12.8 x24.3 x 8.7(325 x 859 x222) -S Version								
Unit Weight	lb(kg)	< 38.5 (17.5) < 47.3(21.3) -S version			< 38.5 (17.5) < 47.3(21.3) -S version			< 38.5 (17.5) < 47.3(21.3) -S version		
Shipping Weight	lbs(kg)	< 38.5 (17.5) < 47.3 (21.3) -S version			< 38.5 (17.5) < 47.3 (21.3) -S version			< 38.5 (17.5) < 47.3 (21.3) -S version		
Mounting System		Wall bracket			Wall bracket			Wall bracket		
Environmental										
Ambient Air Temperature Range	°F (°C)	-13...+140 (-25...+60) with derating above 131 (55)								
Acoustic Noise Emission Level	dBA @ 1m	< 50			< 50			< 50		
Relative Humidity	%RH	0-100 condensing			0-100 condensing			0-100 condensing		
Maximum Operating Altitude without Derating	ft(m)	6560 (2000)			6560 (2000)			6560 (2000)		
Protection Devices										
Output										
Anti-Islanding Protection		According to UL 1741/IEEE 1547			According to UL 1741/IEEE 1547			According to UL 1741/IEEE 1547		
External AC OCPD Rating	A _{RMS}	20	20	15	25	20	20	25	25	25
Over-Voltage Protection Type		Varistor, 2 (L- N/ L-PE)			Varistor, 2 (L- N/ L-PE)			Varistor, 2 (L- N/ L-PE)		
Input										
Reverse Polarity Protection		Yes			Yes			Yes		
Maximum Short Circuit Current Limit per Channel	A	12.5			20			20		
Over-Voltage Protection Type		Varistor, 2 for each channel			Varistor, 2 for each channel			Varistor, 2 for each channel		
PV Array Ground Fault Detection		Pre start-up Riso and dynamic GFDI (Requires Floating Arrays)								
DC Switch Current Rating (Per Contact)	A/V	25 / 600			25 / 600			25 / 600		
Isolation Level		Transformerless (Floating Array)			Transformerless (Floating Array)			Transformerless (Floating Array)		
Safety and EMC Standard		UL 1741, CSA - C22.2 N. 107.1-01			UL 1741, CSA - C22.2 N. 107.1-01			UL 1741, CSA - C22.2 N. 107.1-01		
Safety Approval		cCSAus			cCSAus			cCSAus		
Features- Communication										
User-Interface (Display)		16 characters x 2 lines LCD display			16 characters x 2 lines LCD display			16 characters x 2 lines LCD display		
Remote Monitoring (1xRS485 incl.)		AURORA-UNIVERSAL (opt.)			AURORA-UNIVERSAL (opt.)			AURORA-UNIVERSAL (opt.)		
Wired Local Monitoring (1xRS485 incl.)		PVI-USB-RS485_232 (opt.), PVI-DESKTOP (opt.)								
Wireless Local Monitoring		PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)								
Standard Warranty	Years	5			5			5		
Available Models										
Standard- No switchbox-Floating Array		PVI-3.0-OUTD-US			PVI-3.6-OUTD-US			PVI-4.2-OUTD-US		
DC Switch Option - Floating Array		PVI-3.0-OUTD-S-US			PVI-3.6-OUTD-S-US			PVI-4.2-OUTD-S-US		

*All data is subject to change without notice

** Adjustable low trip point to 57Hz. Contact manufacturer for details



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