

General Specifications Outdoor models

PVI-3.0-OUTD-US / PVI-3.0-OUTD-S-US
PVI-3.6-OUTD-US / PVI-3.6-OUTD-S-US
PVI-4.2-OUTD-US / PVI-4.2-OUTD-S-US



High-Efficiency, 3kW to 4.2kW Inverters

Aurora[®] grid-tie transformerless inverters offer a unique combination of ultra-high efficiencies, installer-friendly designs, long service life, and competitive initial acquisition costs; significantly increasing return on investment in solar-power installations.

Industry-Leading Features and Performance

- High efficiencies deliver more energy – up to 96.8% (96% CEC).
- Two inputs with independent MPPTs, optimize power from multiple arrays oriented in different directions.
- Compact size and high power density: 4600W max of output power in a box just 31" x 12 13/16" x 7 11/16".

Unmatched Applications Flexibility

- Full-rated power available up to 50°C ambient temperature.
- Two input sections, with parallel option, with independent high-speed MPPTs, optimize energy harvesting from multiple arrays oriented in different directions.
- Wide MPPT operating range: 90 to 580VDC

Field-Proven Reliability

- IP65 (NEMA 4) rated enclosure withstands the harshest environmental conditions.
- Front-mounted heat sink resists contamination, enhancing cooling and increasing reliability and long-term efficiency.
- Grid-connected operation according to international standards, UL1741/IEEE1547 & CSA-C22.2 N.107.1-01
- Five-year warranty, optionally extendable to ten years.

Installer Friendly

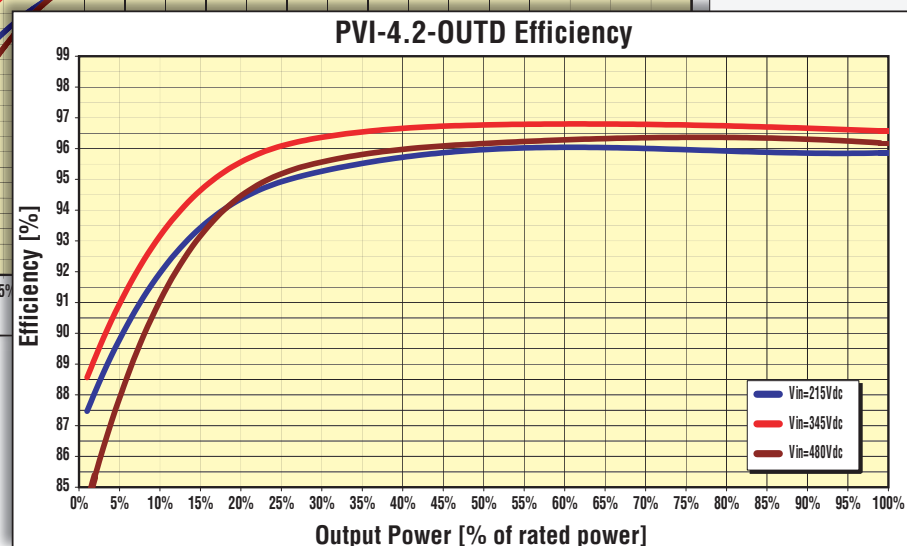
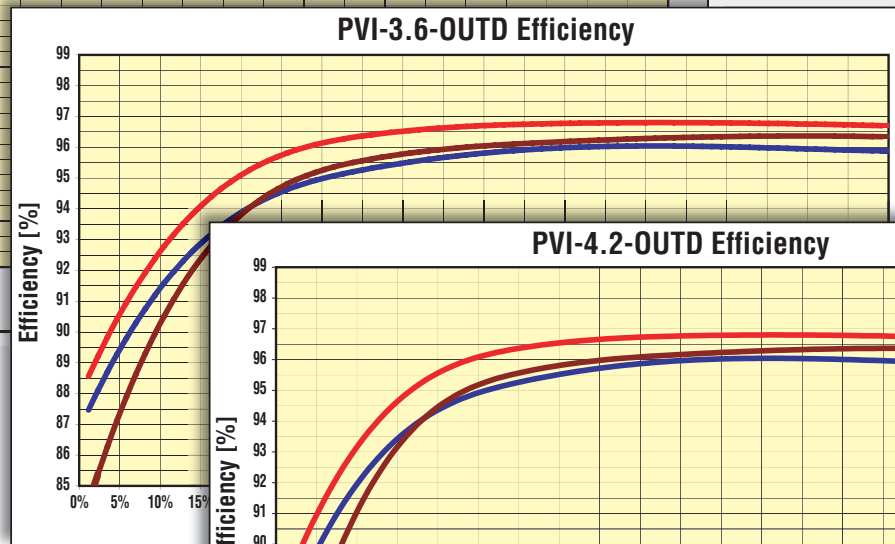
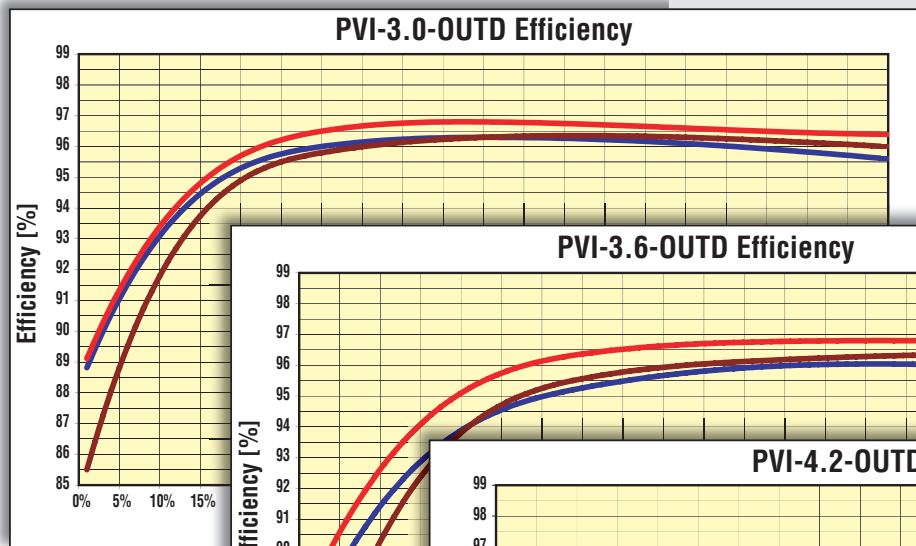
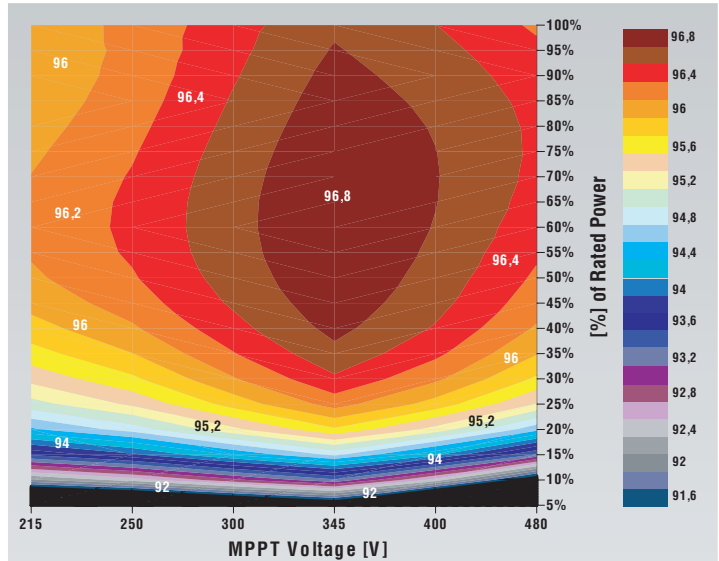
- Reverse-polarity protection minimizes potential damage caused by miswiring during installation.
- Front-panel mounted LCD display provides real-time updates for all critical operating parameters.
- RS-485 and USB communications interfaces.
- Integrated DC switch available in compliance with NEC Standard, Article 690 "Solar Photovoltaic System" (USA)
- Anti-islanding protection

Models	AC Power
PVI-3.0-OUTD-US	3000 W
PVI-3.0-OUTD-S-US	3000 W
PVI-3.6-OUTD-US	3600 W
PVI-3.6-OUTD-S-US	3600 W
PVI-4.2-OUTD-US	4200 W
PVI-4.2-OUTD-S-US	4200 W
Options	
AURORA [®] Communicator software simplifies monitoring via PC. AURORA [®] Easy Control datalogger is available for remote control via Internet, modem, or GSM.	

High Efficiencies Across a Broad Range of Operating Conditions

PVI-3.0, PVI-3.6, and PVI-4.2 inverters work with nominal output voltage, at up to 96.8% efficiency (CEC 96%). The graph to the right demonstrates the high efficiencies, across a continuous range of input voltages and load conditions, for the PVI-4.2.

The graphs below depict the industry-leading performance of all models at three discrete MPPT-voltage reference points, and a continuous range of load conditions.

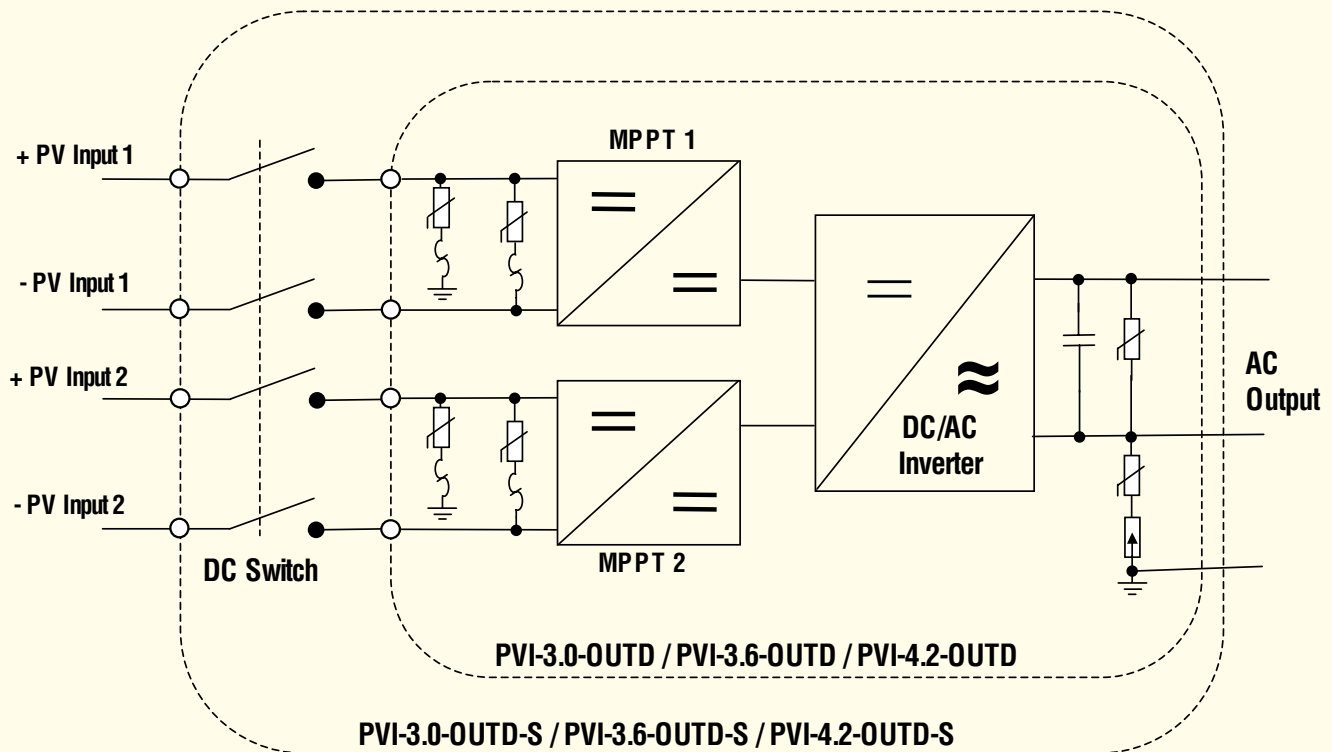


SPECIFICATIONS	PVI-3.0-OUTD/-S	PVI-3.6-OUTD/-S	PVI-4.2-OUTD/-S
INPUT PARAMETERS (DC Side)			
Nominal DC Power	3120 W	3750 W	4380 W
Total Max DC Power	3500 W	4150 W	4820 W
Operating MPPT Input Voltage Range	90 V to 580 V (360Vnominal)		
Full Power MPPT Range	160 V to 530 V	200 V to 530 V @ Vgrid 277 V	200 V to 530 V @ Vgrid 277 V
		200 V to 530 V @ Vgrid 240 V	200 V to 530 V @ Vgrid 240 V
		220 V to 530 V @ Vgrid 208 V	220 V to 530 V @ Vgrid 208 V
Max Input Voltage	600 V		
Activation Voltage	200 V nominal (adjustable from 120 V to 350 V)		
Number of Independent MPPT Channels	2		
Max DC Power On Each MPPT Channel	2000 W	3000 W	3000 W
Max. DC Current Per MPPT Channel	10A (12.5A short circuit)	16A (20A short circuit)	16A (20A short circuit)
Thermal Protected DC Side Varistor	4		
DC Switch	Integrated in the -S versions (rating 600V/25A)		
DC Connections	4 (2 positive; 2 negative)		
	Screw Terminal Block		
	Wire sizes : Solid, from, AWG20 to AWG 6 - Stranded, from AWG20 to AWG 9 Cable Gland: M25 - Cable diameter: 3/8" to 11/16"		
OUTPUT PARAMETERS (AC Side)			
Nominal AC Power	3000 W	3600 W	4200 W
Max AC Power	3300 W	4000 W	4600 W
AC Grid Connection	split phase 240V - single phase 208V/277V		
Nominal AC Voltage	Default 240V - Optional 208V or 277V (setting required)		
AC Voltage Range	277 V (244-304)	240 V (211-264)	208 V (183-228)
Nominal AC Frequency	60 Hz		
Continuous AC Output Current	12A - 14.5A - 14.5A	16A - 17.2A - 17.2A	20A - 20A - 20A
Maximum Output OC Protection	15A - 20A - 20A	15A - 25A - 25A	25A - 25A - 25A
AC Side Varistor	2 (live-netrual / live-PE)		
AC Connection	Screw Terminal Block		
	Wire sizes : Solid, from, AWG20 to AWG 6 - Stranded, from AWG20 to AWG 8		
	Cable Gland: M25 - Cable diameter: 3/8" to 11/16"		
Line Power Factor	1		
AC Current Distorrtion	< 2% at rated power with sine wave voltage		
Max Efficiency	96.8%		
CEC Efficiency	96%		
Feed in Power Threshold	20W		
Night Time Consumption	<2W		
Isolation	NO (trasformerless topology)		
ENVIRONMENTAL PARAMETERS			
Cooling	Natural cooling		
Ambient Temp. Range [°C]	-25°C to +60°C output power derating for Tamb > 55°C		-25°C to +60°C derating for Tamb > 45°C
Operating Altitude	6,000 ft		
Acustical Noise	< 50 dBA @ 1mt		
Environmental NEMA Rating	NEMA 4X		
Relative Humidity	0-100% condensing		
MECHANICAL			
Dimensions (HxWxD) [inches]	-S version : 787x352x208mm - (31", 12 3/4", 8 1/4") basic version : 547x352x208mm - (21 1/2", 12 3/4", 8 1/4")		
Weight	17 Kg (37.5 lbs) - 21Kg (46.25 lbs)		
OTHER			
Display	YES (Alphanumeric 2 lines)		
Communication	RS485 (spring terminal block - wire cross section: AWG28-16)		
	USB connection (for Service only)		
	"AURORA [®] Easy Control" system for remote control (Optional)		

Standards and Codes

Aurora inverters comply with standards set for grid-tied operation, safety, and electromagnetic compatibility including: UL1741/IEEE1547 & CSA -C22.2 N.107.1-01, VDE0126, CEI 11-20, DK5940, CEI64-8, IEC 61683, IEC 61727, EN50081, EN50082, EN61000, CE certification, El Real Decreto RD1663/2000 de España.

Block Diagram and Operating Configurations



Configured with internal DC disconnect switches

Rev.1.1 June.10, 2009

Europa - Power-One Italy S.p.a.

Via S. Giorgio, 64252028 Terranuova Bracciolini, Arezzo, Italy
Phone: (+39) 055 9195 1 / Fax: (+39) 055 9198 185
aesales-eu@power-one.com

North America - Power-One Inc.

740 Calle Plano
Camarillo, California - 93012-8583
aesales-us@power-one.com

www.power-one.com