

PVI-10.0-I-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS

Designed for commercial usage, this three-phase inverter is highly unique in its ability to control the performance of the PV panels, especially during periods of variable weather conditions. This device has two independent MPPTs and efficiency ratings of up to 97.3%.

The input voltage range makes the inverter suitable to installations with reduced string size. The HF isolation allows positive or negative ground configuration.

It is available with an optional fully-integrated DC and AC disconnect (-S2 version). The unit is free of electrolytic capacitors, leading to a longer product lifetime.

-S Version



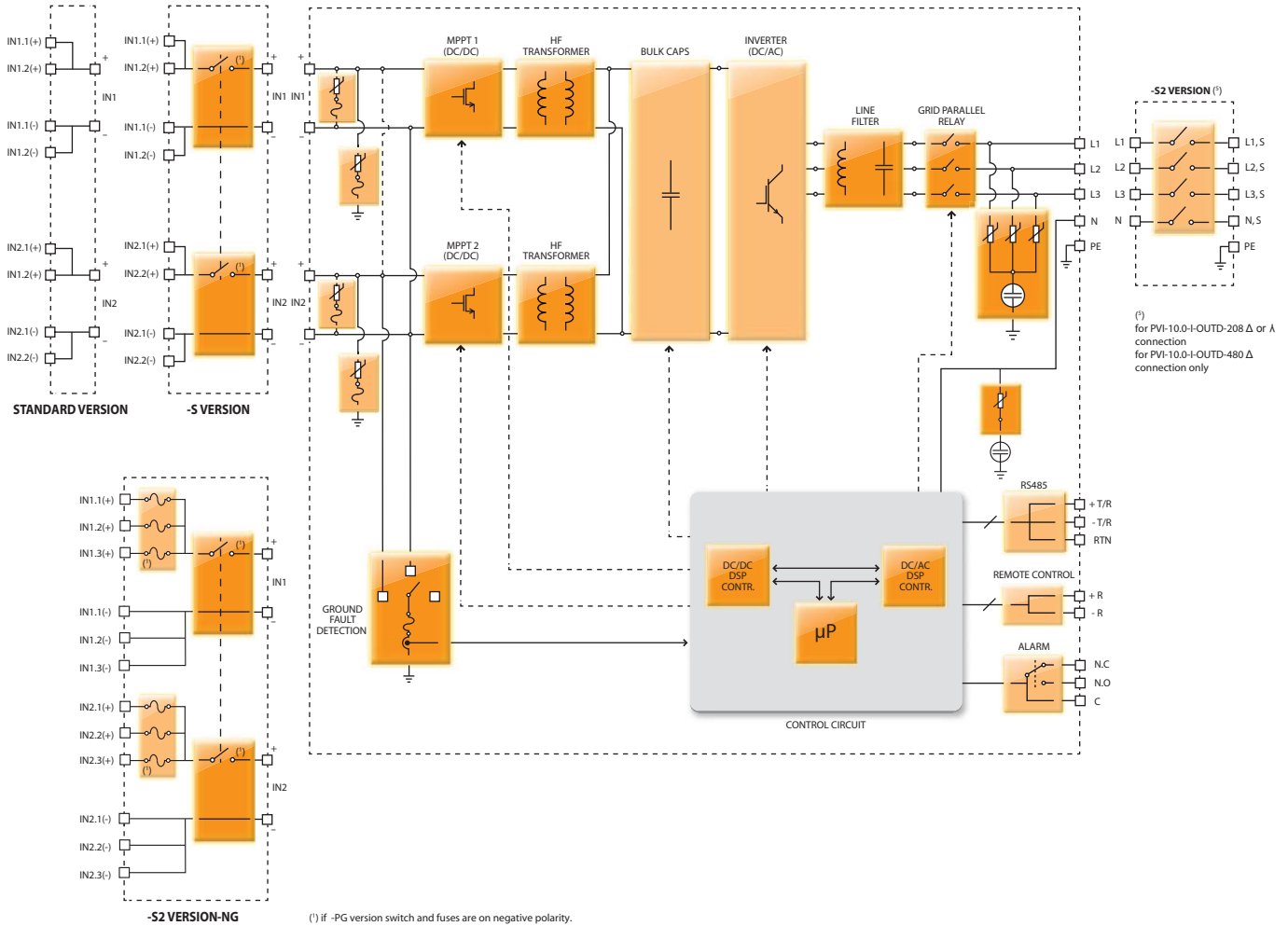
-S2 Version



Features

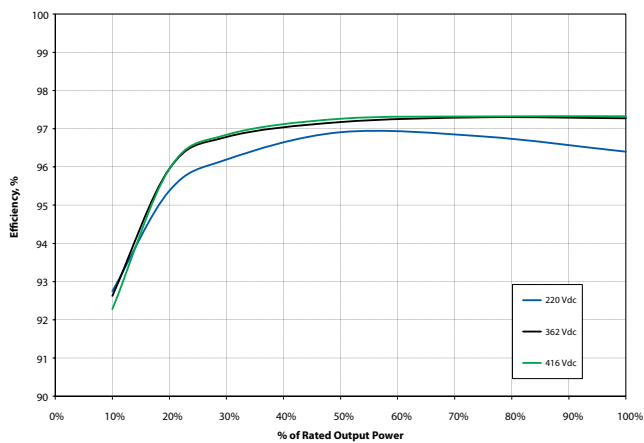
- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- True three-phase bridge topology for DC/AC output converter
- Each inverter is set on specific grid codes which can be selected in the field
- Night Wake up button to access energy harvesting data and error log
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- 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 and -S2 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-10.0-I AND PVI-12.0-I FOR NORTH AMERICA

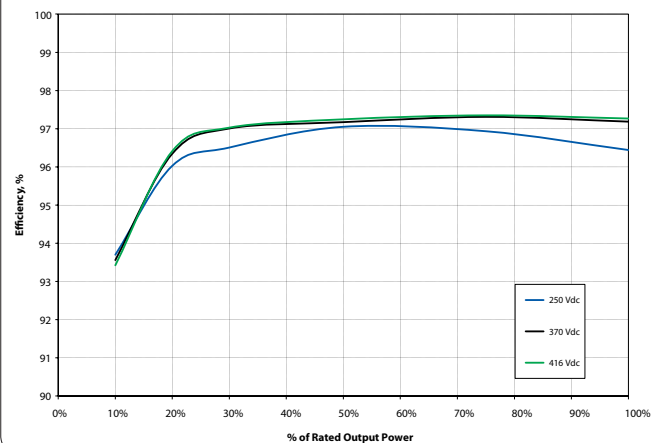


Block Diagram and Efficiency Curves

PVI-10.0-I



PVI-12.0-I



TECHNICAL DATA	Values	PVI-10.0-I-OUTD-US		
Rated Grid AC Voltage	V	208	480	600
Input Side (DC)				
Maximum Usable Power for Each Channel	W		6800	
MPPT Voltage Range	V		220-470	
Start- Up Voltage	V		Default: 200 (Adj. 120-350)	
Absolute Maximum Voltage (Vmax)	V		520	
Maximum Current (Idcmax) for both MPPT in Parallel	A		48	
Maximum Usable Current per Channel	A		24	
Number of Wire Landing Terminals per Channel			Standard version: 2, Switch box version: 2 or 3	
Number of Independent MPPT Channels			Two; programmable as a single paralleled input	
Array Wiring Termination			Terminal block, pressure clamp, 90° C terminals	
Output Side (AC)				
Grid Standard			3-phase/3W or 3-phase/4W/Y (programmable)	
Nominal Power	W		10000	
Voltage Range (Vmin-Vmax)	V	183-228	422-528	528-660
Grid Frequency; Range**	Hz		60; (59.3-60.5)	
Maximum Current (Iac, max)	A	30.0	14.0	10.6
Power Factor			>0.995 (+/-0.9)	
Total Harmonic Distortion At Rated Power	%		THD <2	
Derated Power at 60°C/140°F	kW _{RMS}	7250	8960	9600
Efficiency				
Maximum Efficiency	%	96.5	97.3	97.3
CEC Efficiency	%	96.0	97	97
Operating Parameters				
Consumption in Stand By (Night) (Feed-In Power Threshold)	W _{RMS}		30	
Consumption During Operation (Stand-by Consumption)	W _{RMS}		less than 8.0	
Topology			Isolated - High Frequency transformer	
Mechanical Specifications				
Enclosure rating	in/mn		NEMA 4X	
Cooling			Natural Convection	
Conduit Connections			2ea x 3/4"KO trade size, 3 places (side, front, rear) 4ea x 1/2" KO trade size, 2places, bottom (comm)	
Grid Wiring Termination Type			Screw Terminal Block, Single wire, 90°C terminal wiring	
Dimensions (W/H/D)	in(mm)		Standard (US-no switch box):25.4/28.2/8.7 (645/716/222 -S or -S2 Version: 25.4/37.7/8.7 (645/958/222)	
Unit Weight	lb(kg)	101(45.8)	US-no switch version, 107(48.5) S version, 114(51.7) S2 version	
Shipping Weight	lbs(kg)		with pallet: 254 (<115), without pallet:143 lb(<65)	
Mounting System			Wall Brackett (Included)	
Environmental				
Ambient Air Temperature Range	°C (°F)		-25...+60 (-13...+140)	
Noise Emission Level	db (A) @1m		<50	
Relative Humidity	%RH		0 to 100 %, condensing	
Maximum Operating Altitude without Derating	ft(m)		6560(2000)	
Protection Devices				
Output				
Anti-Islanding Protection			According to local standard per UL1741/IEEE1547	
External AC OCPD Rating	A _{RMS}	40	20	15
Over-Voltage Protection Type			3 plus gas arrester Varistor, One per line + spark gap to PE	
Input				
Reverse Polarity Protection			yes, diode	
Maximum Short Circuit Current Limit per Channel	A		29	
Over-Voltage Protection Type			Varistor, two per MPPT	
PV Array Ground Fault Detection			According to local standardGFDI (GFD fuse) per UL1741/NEC690.5 (A)	
DC Switch Current Rating (Per Contact)	A/V		32/600	
Ground Fault Detector Fuse Size/ Type	A/V mm		1/600 10x38	
Optional String Combiner Fuse Size/Type	A, A/V mm		12, 15/600 10x38	
Isolation Level			POS or NEG ground referenced array (version specific)	
Safety and EMC Standard			UL1741, CSA22.2 #107.1-01	
Safety Approval			cCSAus	
Features- Communication				
User-Interface (Display)			16 Characters X 2 lines LCD display (Front Panel Chassis Mount)	
Remote Monitoring (1xRS485 incl.)			RS485	
Wired Local Monitoring (1xRS485 incl.)			PVI-DESKTOP (opt) Use included RS485 port and (optional) PVI RS485-USB adaptor with AURORA Communicator Software	
Wireless Local Monitoring			PVI-DESKTOP (opt), WITH PVI-RADIO MODULE (opt)	
Standard Warranty	Years		5	
Available Models				
Standard - Positive Ground	Standard - Positive Ground			
Standard - Negative Ground	Standard - Negative Ground			
With DC Switches - Positive Ground	With DC Switch - Positive Ground			
With DC Switches - Negative Ground	With DC Switch - Negative Ground			
With AC and DC Switches - Positive Ground	With AC and DC Switches - Positive Ground			
With AC and DC Switches - Negative Ground	With AC and DC Switches - Negative Ground			

*All data is subject to change without notice

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



www.power-one.com

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