

PVI-10.0-I-OUTD PVI-12.0-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

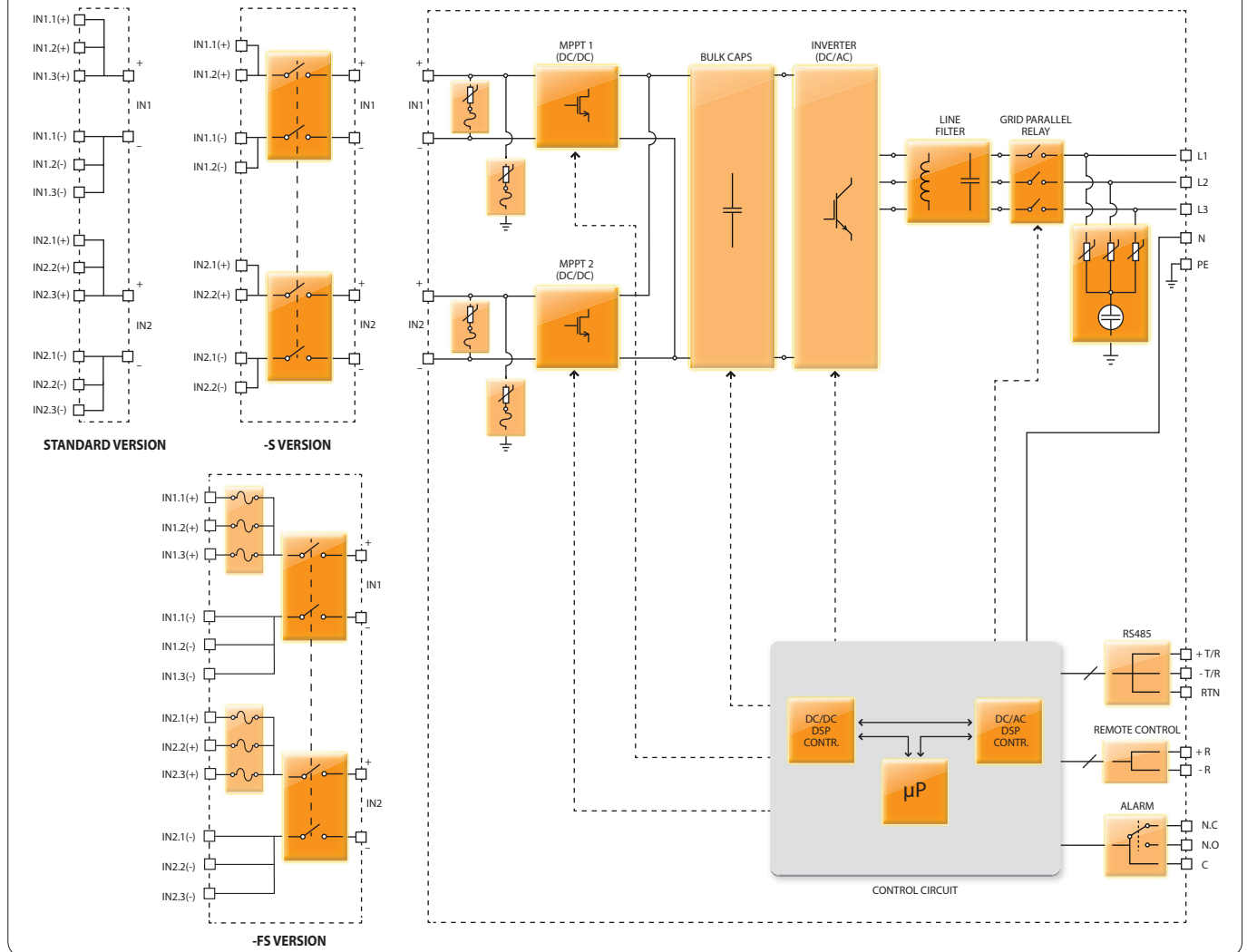


AURORA TRIO

Features

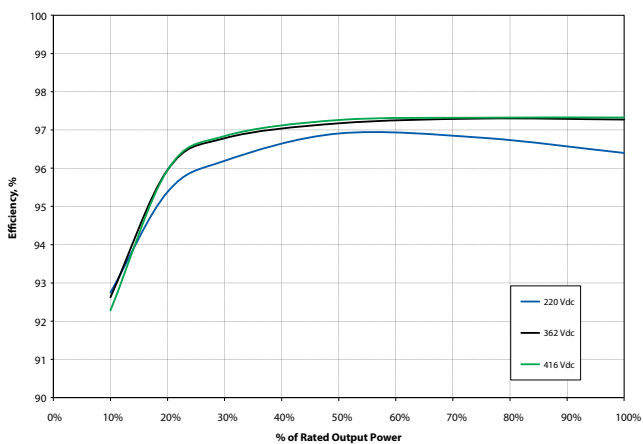
- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- True three-phase bridge topology for DC/AC output converter
- Each inverter is set on specific grid codes which can be selected in the field
- Night Wake up button to access energy harvesting data 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

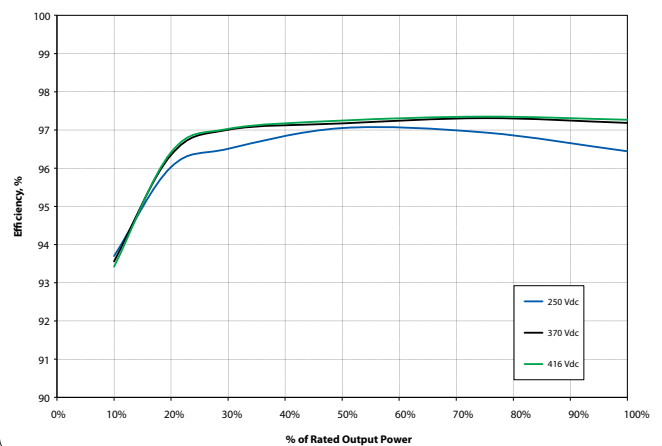


Block Diagram and Efficiency Curves

PVI-10.0-I-OUTD



PVI-12.0-I-OUTD



PARAMETER	PVI-10.0-I-OUTD-400	PVI-12.0-I-OUTD-400
Input Side		
Absolute Maximum DC Input Voltage (V _{max,abs})	520 V	
Start-up DC Input Voltage (V _{start})	200 V (adj. 120...350 V)	
Operating DC Input Voltage Range (V _{dcmín...V_{dcmáx}})	0.7 x V _{start} ...520 V	
Rated DC Input Power (P _{dcr})	10500 W	12300 W
Number of Independent MPPT ⁽⁴⁾	2	
Maximum DC Input Power for each MPPT (P _{MPPTmax})	6800 W	
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	220...470 V	250...470 V
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [470V≤V _{MPPT} ≤520V]	
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	6800 W [285V≤V _{MPPT} ≤470V] the other channel: P _{dcr} -6800W [155V≤V _{MPPT} ≤470V]	6800 W [275V≤V _{MPPT} ≤470V] the other channel: P _{dcr} -6800W [220V≤V _{MPPT} ≤470V]
Maximum DC Input Current (I _{dcmáx}) / for each MPPT (I _{MPPTmax})	48.0 A / 24.0 A	50.0 A / 25.0 A
Maximum Input Short Circuit Current for each MPPT	29.0 A	
Number of DC Inputs Pairs for each MPPT	2	
DC Connection Type	Tool Free PV Connector WM / MC4	
Input Protection		
Reverse Polarity protection	Yes, from limited current source	
Input Over Voltage Protection for each MPPT - Varistor	2	
Photovoltaic Array Isolation Control	According to local standard	
DC Switch Rating for each MPPT (-S Version)	32 A / 600 V	
Fuse Rating (-FS Version)	Not applicable	
Output Side		
AC Grid Connection Type	Trifase (Δ/Y)	
Rated AC Power (P _{acr})	10000 W	12000 W
Maximum AC Output Power (P _{acmax})	11000 W ⁽³⁾	12500 W
Rated AC Grid Voltage (V _{acr})	400 V	
AC Voltage Range	320...480 V ⁽¹⁾	
Maximum AC Output Current (I _{ac,max})	16.0 A	18.0 A
Rated Output Frequency (f _r)	50 Hz	
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz ⁽²⁾	
Nominal Power Factor (Cosphi _{acr})	> 0.995 (adj. ± 0.9)	
Total Current Harmonic Distortion	< 2%	
AC Connection Type	Screw terminal block	
Output Protection		
Anti-Islanding Protection	According to local standard	
Maximum AC Overcurrent Protection	20.0 A	
Output Overvoltage Protection - Varistor	3 plus gas arrester	
Operating Performance		
Maximum Efficiency (η _{max})	97.3%	
Weighted Efficiency (EURO/CEC)	97.0% / -	
Feed In Power Threshold	30 W	
Stand-by Consumption	< 8 W	
Communication		
Wired Local Monitoring	PVI-USB-RS485_232 (opt.), PVI-DESKTOP (opt.)	
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA-UNIVERSAL (opt.)	
Wireless Local Monitoring	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)	
User Interface	16 characters x 2 lines LCD display	
Environmental		
Ambient Temperature Range	-25...+60°C /-13...140°F with derating above 50°C/122°F	-25...+60°C /-13...140°F with derating above 45°C/113°F
Relative Humidity	0...100% condensing	
Noise Emission	< 50 db(A) @ 1 m	
Maximum Operating Altitude without Derating	2000 m / 6560 ft	
Physical		
Environmental Protection Rating	IP 65	
Cooling	Natural	
Dimension (H x W x D)	716mm x 645mm x 222mm / 28.2" x 25.4" x 8.7"	
Weight	< 45.8 kg / 99.0 lb	
Mounting System	Wall bracket	
Safety		
Isolation Level	HF transformer	
Marking	CE	
Safety and EMC Standard	EN 50178, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3,, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12	
Grid Standard	Enel Guideline, VDE 0126-1-1, G59/2, EN 50438, RD1663, AS 4777	
Available Products Variants		
Standard	PVI-10.0-I-OUTD-400	PVI-12.0-I-OUTD-400
With DC Switch	PVI-10.0-I-OUTD-S-400	PVI-12.0-I-OUTD-S-400

1. The AC voltage range may vary depending on specific country grid standard

2. The Frequency range may vary depending on specific country grid standard

3. Limited to 10000 W for Benelux

4. Independent MPPT just with negative ground



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