

# PVI-10.0-OUTD / PVI-12.5-OUTD

## General Specifications - Outdoor models PVI-10.0-0 UTD / PVI-10.0-OUTD-S / PVI-10.0-OUTD-FS PVI-12.5-OUTD / PVI-12.5-OUTD-S / PVI-12.5-OUTD-FS

### AURORA BENEFITS

- Dual independent input sections to offer the max configuration flexibility of the installation with 3 strings for each MPPT
- Transformerless operation for highest efficiency: up to 97,7%; Euro: 97,13% (10KW) ; 97,25 (12.5KW)
- True 3ph bridge topology for DC/AC output converter
- Wide MPPT input voltage range: 200-850Vdc
- Flat efficiency curve: to ensure consistent and stable performance across the whole input voltage and output power range
- Efficiency peaks at the middle of the input voltage and output power range to ensure better performance under real operating conditions
- Very fast and accurate dual MPPT algorithm (response time: 1sec; accuracy: 99,8%)
- Very low sensitivity to grid disturbances to avoid undesired disconnection from the grid
- Wide operating temperature range -25°/+60°C. Maximum output power guaranteed for ambient temperatures up to 50°C, free convection cooling (no ventilation)
- PVI-XX.X-OUTD-FS variants include DC switch and fuses (see block diagram)
- LCD Display on the front to monitor the main parameters
- Anti-islanding Protection
- Integrated RS-485
- Standard DC connection with MultiContact MC4 connector
- Reverse polarity protection minimizes chance of damage due to mis-wiring

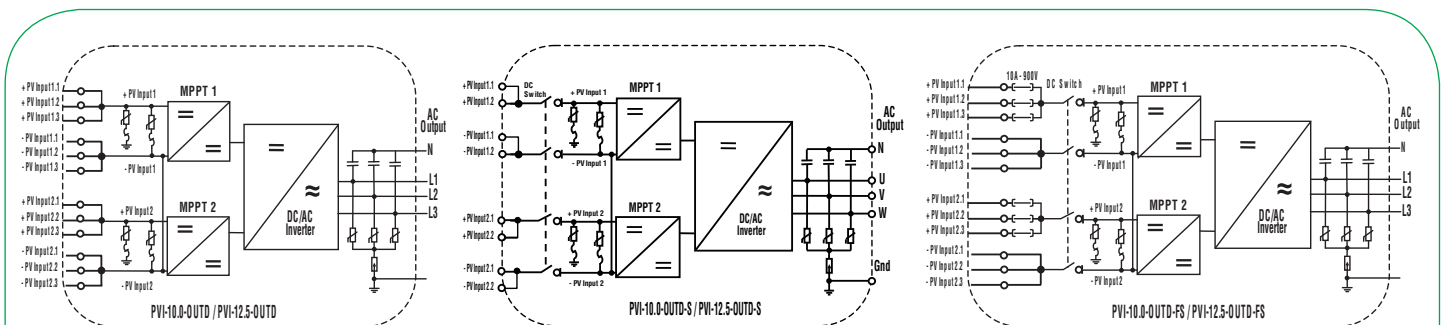


**Electrolyte - Free**  
The string inverter without electrolytic capacitors

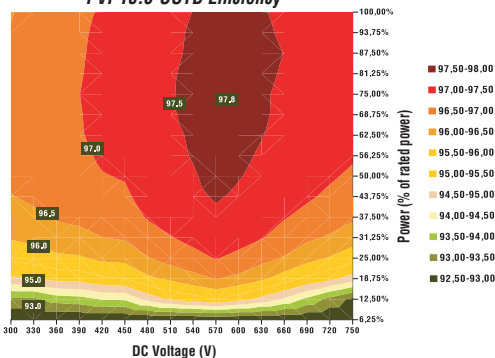
### STANDARDS AND CODES

Aurora inverters comply with standards set for grid-tied operation, safety and electromagnetic compatibility including: VDE0126, CEI 11-20 IV ed, DK5940, IEC 61683, IEC 61727, EN50081, EN50082, EN61000, CE certification, El Real Decreto RD1663/2000 de España.

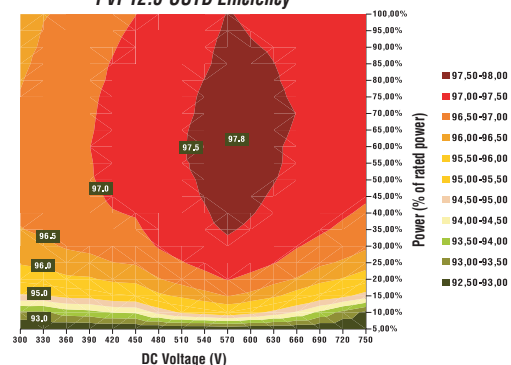
### Block Diagram and typical efficiency



PVI-10.0-OUTD Efficiency



PVI-12.5-OUTD Efficiency



<b>CHARACTERISTICS</b>	<b>PVI-10.0-OUTD-BX</b>	<b>PVI-12.5-OUTD-BX</b>
<b>INPUT PARAMETERS</b>		
Nominal DC Power [kW]	10,3	12,8
Max. Recommended DC Power [kW]	11,4	14,3
Operating Input Voltage Range [V]	0,7xVstart - 850 (580 nominal)	
Full Power MPPT input voltage range (symmetrical load) [V]	300-750	360-750
Full asymmetrical load input voltage range [V]	360-750 (@ 6,5kW) / 216-750 (@ 3,9kW)	445-750 (@ 8kW) / 278-750 (@ 5kW)
Absolute Max. Input Voltage [V]	900	
Activation voltage "Vstart" [V]	360 nominal (adjustable within the range 250Vdc-500Vdc, independently/each input)	
No of independent MPPT trackers	2	
Max. Input Power, each MPPT [kW]	6,5	8
No. of DC Inputs	4/6 (2/3 each MPPT, optionally fused)	
Max. DC Current, each MPPT [A]	18 (22 shortcircuit)	
DC Connection	8/12 x MultiContact Ø 4mm (4/6 male - positive input + 4/6 female - negative input)	
	Mating cable connector included	
	Conductor cross section: 4-6mmq/AWG12-10 - Cable Ø w/insulator: 3-6mm	
<b>INPUT PROTECTION</b>		
Reverse polarity protection	Yes	
Fuse rating, each input (-FS suffix versions only)	10Adc / 900Vdc	
DC side varistors	4 (2 each MPPT), thermally protected	
PV array Insulation Control	according to VDE0126-1-1	
DC Switch (-S/-FS suffix versions only)	Integrated (Rating: 1000Vdc / 25Adc)	
<b>OUTPUT PARAMETERS</b>		
Nominal AC Power (up to 50°C, kW)	10	12,5
Max. AC Power [kW]	10	13,75
AC Grid Connection	3 phase 400Vac 50Hz with or without neutral (3 or 4 wires network) + PE	
Nominal AC Voltage [V]	3x400Vac	
Maximum AC Voltage Range [V]	326.6 - 438.2 Vac (may be limited in acc. to country-specific requirements)	
Nominal AC Frequency [Hz]	50	
Max. AC Line Current [A]	16,6A per phase (19A short circuit)	20A per phase (22A short circuit)
AC Connection	Screw terminal block	
	Conductor Cross Section: Solid: 0,5-16mmq / Stranded: 0,5-10mmq / AWG20-6	
	Cable Gland: M40 - Cable Ø: 19-28mm	
Line Power Factor	1	
AC Current Distortion (THD%)	<2% at rated power with sine wave voltage	
<b>OUTPUT PROTECTION</b>		
AC side varistors	3, star connected to common point, plus gas arrester to ground	
Ground fault protection (AC + DC leakage current)	according to VDE0126-1-1	
<b>CONVERSION EFFICIENCY</b>		
Max. Efficiency	97,70%	
Euro Efficiency	97,13%	97,25%
<b>ENVIRONMENTAL PARAMETERS</b>		
Cooling	Natural cooling	
Ambient Temp. Range [°C]	-20 / +60 (output power derating above 50°C)	
Operating Altitude [m]	2000	
Acoustical Noise [dBA]	<50 @1mt	
Environmental IP Rating	IP65	
Relative Humidity	0-100% condensing	
<b>MECHANICAL</b>		
Dimensions [H x W x D]	650 x 650 x 200	
Weight [kg]	38	
<b>OTHER</b>		
Stand-By Consumption [W]	10	
Feed In Power Threshold [W]	30W	
Night Time consumption [W]	<2	
Isolation	No isolation, Transformer-less	
Display	YES (Alphanumeric 2 lines)	
Communication	RS485 (Screw terminal block - Conductor cross section: 0,08-1,5mmq/AWG28-16)	
<b>AVAILABLE PRODUCT VARIANTS</b>		
Standard - no options	PVI-10.0-OUTD	PVI-12.5-OUTD
With DC switch	PVI-10.0-OUTD-S	PVI-12.5-OUTD-S
With DC switch and protection fuse/each input	PVI-10.0-OUTD-FS	PVI-12.5-OUTD-FS

## MODEL SUMMARY

MODEL NUMBER	POWER
PVI-10.0-OUTD/-S/-FS	10.000W
PVI-12.5-OUTD/-S/-FS	12.500W



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