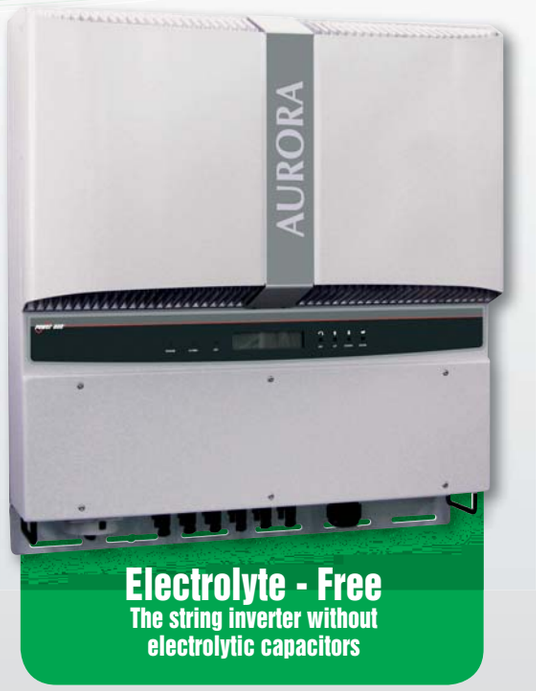
PVI-10.0-OUTD-AU / PVI-12.5-OUTD-AU

AURORA®
Photovoltaic Inverter

General Specifications - Outdoor models
PVI-10.0-0 UTD-AU
PVI-12.5-OUTD-AU



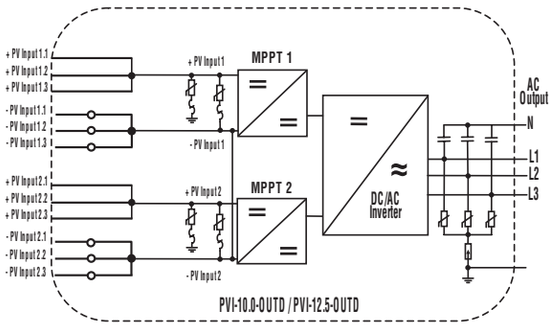
AURORA® BENEFITS

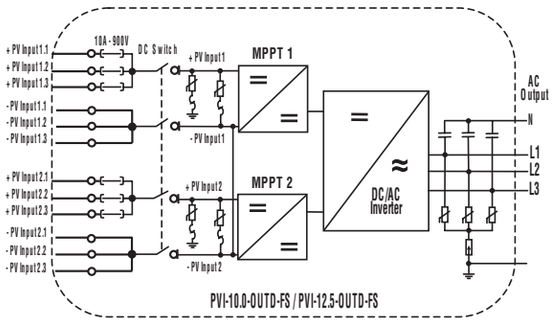
- Dual indipendent input sections to offer the max configuration flexibility of the installation with 3 strings for each MPPT
- Transformerless operation for highest efficiency: up to 97,7%; Euro: 97,13% (10KW) ; 97,25 (12.5KW)
- True 3ph bridge topology for DC/AC output converter
- Wide MPPT input voltage 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 betters 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. Maximun 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

STANDARDS AND CODES

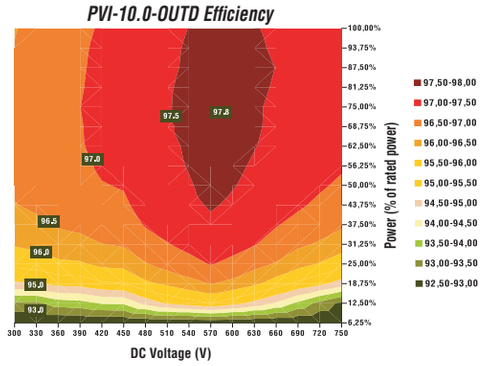
Aurora inverters comply with standards set for grid-tied operation, safety and electromagnetic compatibility including: VDE0126, CEI 11-20 IV ed, DK5940, IEC 61683, IEC 61727, EN50081, EN50082, EN61000, CE certification, El Real Decreto RD1663/2000 de España.

Block Diagram and typical efficiency

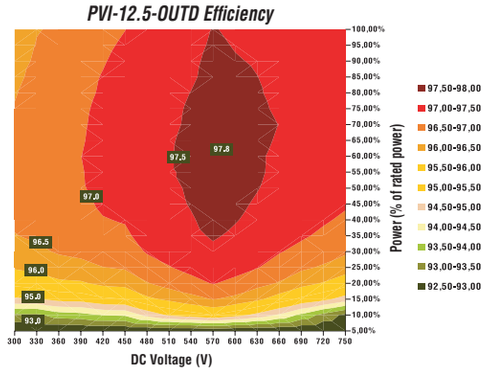




PVI-10.0-OUTD Efficiency



PVI-12.5-OUTD Efficiency



CHARACTERISTICS	PVI-10.0-OUTD-AU	PVI-12.5-OUTD-AU
INPUT PARAMETERS		
Nominal DC Power [kW]	10,4	13
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	6 (3 each MPPT, optionally fused)	
Max. DC Current, each MPPT [A]	18 (22 shortcircuit)	
DC Connection	12 x MultiContact Ø 4mm (6 male - positive input + 6 female - negative input)	
	Mating cable connector included	
	Conductor cross section: 4-6mmq/AWG12-10 - Cable Ø w/insulator: 3-6mm	
INPUT PROTECTION		
Reverse polarity protection	Yes	
Fuse rating, each input (-FS suffix versions only)	10Adc / 900Vdc	
DC side varistors	4 (2 for each MPPT), thermally protected	
PV array Insulation Control	according to VDE0126-1-1	
DC Switch (-S/-FS suffix versions only)	Integrated (Rating: 1000Vdc / 25Adc)	
OUTPUT PARAMETERS		
Nominal AC Power [up to 50°C, kW]	10	12,5
Max. AC Power [kW]	11	13,8
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]	311-456Vac (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	
OUTPUT PROTECTION		
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	
CONVERSION EFFICIENCY		
Max. Efficiency	97,70%	
Euro Efficiency	97,13%	97,25%
ENVIRONMENTAL PARAMETERS		
Cooling	Natural cooling	
Ambient Temp. Range [°C]	-20 / +60 (output power derating above 50°C)	
Opertaing Altitude [m]	2000	
Acoustical Noise [dBA]	<50 @1mt	
Environmental IP Rating	IP65	
Relative Humidity	0-100% condensing	
MECHANICAL		
Dimensions [H x W x D]	650 x 620 x 200	
Weight [kg]	38	
OTHER		
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)	
AVAILABLE PRODUCT VARIANTS		
Standard - no options	PVI-10.0-OUTD	PVI-12.5-OUTD

MODEL SUMMARY

MODEL NUMBER	POWER
PVI-10.0-OUTD-AU	10.000W
PVI-12.5-OUTD-AU	12.500W