

PVI-6.0-TL PVI-8.0-TL

GENERAL SPECIFICATIONS OUTDOOR MODELS

The non-isolated 6.0 and 8.0 kW three-phase inverters are the perfect solution for rooftop installations.

The smallest three-phase inverters in the Aurora family, they add to the range including the leading 10.0 and 12.5 kW transformerless inverters.

Two independent MPPTs, a wide input voltage range and high efficiency values permit to fit to different installation conditions, always ensuring maximum energy harvesting.

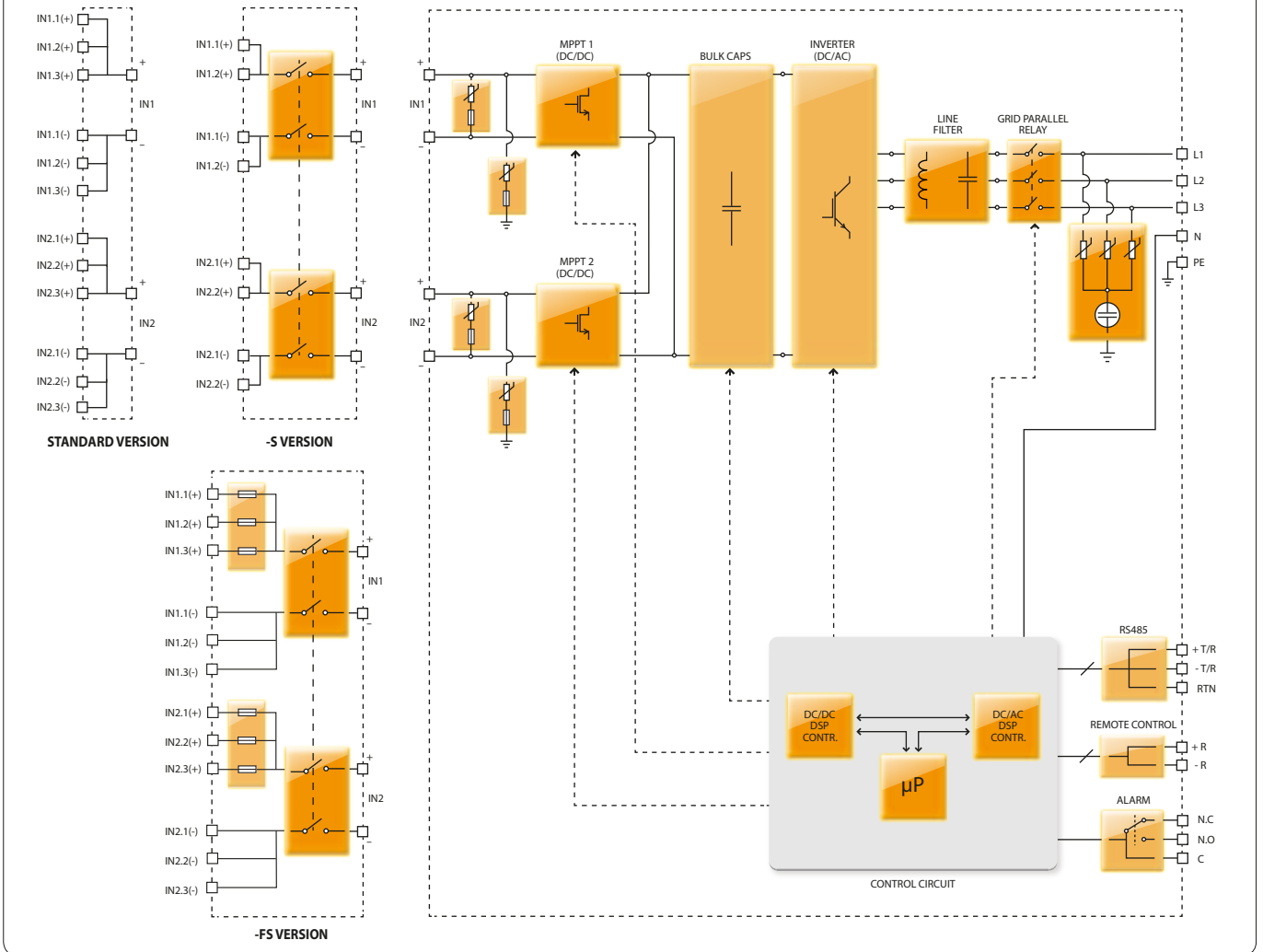
Also available in a version with a DC disconnect switch and protective fuses.



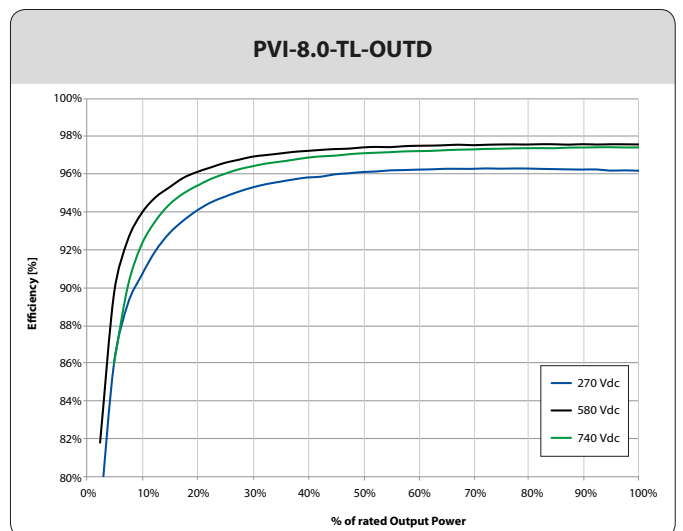
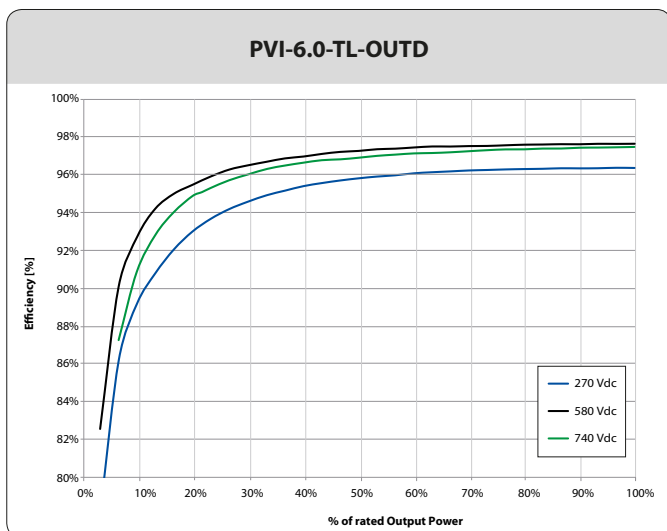
Features

- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- DC/AC conversion unit with three-phase bridge topology
- Each inverter is programmed to specific grid standards which may be selected directly in the field
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input voltage range
- High speed and accurate 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 over the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- Integrated DC disconnect switch in conformity with international standards (versions -S and -FS)
- RS-485 communication interface (for connection with laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with AURORA PVI-DESKTOP

BLOCK DIAGRAM OF PVI-6.0-TL-OUTD AND PVI-8.0-TL-OUTD



Block Diagram and Efficiency Curves



PARAMETER	PVI-6.0-TL-OUTD	PVI-8.0-TL-OUTD
Input Side		
Absolute Maximum DC Input Voltage ($V_{max,abs}$)	900 V	
Start-up DC Input Voltage (V_{start})	360 V (adj. 250...500 V)	
Operating DC Input Voltage Range ($V_{dmin}...V_{dmax}$)	0.7 x V_{start} ...850 V	
Rated DC Input Power (P_{dcr})	6200 W	8250 W
Number of Independent MPPT	2	
Maximum DC Input Power for each MPPT ($P_{MPPTmax}$)	4200 W	5500 W
DC Input Voltage Range with Parallel Configuration of MPPT at P_{acr}	200...750 V	270...750 V
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [$750V \leq V_{MPPT} \leq 850V$]	
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P_{acr} , max unbalance example	4200 W [$250V \leq V_{MPPT} \leq 750V$] the other channel: P_{dcr} -4200W [$175V \leq V_{MPPT} \leq 750V$]	5500 W [$320V \leq V_{MPPT} \leq 750V$] the other channel: P_{dcr} -5500W [$175V \leq V_{MPPT} \leq 750V$]
Maximum DC Input Current (I_{dmax}) / for each MPPT ($I_{MPPTmax}$)	34.0 A / 17.0 A	
Maximum Input Short Circuit Current for each MPPT	22.0 A	
Number of DC Inputs Pairs for each MPPT	2 (-S Version) 3 (Standard or -FS Version)	
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 (Version with DC Switch)	25 A / 1000 V	
Fuse Rating (Versions with fuses)	12 A / 1000 V	
Output Side		
AC Grid Connection Type	Three phase 3W or 4W+PE	
Rated AC Power (P_{acr})	6000 W	8000 W
Maximum AC Output Power (P_{acmax})	6600 W ⁽³⁾	8900 W ⁽⁴⁾
Rated AC Grid Voltage (V_{acr})	400 V	
AC Voltage Range	320...480 V ⁽¹⁾	
Maximum AC Output Current ($I_{ac,max}$)	10.0 A	13.0 A
Rated Output Frequency (f)	50 Hz	
Output Frequency Range ($f_{min}...f_{max}$)	47...53 Hz ⁽²⁾	
Nominal Power Factor ($\cos\phi_{acr}$)	> 0.995 (adj. ± 0.9 , or fixed by display down to ± 0.8 with max 6.67 kVA)	> 0.995 (adj. ± 0.9 , or fixed by display down to ± 0.8 with max 8.9 kVA)
Total Current Harmonic Distortion	< 2%	
AC Connection Type	Screw terminal block	
Output Protection		
Anti-Islanding Protection	According to local standard	
Maximum AC Overcurrent Protection	12.0 A	15.0 A
Output Overvoltage Protection - Varistor	3 plus gas arrester	
Operating Performance		
Maximum Efficiency (η_{max})	97.6%	97.6%
Weighted Efficiency (EURO/CEC)	96.5% / -	96.8% / -
Feed In Power Threshold	30.0 W	
Stand-by Consumption	< 10.0 W	
Communication		
Wired Local Monitoring	PVI-USB-RS232_485 (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 55°C (131°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	< 41.0 kg / 90.4 lb	
Mounting System	Wall bracket	
Safety		
Isolation Level	Transformerless	
Marking	CE	
Safety and EMC Standard	EN 50178, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12, VDE 0126-1-1, VDE-AR-N 4105, G83/1, C10/11, CEI 0-21 + Attachment A70 Terna, CEI 0-16 ⁽⁵⁾ , VDE 0126-1-1, VDE-AR-N 4105, G83/1, C10/11, EN 50438, RD1699, AS 4777, BDEW	
Grid Standard	Not certified CEI 0-21	
Available Products Variants		
Standard	PVI-6.0-TL-OUTD	PVI-8.0-TL-OUTD
With DC Switch	PVI-6.0-TL-OUTD-S	PVI-8.0-TL-OUTD-S
With DC Switch and Fuse	PVI-6.0-TL-OUTD-FS	PVI-8.0-TL-OUTD-FS

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 6000 W for Germany

4. Limited to 8000 W for Germany

5. Since the applicability date

Remark. Features not specifically listed in the present data sheet are not included in the product



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Power-One Renewable Energy

Worldwide Sales Offices

<u>Country</u>	<u>Name/Region</u>	<u>Telephone</u>	<u>Email</u>
Australia	Asia Pacific	+61 2 9735 3111	sales.australia@power-one.com
China (Shenzhen)	Asia Pacific	+86 755 2988 5888	sales.china@power-one.com
China (Shanghai)	Asia Pacific	+86 21 5505 6907	sales.china@power-one.com
India	Asia Pacific	+65 6896 3363	sales.india@power-one.com
Japan	Asia Pacific	03-4580-2714 / +81-3-4580-2714	sales.japan@power-one.com
Singapore	Asia Pacific	+65 6896 3363	sales.singapore@power-one.com
Belgium / The Netherlands / Luxembourg	Europe	+32 2 206 0338	sales.belgium@power-one.com
France	Europe	+33 (0) 141 796 140	sales.france@power-one.com
Germany	Europe	+49 7641 955 2020	sales.germany@power-one.com
Greece	Europe	00 800 00287672	sales.greece@power-one.com
Italy	Europe	00 800 00287672	sales.italy@power-one.com
Spain	Europe	+34 91 879 88 54	sales.spain@power-one.com
United Kingdom	Europe	+44 1903 823 323	sales.uk@power-one.com
Dubai	Middle East	+971 50 100 4142	sales.dubai@power-one.com
Israel	Middle East	+972 0 3 544 8884	sales.israel@power-one.com
Canada	North America	+1 877 261-1374	sales.canada@power-one.com
USA East	North America	+1 877 261-1374	sales.usaeast@power-one.com
USA Central	North America	+1 877 261-1374	sales.usacentral@power-one.com
USA West	North America	+1 877 261-1374	sales.usawest@power-one.com

Ver. 2013-04.0-EN - All products are subject to technical improvements without notice.