

# ABB small wind inverters

## PVI-6000-TL-OUTD-W

### 6 kW



The PVI-6000-TL-W is ABB's most used small wind turbine inverter. It is designed with proven high performance technology. This dual stage transformerless wind inverters offers a unique combination of high efficiency, installer-friendly design and very wide input voltage range ensuring high energy harvesting.

The high speed and precise power curve tracking algorithm allows to best match the power curve of each turbine.

#### Efficiency of up to 97%

The PVI-6000-TL-W features an high efficiency up to 97 percent thanks to transformerless technology.

It has power curve customization with high granularity, up to 16-point, for high production yield.

It is a sealed unit to withstand harsh environmental conditions.

#### Highlights

- Single phase output
- Power curve customization
- Wide input voltage range
- Transformerless technology
- Field-selectable standard grid settings

## Additional highlights

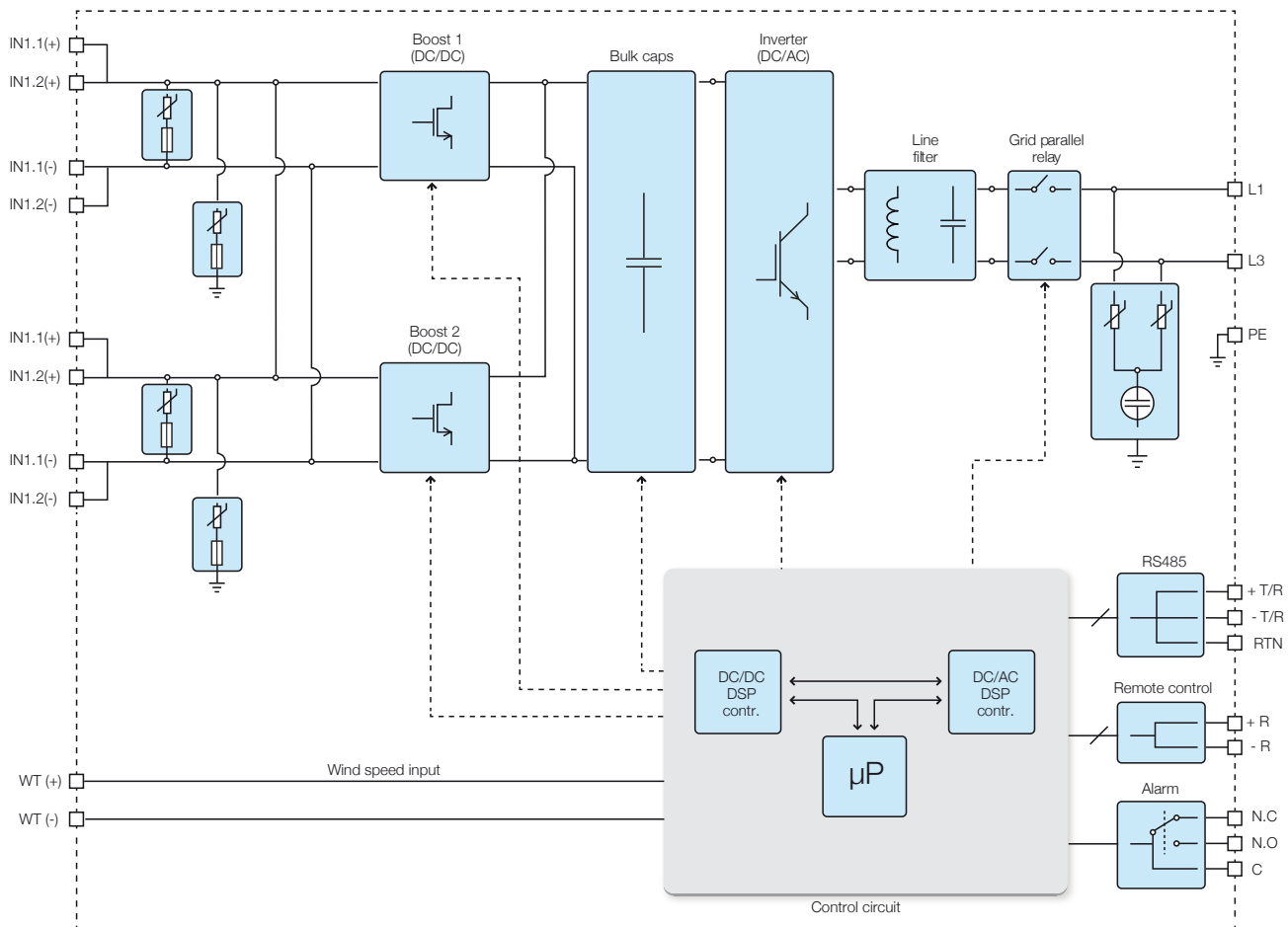
- Flexible data monitoring options to view inverter performance
- Compatible with ABB 7200-WIND-INTERFACE
- Compatible with ABB 15/25kW-WIND-INTERFACE



## Technical data and types

Type code	PVI-6000-TL-OUTD-W
<b>Input side</b>	
Maximum absolute DC input voltage ( $V_{max,abs}$ )	600 V
Operating DC Input voltage range ( $V_{demin}...V_{dcmx}$ )	50...580 V
DC input voltage range at $P_{acr}$ ( $V_{rp,min}...V_{rp,max}$ )	180...530 V
Rated DC input voltage ( $V_{dcr}$ )	360 V
Dc power limitation	Linear derating from Max to Null [ $530V \leq V_{dc} \leq 580V$ ]
Maximum DC input current ( $I_{dcmx}$ )	36 A
Maximum input short circuit current	44 A
DC connection type	Screw terminal block
<b>Input protection</b>	
Reverse polarity protection	Yes, from limited current source
Input over voltage protection - varistor	4
Generator isolation control	According to local standard
<b>Output side</b>	
AC grid connection	Single phase
Rated AC power ( $P_{acr} @ \cos\phi=1$ )	6000 W
Maximum AC output power ( $P_{acmax} @ \cos\phi=1$ )	6000 W
Maximum apparent power ( $S_{max}$ )	6670 VA
Rated grid AC voltage ( $V_{acr}$ )	230 V
AC voltage range	180...264 V <sup>(1)</sup>
Maximum output AC current ( $I_{ac,max}$ )	30 A
Contributory fault current	40.0 A
Rated frequency ( $f_r$ )	50 Hz / 60 Hz
Frequency range ( $f_{min}...f_{max}$ )	47...53 Hz / 57...63 Hz <sup>(2)</sup>
Nominal power factor and adjustable range	> 0.995, adj. $\pm 0.9$ with $P_{acr}=6.0$ kW
Total harmonic distortion	< 3.5 %
AC connection type	Screw terminal block
<b>Output protection</b>	
Anti-islanding protection	According to local standard
Maximum AC overcurrent protection	40.0 A
Output over voltage protection - varistor	2 (L-N/L-PE)

## Block diagram of PVI-6000-TL-OUTD-W



## Technical data and types

### Type code

PVI-6000-TL-OUTD-W

### Operating performance

Maximum efficiency ( $\eta_{max}$ )	97.0%
Stand-by consumption	< 8W
Feed in power threshold	10.0 W

### Communication

Wired local monitoring	PVI-USB-RS232_485 (opt.)
Remote monitoring	VSN300 Wifi Logger Card <sup>(3)</sup> (opt.), PVI-AEC-EVO (opt.), VSN700 Data Logger (opt.)
Wireless local monitoring	VSN300 Wifi Logger Card <sup>(3)</sup> (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)
Noise emission	< 50 dB(A)
Maximum operating altitude without derating	2000 m (6560 ft)

### Physical

Environmental protection rating	IP 65
Cooling	Natural
Dimension (H x W x D)	810 mm x 325 mm x 218 mm (31.9 in x 12.8 in x 8.6 in)
Weight	< 26 kg (57.3 lb)

### Safety

Isolation level	Transformerless
Marking	CE (50 Hz only)
Safety and EMC standard	EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-1, EN61000-6-3, EN61000-3-11, EN61000-3-12
Grid standard	CEI 0-21, VDE 0126-1-1, G59/3, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149, CLC/FprTS 50549

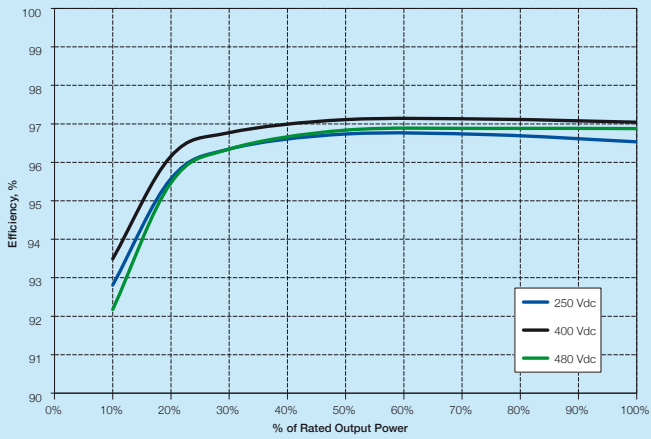
### Available products variants

Standard	PVI-6000-TL-OUTD-W
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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. Check availability before to order

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

### Efficiency curves of PVI-6000-TL-OUTD-W



#### Support and service

ABB supports its customers with a dedicated, global service organization in more than 60 countries and strong regional and national technical partner networks providing the complete range of life cycle services.

For more information please contact your local ABB representative or visit:

[www.abb.com/converters-inverters](http://www.abb.com/converters-inverters)

[www.abb.com/windpower](http://www.abb.com/windpower)

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