



INVERTER PVI-3.0-TL-OUTD / PVI-4.2-TL-OUTD / PVI-5000-TL-OUTD



PVI-3.0-TL-OUTD
PVI-4.2-TL-OUTD



PVI-5000-TL-OUTD

Description

These ABB inverters have the option of running on either one or two strings. The dual input section can process two strings with independent Maximum Power Point Tracking (MPPT). This is particularly useful for rooftop installations with two different orientations (e.g. East and West). The high speed MPPT offers real-time power tracking and improved energy harvesting.

Key Features

- Efficiency up to 96.8%
- Transformerless technology
- Natural convection cooling
- RS-485 and optional wireless communication interface
- Dual input section with independent MPP tracking

Key Benefits

- More power generated from system
- Higher efficiencies
- Trouble free operation
- For connection to laptop or datalogger
- Allows optimal energy harvesting from two sub arrays oriented in different directions

Technical data and types	PVI-3.0-TL-OUTD	PVI-4.2-TL-OUTD	PVI-5000-TL-OUTD
Input Side			
Absolute Maximum DC Input Voltage (V _{max,abs})	600V		
Start-up DC Input Voltage (V _{start})	200 V [adj. 120...350 V]		
Operating DC Input Voltage Range (V _{dcr,min} ...V _{dcr,max})	0.7 x V _{start} ...580 V		
Rated DC Input voltage (V _{dcr})	360 V		
Rated DC Input Power (P _{dcr})	3120 W	4375 W	5150 W
Number of Independent MPPT	2		
Maximum DC Input Power for each MPPT (P _{MPPT,max})	2000 W	3000 W	4000 W
DC input voltage range with parallel configuration of MPPT at P _{acr}	160...530 V	140...530 V	150...530 V
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	2000 W [200V ≤ V _{MPPT} ≤ 530V] the other channel: P _{dcr} -2000W [112V ≤ V _{MPPT} ≤ 530V]	3000 W [190V ≤ V _{MPPT} ≤ 530V] the other channel: P _{dcr} -3000W [90V ≤ V _{MPPT} ≤ 530V]	4000 W [220V ≤ V _{MPPT} ≤ 530V] the other channel: P _{dcr} -4000W [90V ≤ V _{MPPT} ≤ 530V]
Maximum DC Input Current (I _{DC,max}) / for each MPPT (I _{MPPT,max})	20.0 A / 10.0 A	32.0 A / 16.0 A	36.0 A / 18.0 A
Maximum Input Short Circuit Current for each MPPT	12.5 A	20.0 A	22.0 A
Number of DC Inputs Pairs for each MPPT	1	2 for MPPT1 and 1 for MPPT2	2
DC Connection Type	Tool Free PV Connector MC4		
Input Protection			
Reverse Polarity Protection	Yes, from limited current source		
Input Over Voltage Protection for each MPPT - Varistor	Yes		
Output Side			
AC Grid Connection Type	Single phase		
Rated AC Power (P _{acr} @cosφ=1)	3000 W	4200 W	4600 W
Maximum AC Output Power (P _{ac,max} @cosφ=1)	3300 W	4600 W	4600 W
Maximum Apparent Power (S _{max})	3330 VA	4670 VA	5560 VA
Rated AC Grid Voltage (V _{acr,r})	230 V		
AC Voltage Range	180...264 V ⁽¹⁾		
Maximum AC Output Current (I _{acr,max})	14.5 A	20.0 A	25.0 A
Contributory Fault Current	16.0 A	22.0 A	32.0 A
Rated Output Frequency (f _r)	50 Hz		
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz ⁽²⁾		
Nominal Power Factor and Adjustable Range	> 0.995, adj. ± 0.9 with P _{acr} =3.0kW	> 0.995, adj. ± 0.9 with P _{acr} =4.2 kW	> 0.995, adj. ± 0.9 with P _{acr} =5.0kW
Total Current Harmonic Distortion	< 3.5 %		
AC Connection Type	Screw terminal block, cable gland M25		Terminal block, cable gland M32
Output Protection			
Anti-Islanding Protection	According to local standard		
Maximum AC Overcurrent Protection	20.0 A	25.0 A	32.0 A
Output Overvoltage Protection - Varistor	2 (L - N / L - PE)		
Operating Performance			
Maximum Efficiency (η _{max})	96.8%		97.0%
Weighted Efficiency (EURO)	96.0%		96.4%
Feed In Power Threshold	10.0W		
Night Consumption	< 0.4 W		
Communication			
Wired Local Monitoring	PVI-USB-RS232_485 (opt.)		
User Interface	16 characters x 2 lines LCD display		
Wireless Local Monitoring	VSN 300 WIFI Logger Card (opt.)		
Environmental			
Ambient Temperature Range	-25...+60°C with derating above 50°C		-25...+60°C
Relative Humidity	0...100% condensing		
Noise Emission	50 dB(A) @ 1m		
Maximum Operating Altitude without Derating	2000m		
Physical			
Environmental Protection Rating	IP 65		
Cooling	Natural		
Dimension (H x W x D)	618mm x 325mm x 222mm		810mm x 325mm x 222mm
Weight	17.5 kg		< 26.0 kg
Mounting System	Wall bracket		
Safety			
Isolation Level	Transformerless		
Marking	CE (50 Hz only), RCM		
Safety and EMC Standard	EN 50178, IEC/EN 62109-1, IEC/EN 62109-2, AS/NZS 3100, EN 61000-6-1, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3	EN 50178, IEC/EN 62109-1, IEC/EN 62109-2, AS/NZS 3100, EN 61000-6-1, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12	
Grid Standard (check your sales channel for availability)	CEI 0-21, DIN V VDE V 0126-1-1, VDE-AR-N 4105, G83/2, G59/3, EN 50438 (not for all national appendices), RD 1699, AS 4777.2, AS 4777.3, IEC 61727, IEC 62116, RD 413, ITC-BT-40	CEI 0-21, DIN V VDE V 0126-1-1, VDE-AR-N 4105, G59/3, EN 50438 (not for all national appendices), RD 1699, RD 413, ITC-BT-40, IEC 61727, IEC 62116, AS 4777.2, AS 4777.3	CEI 0-21, DIN V VDE V 0126-1-1, G59/3, EN 50438 (not for all national appendices), RD 1699, RD 413, ITC-BT-40, C10/11, IEC 61727, IEC 62116, AS 4777.2, AS 4777.3
Product Details			
Solahart Warranty	5 Years ⁽³⁾		

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. For full details see Solahart Owner's Guide and Installation Instructions. Specifications and designs included in this datasheet are subject to change without notice.

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