

MICRO-0.25-I-OUTD MICRO-0.3-I-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



The new Aurora 250 & 300-watt micro-inverter product offers something new to Power-One customers. The ability to individually link all modules within a specific installation is an alternative to the traditional Aurora string inverters Power-One is famous for.

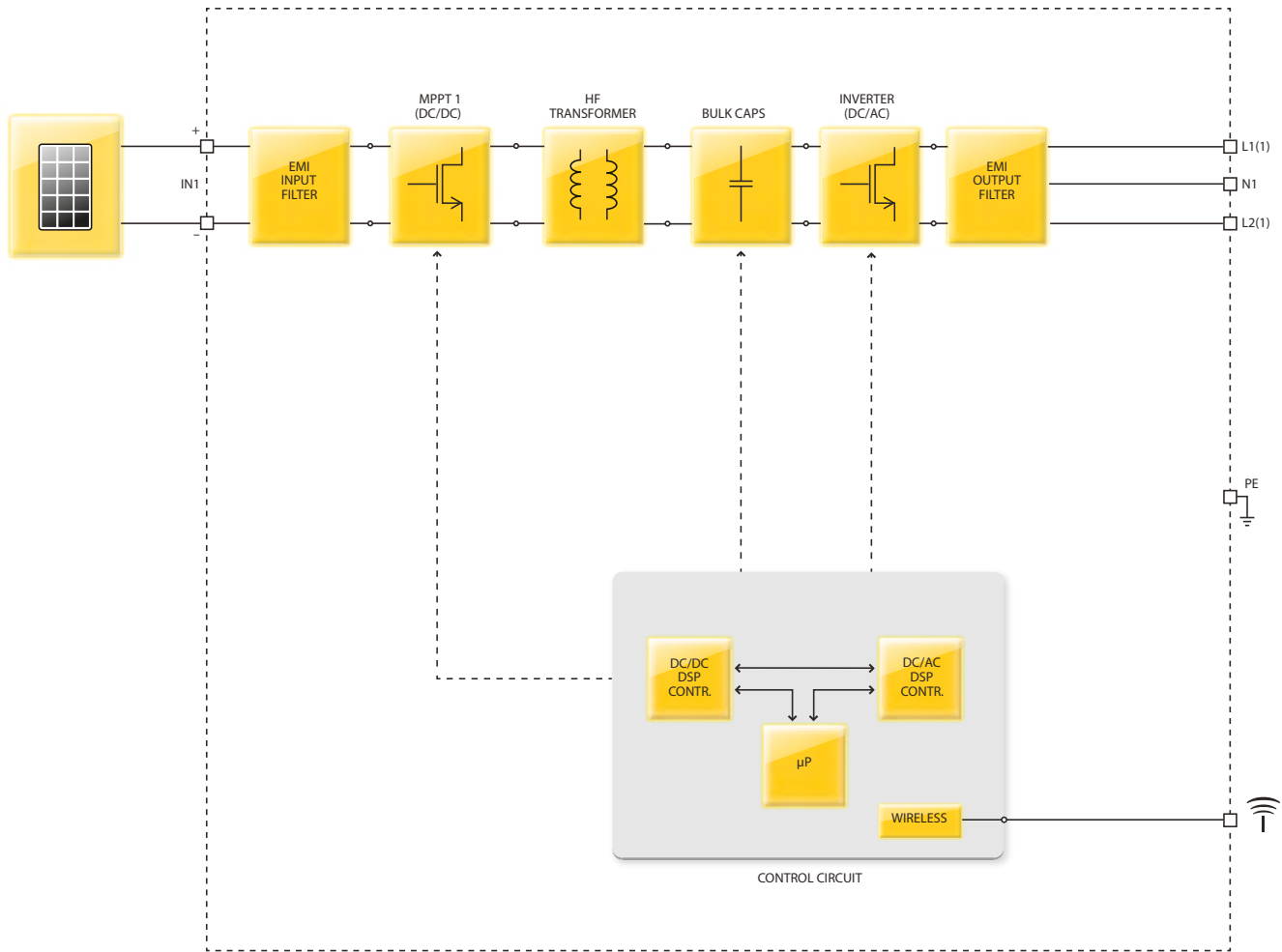
MICRO inverters have some advantages over string inverters. They allow you to control the panels output individually and offer Maximum Power Point Tracking (MPPT) for each single module.

They also allow you to control individual panels in different ways and reduce the losses in efficiency in a variety of challenging conditions.

Features

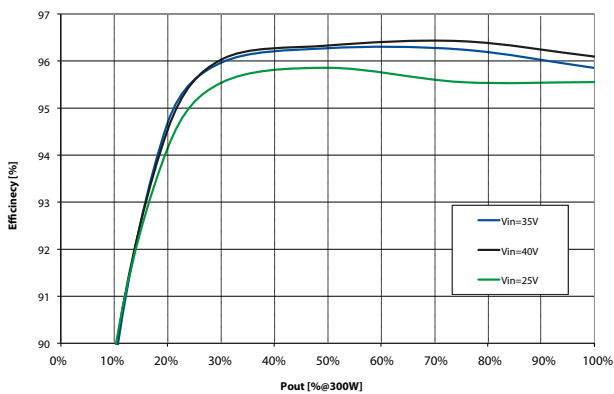
- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- Outdoor enclosure for unrestricted use under any environmental conditions
- Increased energy harvesting thanks to the MPPT algorithm which works at the level of each solar panel in any light condition
- Enhanced MPPT control with reduced DC input current ripple
- HF isolation to fits any application that requires the positive grounding of DC input terminals
- 96.5% maximum efficiency
- Ease of installation by the implementation of a package inclusive of proprietary wireless communication hub
- Reduced susceptibility to fault. In case of a component failure only the energy produced from one PV module will be lost

BLOCK DIAGRAM OF MICRO-0.25/0.3-I-OUTD

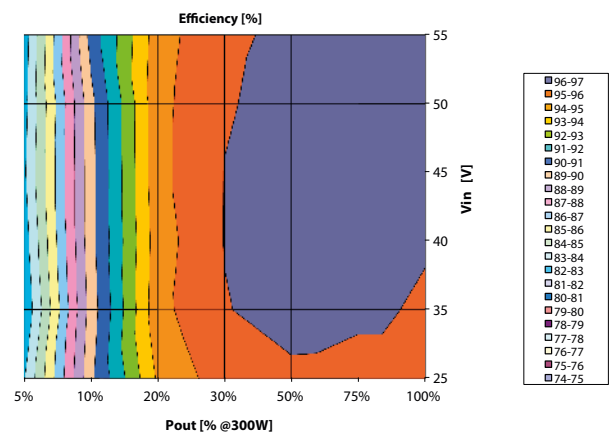


Block Diagram and Efficiency Curves

MICRO-0.3-I



MICRO-0.3-I



PARAMETER	MICRO-0.25-I-OUTD	MICRO-0.3-I-OUTD
Input Side		
Maximum DC Input Power (P_{dcmax})	265 Wp	320 Wp
Operating DC Input Voltage Range ($V_{dcmin}...V_{dcmax}$)	12...60 V	12...60 V
MPPT Input DC Voltage Range ($V_{MPPTmin}...V_{MPPTmax}$)	25...50 V	30...50 V
Absolute Maximum DC Input Voltage ($V_{max,abs}$)	65 V	65 V
Maximum DC Input Current (I_{dcmax})	10.5 A	10.5 A
Number of DC Inputs Pairs for each MPPT	1	1
DC Connection Type	PV connector Amphenol Helios H4 ⁽⁶⁾	PV connector Amphenol Helios H4 ⁽⁶⁾
Start-up DC Input Voltage (V_{start})	25V	25V
Output Side		
AC Grid Connection Type	Single phase	Single phase
Rated AC Power ($P_{ac,r}$)	250 W	300 W
Maximum Apparent Power (S_{max})	250 VA ⁽³⁾	300 VA ⁽³⁾
Rated AC Grid Voltage ($V_{ac,r}$)	230 V	230 V
AC Voltage Range ($V_{acmin}...V_{acmax}$)	180...264 V ⁽¹⁾	180...264 V ⁽¹⁾
Maximum AC Output Current ($I_{ac,max}$)	1.3 A	1.5 A
Contributory fault current	3 A	3 A
Rated Output Frequency (f_r)	50 Hz	50 Hz
Output Frequency Range ($f_{min}...f_{max}$)	47...53 Hz ⁽²⁾	47...53 Hz ⁽²⁾
Nominal Power Factor ($\cos\phi_{I_{ac,r}}$) and adjustable range	> 0.995 ⁽³⁾	> 0.995 ⁽³⁾
Maximum number of units per phase	17	17
Output Protection		
Anti-Islanding Protection	According to local standard	According to local standard
Output Overvoltage Protection - Varistor	Yes	Yes
Operating Performance		
Maximum Efficiency (η_{max})	96.5%	96.5%
Weighted Efficiency (η_{EURO}/η_{CEC})	95.4% / -	95.5% / -
Stand-by Consumption	< 50mW	< 50mW
Communication		
Monitoring System (PC/Data logger)	Wireless	Wireless
Remote Monitoring	Wireless	Wireless
Environmental		
Ambient Temperature Range	-40...+75°C / -40...167°F with Derating above 65°C (149°F)	-40...+75°C / -40...167°F with Derating above 65°C (149°F)
Relative Humidity	0...100 % condensing	0...100 % condensing
Noise Emission	< 30 db(A) @ 1 m	< 30 db(A) @ 1 m
Maximum Operating Altitude without Derating	2000 m / 6560 ft	2000 m / 6560 ft
Physical		
Environmental Protection Rating	IP 65	IP 65
Cooling	Natural	Natural
Dimension (H x W x D)	266mm x 246mm x 35mm / 10.5" x 9.7" x 1.37"	266mm x 246mm x 35mm / 10.5" x 9.7" x 1.37"
Weight	< 1.65 kg / 3.5 lb	< 1.65 kg / 3.5 lb
Safety		
Isolation Level	HF Transformer	HF Transformer
Marking	CE ⁽⁵⁾	CE ⁽⁵⁾
Safety and EMC Standard	EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3, EN 50178, EN62109-1, EN62109-2	EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3, EN 50178, EN62109-1, EN62109-2
Grid Standard ⁽⁴⁾	CEI 0-21, VDE 0126-1-1, VDE-AR-N 4105, G83/2, RD1699, AS 4777	CEI 0-21, VDE 0126-1-1, VDE-AR-N 4105, G83/2, RD1699, AS 4777
Available Products Variants		
Standard	MICRO-0.25-I-OUTD-230	MICRO-0.3-I-OUTD-230

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. The unit has not reactive power capability

4. The unit has not an internal disconnection device

5. Take care that an external device (i.e. CDD) shall be used in the end system installation to indicate faults

6. MC4 compatible in most countries where it is distributed

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

AURORA CDD

GENERAL SPECIFICATIONS INDOOR MODEL





Power-One

AURORA CDD connects your PV System to the Internet in a simple a quick way.

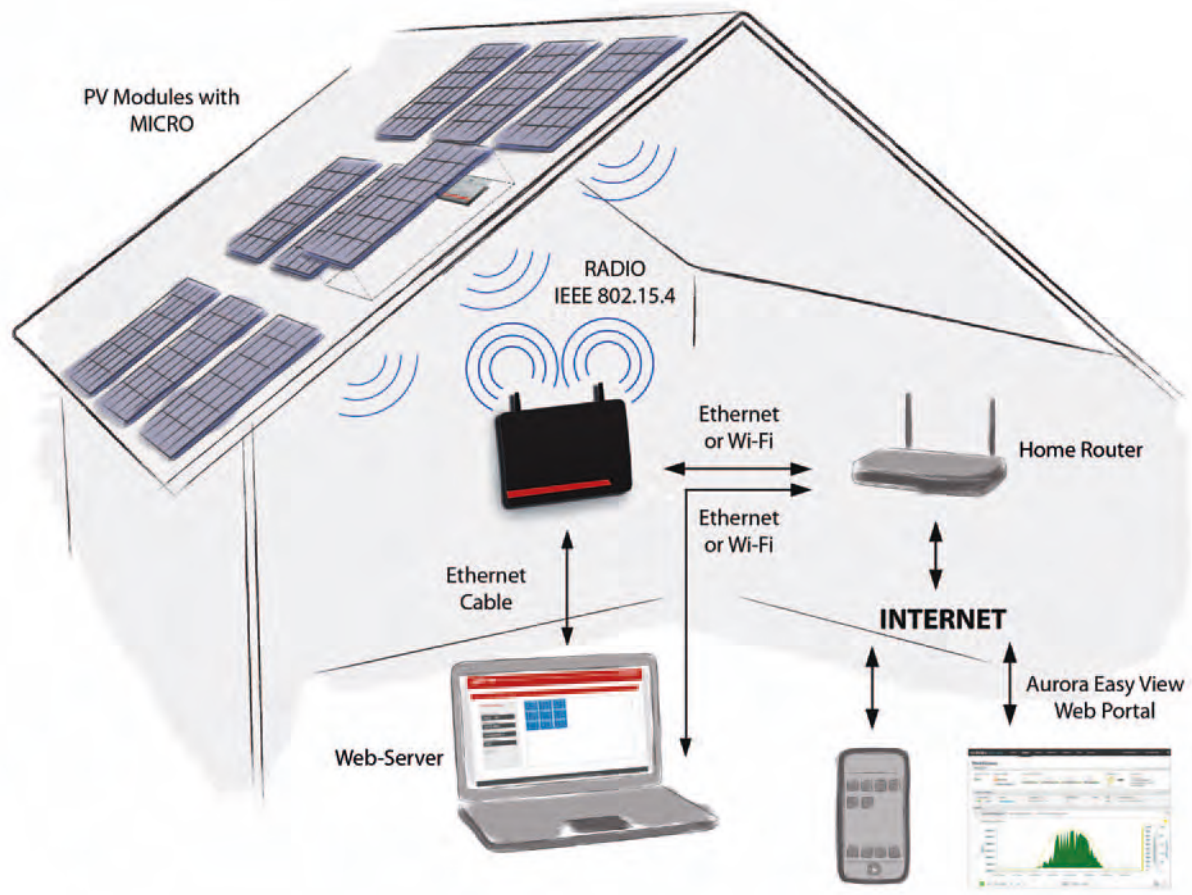
It uses wireless communication technology to monitor each MICRO inverter without additional wiring.

Through the web-based portal, you can view data on the daily and historical photovoltaic production.

Features

- Easy Setup to Configuration
- Data Sampling every 60 sec up to 4 sec for Real-Time Performance monitoring and Rapid Detection of Operational Failure
- Up to 30 MICRO inverters directly Monitored by a single CDD
- 24 hours 7 days Web-Based Monitoring
- CDD mesh network topology ensures redundancy in communications and the highest design flexibility

CDD CONNECTIVITY



CDD Connectivity

PARAMETER	CDD
Communication To Inverter	
Type	Radio IEEE 802.15.4
Sample Rate	1 min.
Max Distance (Free Space)	50 m (can be extended with Power-One repeater)
Max Number Of Devices	30
Communication To Modem/Pc	
Wireless Communication	Wi-Fi IEEE 802.11 / 2.4GHz / 10 Mbps
Wired Communication	Ethernet RJ45 10/100 Mbps
Connectivity	
Wired Ports	1x RJ45 Ethernet, 1x RS485, 1x Go-Go Relè
Compatibility	RS485, AURORA protocol
Features	
Operation	Integrated Web Server
Power Supply	
Type	External plug-in adapter
Adapter Input	100...240 Vac ; 50/60 Hz
Adapter Output	5 Vdc - 1 A
Power Consumption	typ. 2,5W/ max. 5W
Battery	coin battery, 3Vdc, replaceable
Environmental	
Ip Degree	IP20 / NEMA 1
Ambient Temperature	-20...+55 °C / -4...131°F
Relative Humidity	< 90% non condensing
Physical	
Dimensions (H/W/D)	150x180x25 mm / 5.9x7x1"
Weight	0.6 kg / 1.32lbs
Mounting	Wall mounting (screws provided)
Interface	
Display	16 Characters x 2 lines OLED
Display Language	IT-EN-ES-DE-FR
Led	Bicolor (red and green)
Safety	
Marking	CE, cCSAus, FCC
Safety And Emc Standard	EN 62311; EN 60950-1; EN 301489-1 V1.8.1; EN 301489-17 V2.1.1; EN 55022; EN 55024; FCC Part 15 Class B / Class C; RTTE 1999/5/EC
Accessories	
Antenna Extension cable	optional
Plug-in power adapter	Included

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

AC TRUNK CABLE SYSTEM

GENERAL SPECIFICATIONS OUTDOOR MODELS

Product Description

The AC-TRUNK cable is a 4 mm² cross section cable, homologated for outdoor applications, with preinstalled connectors for Power-One MICRO inverters.

Robust

- Designed to withstand even very intense operating conditions, they guarantee maximum mechanical, chemical and UV resistance.
- Once connected to the MICRO inverters or terminated using the specific water-tight caps, AC-TRUNK cable connectors guarantee IP68 environmental protection grade.

Flexible

- It is possible to select up to three models of AC-TRUNK cable, with different distances between one connector and the next, depending on the module type and their method of installation (horizontal or vertical).
- Thanks to the broad temperature range (-40°C...+90°C in fixed installations) and the high mechanical strength, there are no particular restrictions on the type of installation, thus guaranteeing high installation flexibility.

Simple

- Power-One MICRO inverters are connected directly to AC-TRUNK cable connectors without using special tools.
- The AC accessories complete the range, making it possible to create extension cables, terminations and connections to other cables, simplifying the installation of small and large systems alike.

Technical Specifications

TECHNICAL SPECIFICATIONS OF THE CABLE

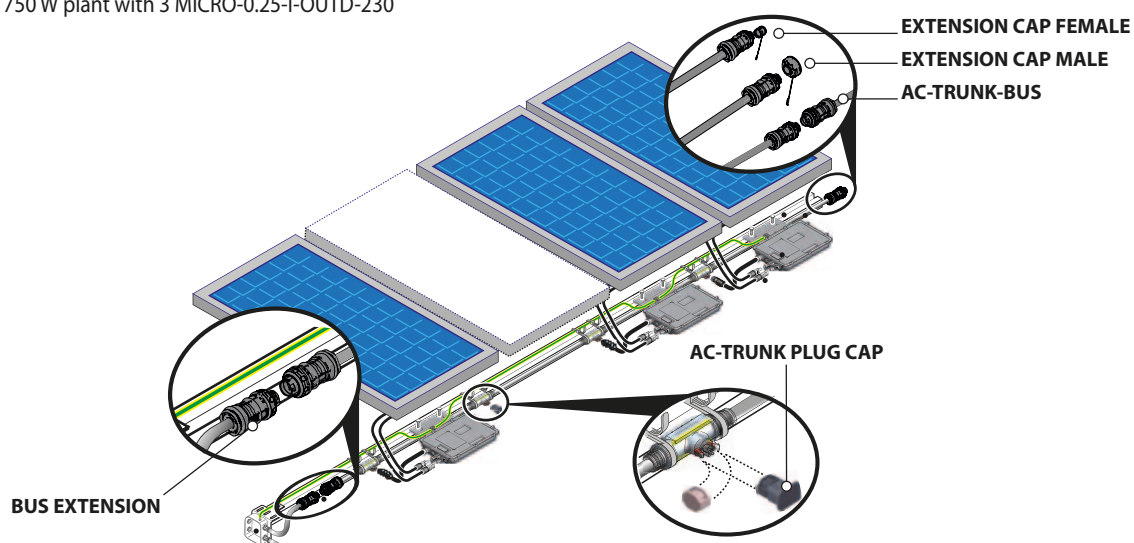
Number of Conductors and cross section	3G4 mm ²
Minimum radius of curvature for fixed installation	48 mm
Operating temperature (mobile installation)	-40°C...+90°C
Rated Voltage U0/U	450/750 V/V
Specific resistance of the insulation	>10 GOhm x cm
Test voltage	3000 V
External sheathing	Black PUR
Cable type	H07BQ-F

SPECIFICATIONS OF THE CONNECTORS

Operating temperature	-40°C...+90°C
Protection class	IP68
Connector rated current for MICRO inverter connection	5 A
Connector rated voltage for MICRO inverter connection	300V
Extension connector rated current	25 A
Extension connector rated voltage	660 V

EXAMPLE ASSEMBLY AND BILL OF MATERIAL

750 W plant with 3 MICRO-0.25-I-OUTD-230



Code	Quantity
MICRO-0.25-I	3
PVI-CDD	1
AC-TRUNK-BUS-1,05m-4PLUGS-3x4mm ²	1
AC-TRUNK-BUS-1,70m-4PLUGS-3x4mm ²	0
AC-TRUNK-BUS-2,05m-4PLUGS-3x4mm ²	0
AC-TRUNK PLUG CAP	1
AC-TRUNK UNLOCK TOOL	0
AC-TRUNK-BUS EXTENSION-MALE-3PINS	0
AC-TRUNK-BUS EXTENSION-FEMALE-3PINS + AC-BUS-EXTENSION UNLOCK TOOL	1
AC-TRUNK-EXTENSION CAP-MALE-3PINS	0
AC-TRUNK-EXTENSION CAP-FEMALE-3PINS	1

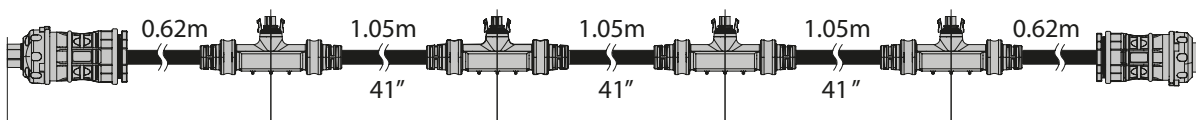
COMPONENT CODES

CODE

DESCRIPTION

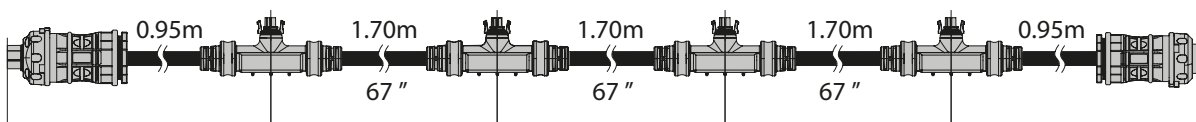
AC-TRUNK-BUS-1.05m-4plus-3x4mm²

AC cable 3 4 mm² conductors; distance between connectors 1.05m/41"



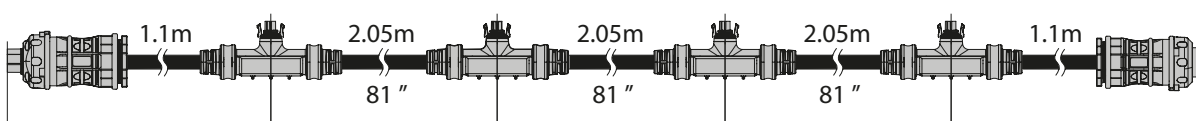
AC-TRUNK-BUS-1.70m-4plus-3x4mm²

AC cable 3 4 mm² conductors; distance between connectors 1.70m/67"



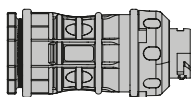
AC-TRUNK-BUS-2.05m-4plus-3x4mm²

AC cable 3 4 mm² conductors; distance between connectors 2.05m/81"



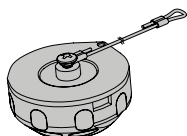
AC-TRUNK-BUS EXTENSION-male-3pins

Male connector for AC bus cable extension



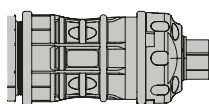
AC-TRUNK-EXTENSION CAP-male-3pins

Sealing cap for AC-TRUNK-BUS EXTENSION-male-3pin connectors



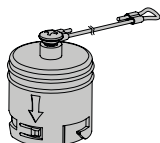
AC-TRUNK-BUS EXTENSION CAP-female-3pins

Female connector for AC bus cable extension



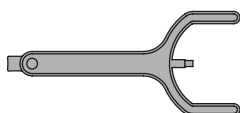
AC-TRUNK-EXTENSION CAP-female-3pins

Sealing cap for AC-TRUNK-BUS EXTENSION-female-3pins



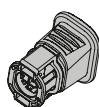
AC-BUS-EXTENSION UNLOCK TOOL
(included with AC-TRUNK-BUS EXTENSION-female-3pins)

Tool for unlocking AC cable EXTENSION connectors



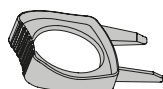
AC-TRUNK PLUG CAP

Sealing cap for AC cable connectors (female)



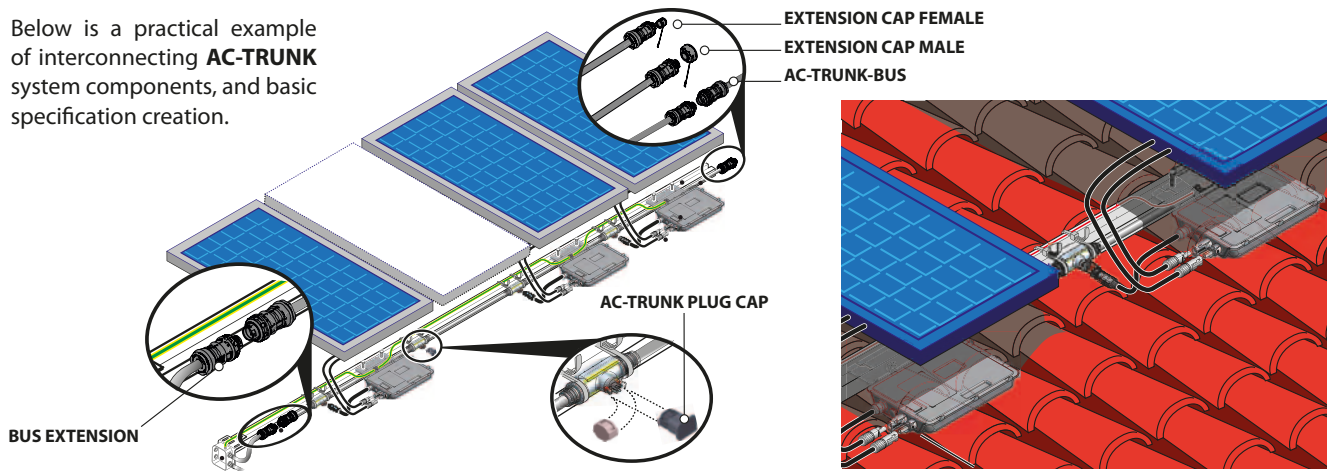
AC-TRUNK UNLOCK TOOL

MICRO inverter and PLUG CAP connector unlocking tool



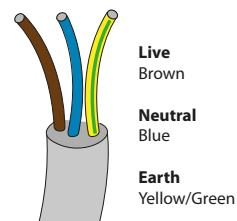
CONNECTIONS, EXAMPLE ASSEMBLY AND BASIC SPECIFICATION CREATION

Below is a practical example of interconnecting **AC-TRUNK** system components, and basic specification creation.

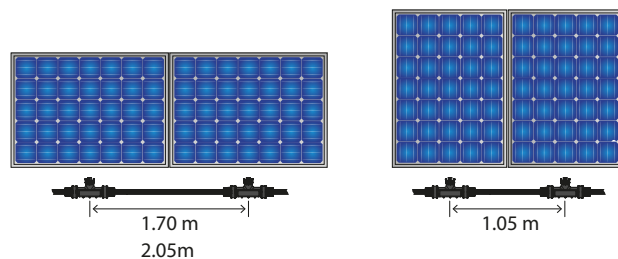


PRACTICAL SUGGESTIONS

The Power-One **AC-TRUNK-BUS** cable has 3 conductors with different colours identifying their function.

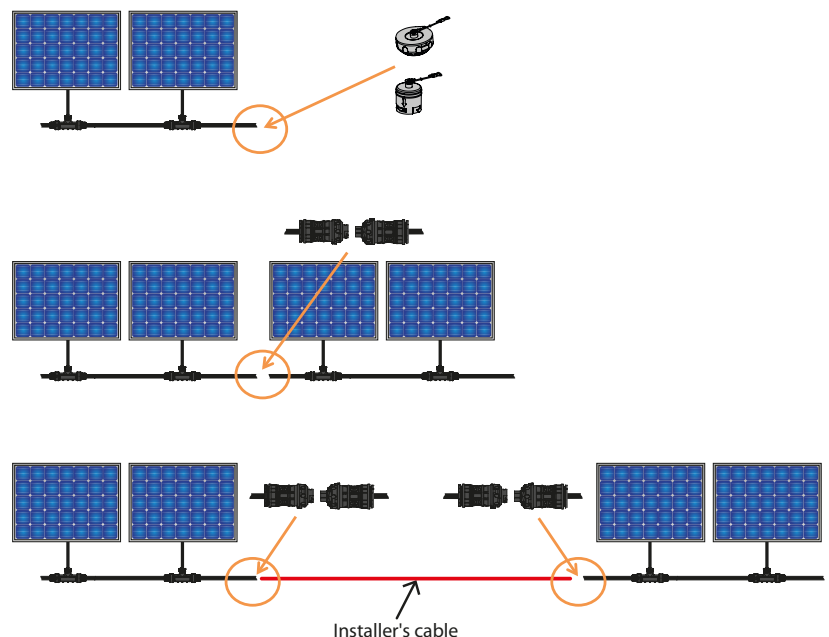


The installer has the option of choosing between several **AC-TRUNK-BUS** cables, with varying lengths between the connectors, depending on the size and positioning of the panels (horizontal or vertical).



Each **AC-TRUNK-BUS** cable has connectors at the ends which can be:

- Terminated using specific **EXTENSION CAPS**.
- Connected to other Power-One **AC-TRUNK-BUS** units.
- Used to create extensions thanks to the **AC-TRUNK-BUS EXTENSION** counterparts:



UNO-2.0-I-OUTD UNO-2.5-I-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



The UNO-2.0-I and UNO-2.5-I are the latest single phase string inverters in the Aurora range. A new-look inverter but packed with Power-One's proven high performing technology. The new look inverter has new features including a special built-in heat sink compartment and front panel display system.

The smallest of Power-One's outdoor range, these new products are the right size for the average rooftop installation. This rugged outdoor inverter has been designed as a completely sealed unit to withstand the harshest environmental conditions.

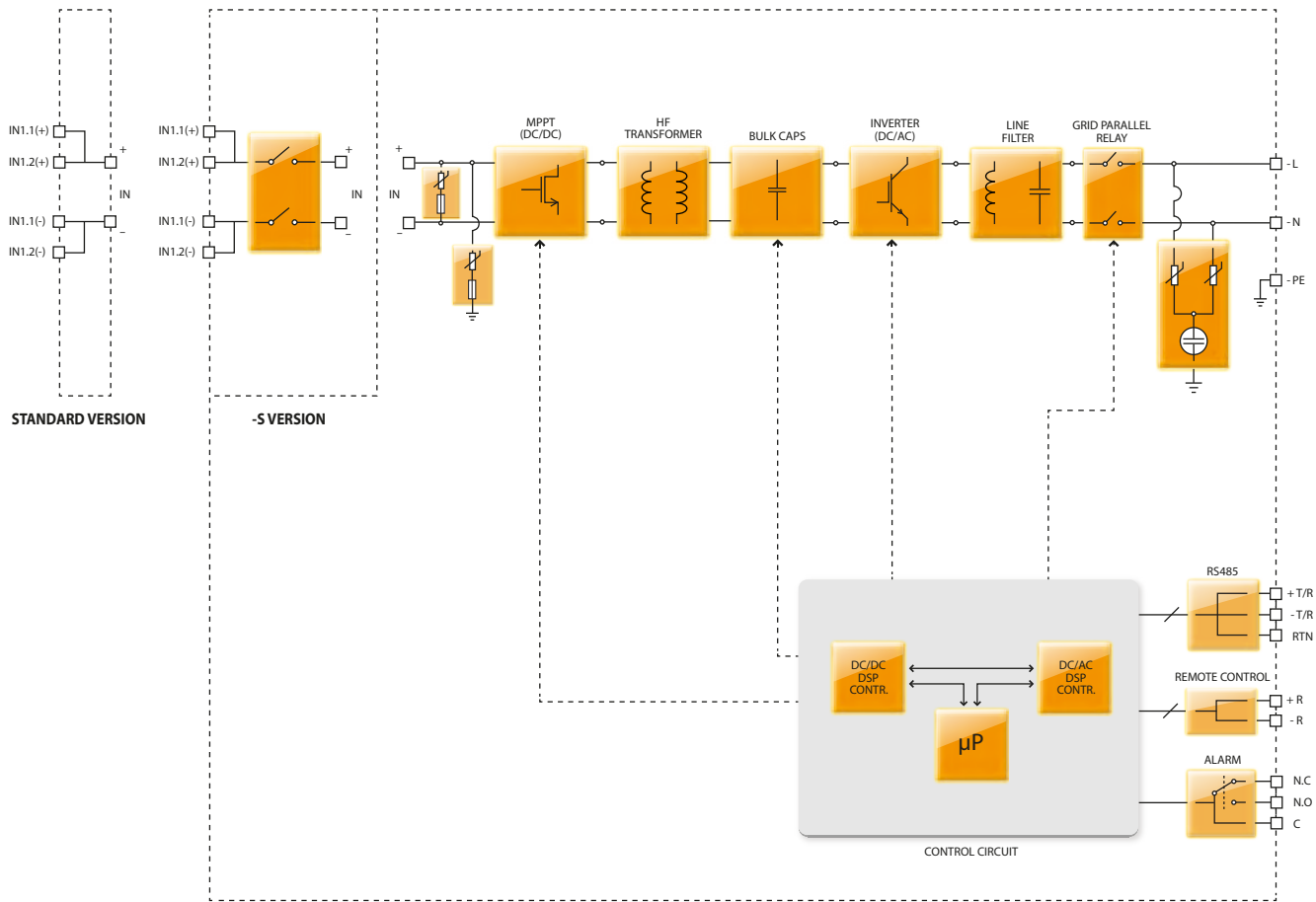
The high speed MPPT offers real-time power tracking and improved energy harvesting.

Despite the isolated operation, the UNO-2.0-I and UNO-2.5-I feature an efficiency of 96.3%. The wide input voltage range makes the inverter suitable to low power installations with reduced string size.

Features

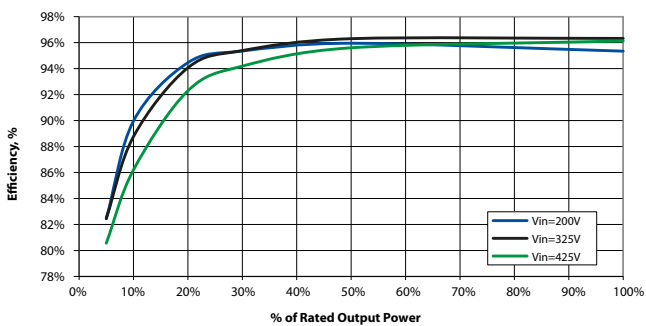
- Single phase output
- Each inverter is set on specific grid codes which can be selected in the field
- Wide input range
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP

BLOCK DIAGRAM OF UNO-2.0/2.5-I-OUTD

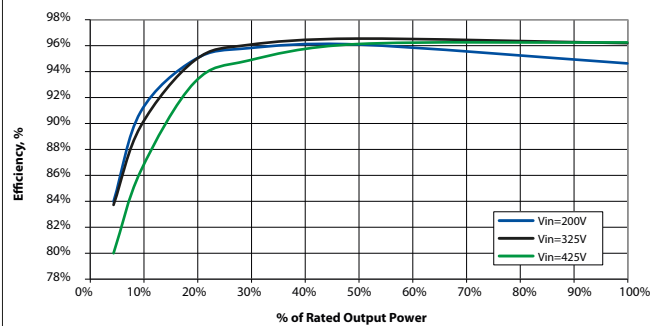


Block Diagram and Efficiency Curves

UNO-2.0-I-OUTD



UNO-2.5-I-OUTD



PARAMETER	UNO-2.0-I-OUTD	UNO-2.5-I-OUTD
Input Side		
Absolute Maximum DC Input Voltage (V _{max,abs})	520 V	
Start-up DC Input Voltage (V _{start})	200 V (adj. 120...350 V)	
Operating DC Input Voltage Range (V _{dcmín...V_{dcmax}})	0.7 x V _{start} ...520 V	
Rated DC Input Power (P _{dcr})	2100 W	2600 W
Number of Independent MPPT	1	1
Maximum DC Input Power for each MPPT (P _{MPPTmax})	2300 W Linear Derating From MAX to Null [470V≤V _{MPPT} ≤520V]	2900 W Linear Derating From MAX to Null [470V≤V _{MPPT} ≤520V]
MPPT Input DC Voltage Range (V _{MPPTmin} ... V _{MPPTmax}) at P _{acr}	170...470 V	205...470 V
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	not applicable	
Maximum DC Input Current (I _{dcmáx}) / for each MPPT (I _{MPPTmax})	12.5 A / 12.5 A	12.8 A / 12.8 A
Maximum Input Short Circuit Current for each MPPT	15.0 A	
Number of DC Inputs Pairs for each MPPT	2	
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)	16 A / 600 V	
Output Side		
AC Grid Connection Type	Single phase	
Rated AC Power (P _{acr} @cosφ=1)	2000 W	2500 W
Maximum AC Output Power (P _{acmax} @cosφ=1)	2200 W ⁽⁴⁾	2750 W ⁽⁵⁾
Rated AC Grid Voltage (V _{acr})	230 V	
AC Voltage Range	180...264 V ⁽¹⁾	
Maximum AC Output Current (I _{ac,max})	10.0 A	12.0 A
Contributory fault current	16.0 A	
Rated Output Frequency (f _r)	50 Hz / 60 Hz	
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz / 57...63 Hz ⁽²⁾	
Nominal Power Factor and adjustable range	> 0.990 ⁽⁸⁾	
Total Current Harmonic Distortion	< 2%	
AC Connection Type	Screw terminal block	
Output Protection		
Anti-Islanding Protection	According to local standard	
Maximum AC Overcurrent Protection	15.0 A	
Output Overvoltage Protection - Varistor	2 (L - N / L - PE)	
Operating Performance		
Maximum Efficiency (η _{max})	96.3%	
Weighted Efficiency (EURO/CEC)	95.1% / -	95.4% / -
Feed In Power Threshold	24.0 W	
Stand-by Consumption	< 8.0 W ⁽³⁾	
Communication		
Wired Local Monitoring	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)	
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA LOGGER (opt.)	
Wireless Local Monitoring	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)	
User Interface	Graphic display	
Environmental		
Ambient Temperature Range	-25...+60°C (-13...+ 140°F) with derating above 45°C (113°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)	518mm x 367mm x 161mm / 20.4" x 14.4" x 6.3"	
Weight	< 17 kg / 37.4 lb	
Mounting System	Wall bracket	
Safety		
Isolation Level	HF transformer	
Marking	CE	
Safety and EMC Standard	EN 50178, EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3	
Grid Standard	CEI 0-21 ⁽⁶⁾ , VDE 0126-1-1, VDE-AR-N 4105 ⁽⁷⁾ , G83/1, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149	
Available Products Variants		
Standard	UNO-2.0-I-OUTD	UNO-2.5-I-OUTD
With DC Switch	UNO-2.0-I-OUTD-S	UNO-2.5-I-OUTD-S

- The AC voltage range may vary depending on specific country grid standard
- The Frequency range may vary depending on specific country grid standard
- Night time consumption < 0.6W
- Limited to 2000 W for Germany
- Limited to 2500 W for Germany
- Limited to plant power ≤ 3kW
- Limited to plant power ≤ 3.68kVA
- The unit has not reactive power capability

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

PVI-3.0-TL-OUTD PVI-3.6-TL-OUTD PVI-4.2-TL-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



The most common residential inverter is the ideal size for an average-sized family home. This family of single-phase string inverter complements the typical number of rooftop solar panels, allowing home-owners to get the most efficient energy harvesting for the size of the property. This rugged outdoor inverter has been designed as a completely sealed unit to withstand the harshest environmental conditions.

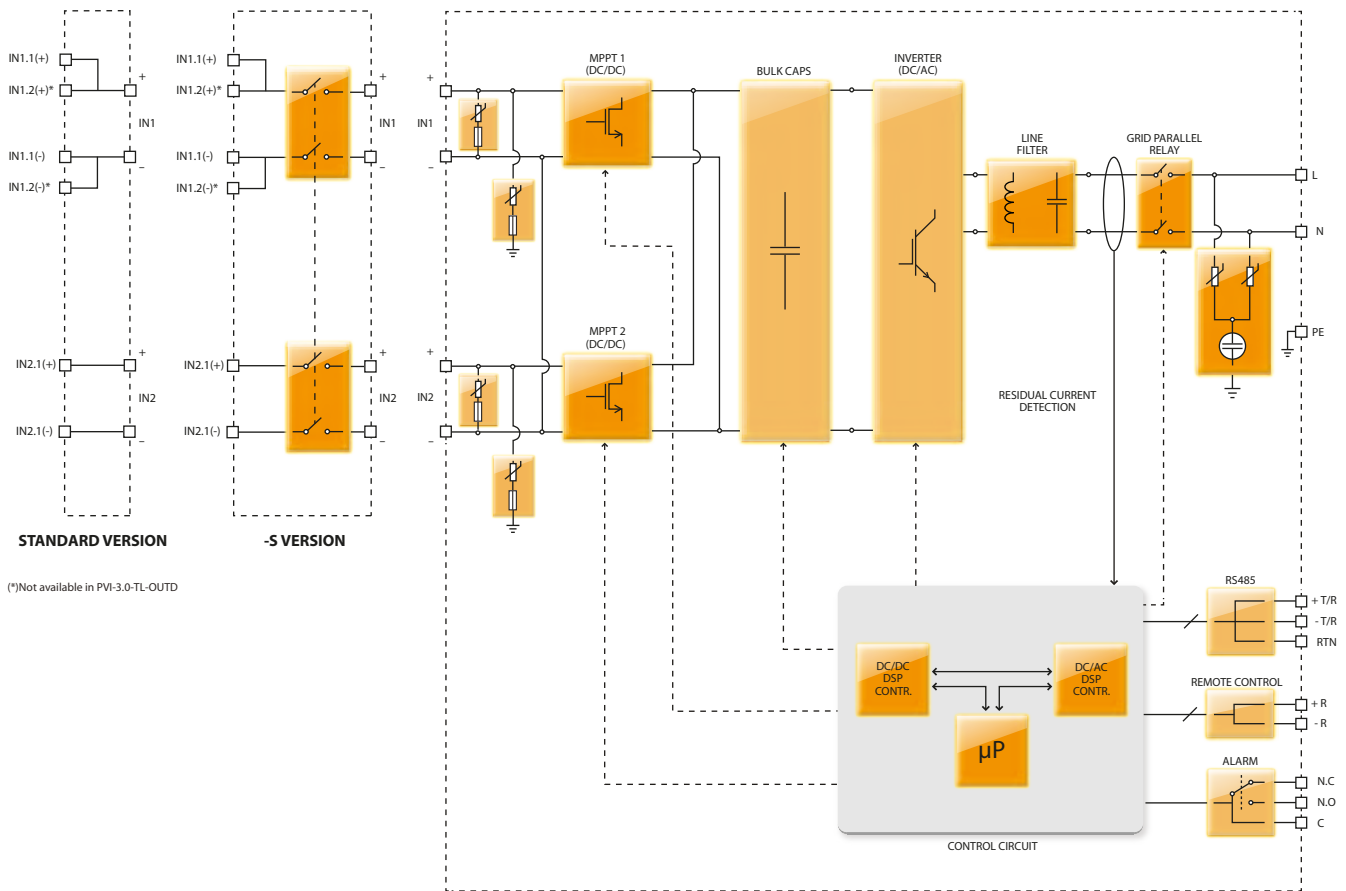
One of the key benefits of the Uno family of single-phase inverters is the dual input section to process two strings with independent MPPT especially useful for rooftop installations with two different orientations (ie East and West). The high speed MPPT offers real-time power tracking and improved energy harvesting.

The transformerless operation gives the highest efficiency of up to 96.8%. The wide input voltage range makes the inverter suitable to low power installations with reduced string size.

Features

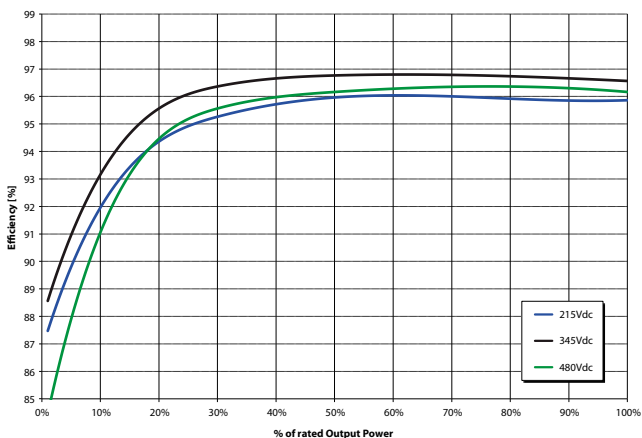
- Single phase output
- Each inverter is set on specific grid codes which can be selected in the field
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- Integrated DC disconnect switch in compliance with international Standards (-S Version)
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP

BLOCK DIAGRAM OF PVI-3.0/3.6/4.2-TL-OUTD

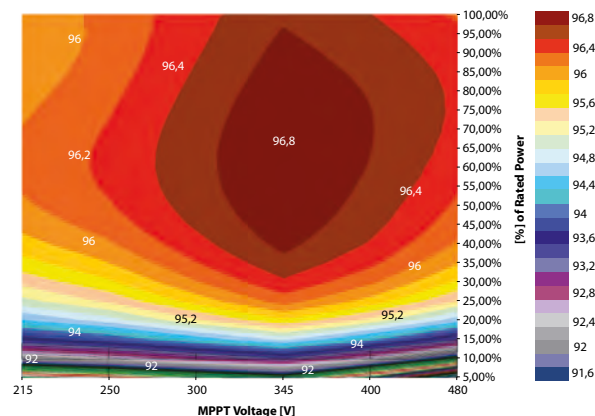


Block Diagram and Efficiency Curves

PVI-4.2-TL-OUTD



PVI-4.2-TL-OUTD



PARAMETER	PVI-3.0-TL-OUTD		PVI-3.6-TL-OUTD	PVI-4.2-TL-OUTD
Input Side				
Absolute Maximum DC Input Voltage (V _{max,abs})	600 V			
Start-up DC Input Voltage (V _{start})	200 V (adj. 120...350 V)			
Operating DC Input Voltage Range (V _{dcmi} ...V _{dcmx})	0.7 x V _{start} ...580 V			
Rated DC Input Power (P _{dcr})	3120 W	3750 W	4375 W	
Number of Independent MPPT	2			
Maximum DC Input Power for each MPPT (P _{MPPTmax})	2000 W	3000 W	3000 W	
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	160...530 V	120...530 V	140...530 V	
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [530V≤V _{MPPT} ≤580V]			
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]	3000 W [190V≤V _{MPPT} ≤530V] the other channel: P _{dcr} =3000W [90V≤V _{MPPT} ≤530V]	
Maximum DC Input Current (I _{dcmx}) / for each MPPT (I _{MPPTmax})	20.0 A / 10.0 A	32.0 A / 16.0 A	32.0 A / 16.0 A	
Maximum Input Short Circuit Current for each MPPT	12.5 A	20.0 A	20.0 A	
Number of DC Inputs Pairs for each MPPT	1	1	2 for MPPT1 and 1 for MPPT2	
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 / 600 V			
Output Side				
AC Grid Connection Type	Single phase			
Rated AC Power (P _{acr} @cosφ=1)	3000 W	3600 W	4200 W	
Maximum AC Output Power (P _{acmax} @cosφ=1)	3300 W ⁽⁴⁾	4000 W ⁽⁵⁾	4600 W ⁽⁶⁾	
Maximum Apparent Power (S _{max})	3330 VA	4000 VA	4670 VA	
Rated AC Grid Voltage (V _{acr})	230 V			
AC Voltage Range	180...264 V ⁽¹⁾			
Maximum AC Output Current (I _{ac,max})	14.5 A	17.2 A ⁽²⁾	20.0 A	
Contributory fault current	16.0 A	19.0 A	22.0 A	
Rated Output Frequency (f _i)	50 Hz / 60 Hz			
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz / 57...63 Hz ⁽³⁾			
Nominal Power Factor and adjustable range	> 0.995, adj. ± 0.9 with P _{acr} =3.0 kW	> 0.995, adj. ± 0.9 with P _{acr} =3.6 kW	> 0.995, adj. ± 0.9 with P _{acr} =4.2 kW	
Total Current Harmonic Distortion	< 3.5 %			
AC Connection Type	Screw terminal block			
Output Protection				
Anti-Islanding Protection	According to local standard			
Maximum AC Overcurrent Protection	16.0 A	19.0 A	22.0 A	
Output Overvoltage Protection - Varistor	2 (L - N / L - PE)			
Operating Performance				
Maximum Efficiency (η _{max})	96.8%			
Weighted Efficiency (EURO/CEC)	96.0% / -			
Feed In Power Threshold	10.0 W			
Stand-by Consumption	< 8.0 W			
Communication				
Wired Local Monitoring	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)			
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA LOGGER (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 50°C/122°F	-25...+60°C /-13...140°F with derating above 55°C/131°F	-25...+60°C /-13...140°F with derating above 50°C/122°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)	618mm x 325mm x 222mm / 24.3" x 12.8" x 8.7"			
Weight	17.5 kg / 38.5 lb			
Mounting System	Wall bracket			
Safety				
Isolation Level	Transformerless			
Marking	CE			
Safety and EMC Standard	EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-1, EN61000-6-3, EN61000-3-2, EN61000-3-3	EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-1, EN61000-6-3, EN61000-3-11, EN61000-3-12	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, VDE-AR-N 4105, G83/1, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149	CEI 0-21, VDE 0126-1-1, VDE-AR-N 4105, G83/1, G59/2, EN 50438 (not for all national appen- dices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149	CEI 0-21, VDE 0126-1-1, VDE-AR-N 4105, G59/2, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149	
Available Products Variants				
Standard	PVI-3.0-TL-OUTD	PVI-3.6-TL-OUTD	PVI-4.2-TL-OUTD	
With DC Switch	PVI-3.0-TL-OUTD-S	PVI-3.6-TL-OUTD-S	PVI-4.2-TL-OUTD-S	

1. The AC voltage range may vary depending on specific country grid standard

2. For UK G83/1 setting, maximum output current limited to 16A up to a maximum output power of 3.68kW.

3. The Frequency range may vary depending on specific country grid standard

4. Limited to 3000 W for Germany

5. Limited to 3600 W for Germany

6. Limited to 4200 W for Germany

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

PVI-3.8-I-OUTD PVI-4.6-I-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



This isolated inverter is optimized for use in residential applications requiring PV array grounding, such as some thin-film modules. This inverter has also been designed to serve all countries and regions with specific field-configurable set-ups available for all major country grid codes and display languages.

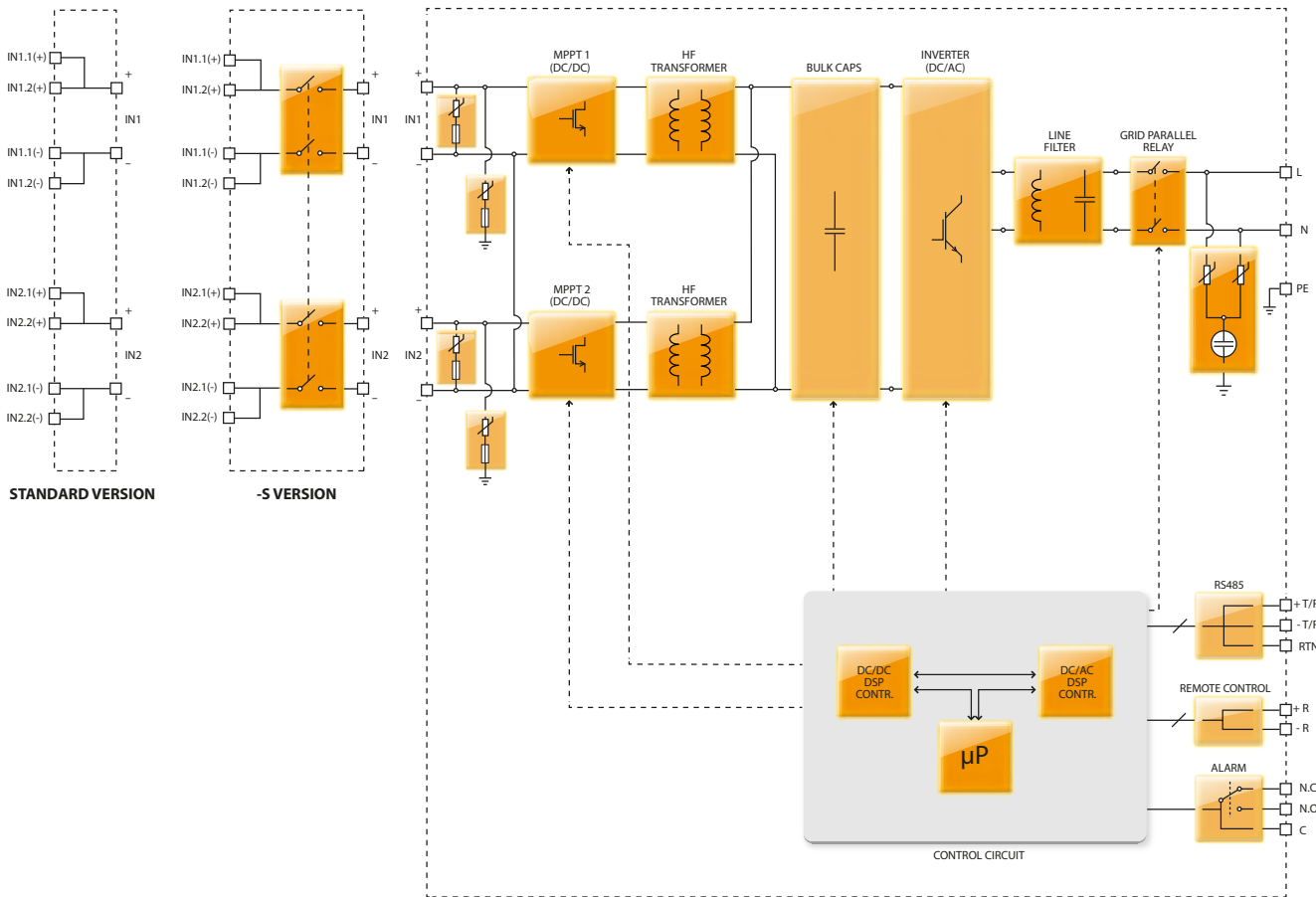
The 3.8 and 4.6kW isolated inverters have all the usual Aurora benefits including dual input section to process two strings with independent MPPT, high speed and precise MPPT algorithm for real-time power tracking and energy harvesting, as well as regular high performance efficiencies of up to 96.8%. The wide input voltage range makes the inverter suitable to low power installations with reduced string size.

Its high frequency isolated topology allows this unit to be lightweight and compact in size to help with transportation and installation. This rugged outdoor inverter has been designed as a completely sealed unit to withstand the harshest environmental conditions.

Features

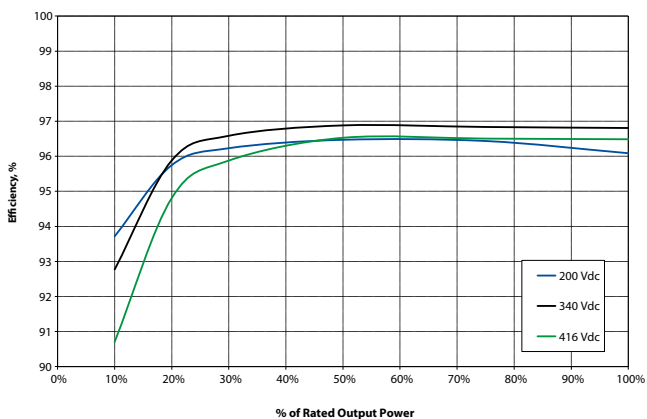
- Single phase output
- Each inverter is set on specific grid codes which can be selected in the field
- Night Wake up button to access energy harvesting data and error log
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- High speed and precise 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 across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP

BLOCK DIAGRAM OF PVI-3.8/4.6-I-OUTD

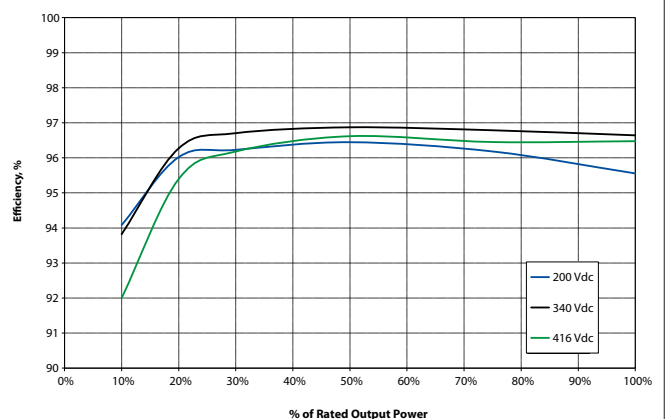


Block Diagram and Efficiency Curves

PVI-3.8-I-OUTD



PVI-4.6-I-OUTD



PARAMETER	PVI-3.8-I-OUTD	PVI-4.6-I-OUTD
Input Side		
Absolute Maximum DC Input Voltage (V _{max,abs})	520 V	
Start-up DC Input Voltage (V _{start})	200 V (adj. 120...350 V)	
Operating DC Input Voltage Range (V _{dcmín...V_{dcmax}})	0.7 x V _{start...520 V}	
Rated DC Input Power (P _{dcr})	4000 W	4800 W
Number of Independent MPPT	2 ⁽⁴⁾	
Maximum DC Input Power for each MPPT (P _{MPPTmax})	3000 W	
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	160...470 V	180...470 V
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [470V≤V _{MPPT} ≤520V]	
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	3000 W [210V≤V _{MPPT} ≤470V] the other channel: P _{dcr} -3000W [90V≤V _{MPPT} ≤470V]	3000 W [210V≤V _{MPPT} ≤470V] the other channel: P _{dcr} -3000W [130V≤V _{MPPT} ≤470V]
Maximum DC Input Current (I _{dcmax}) / for each MPPT (I _{MPPTmax})	25.0 A / 12.5 A	28.0 A / 14.0 A
Maximum Input Short Circuit Current for each MPPT	22.0 A	
Number of DC Inputs Pairs for each MPPT	2	
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 / 600 V	
Output Side		
AC Grid Connection Type	Single phase	
Rated AC Power (P _{acr} @cosφ=1)	3800 W	4600 W
Maximum AC Output Power (P _{acmax} @cosφ=1)	4200 W ⁽⁵⁾	5000 W ⁽⁶⁾
Maximum Apparent Power (S _{max})	4220 VA	5110 VA
Rated AC Grid Voltage (V _{acr})	230 V	
AC Voltage Range	180...264 V ⁽¹⁾	
Maximum AC Output Current (I _{ac,max})	18.2 A ⁽²⁾	22.5 A
Contributory fault current	25.0 A	32.0 A
Rated Output Frequency (f _i)	50 Hz / 60 Hz	
Output Frequency Range (f _{min...f_{max}})	47...53 Hz / 57...63 Hz ⁽³⁾	
Nominal Power Factor and adjustable range	> 0.995, adj. ± 0.9 with P _{acr} =3.8 kW	> 0.995, adj. ± 0.9 with P _{acr} =4.6 kW
Total Current Harmonic Distortion	< 2%	
AC Connection Type	Screw terminal block	
Output Protection		
Anti-Islanding Protection	According to local standard	
Maximum AC Overcurrent Protection	20.0 A	25.0 A
Output Overvoltage Protection - Varistor	2 (L - N / L - PE)	
Operating Performance		
Maximum Efficiency (η _{max})	96.8%	
Weighted Efficiency (EURO/CEC)	96.5% / -	
Feed In Power Threshold	24.0 W	
Stand-by Consumption	< 8.0 W	
Communication		
Wired Local Monitoring	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)	
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA LOGGER (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)	-25...+60°C (-13...+ 140°F) with derating above 50°C (122°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)	712mm x 325mm x 222mm / 28.0" x 12.8" x 8.7"	
Weight	< 24.0 kg / 53.0 lb	
Mounting System	Wall bracket	
Safety		
Isolation Level	HF Transformer	
Marking	CE	
Safety and EMC Standard	EN 50178, EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-6	EN 50178, EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-15
Grid Standard	CEI 0-21, VDE 0126-1-1, VDE-AR-N 4105, G83/1, G59/2, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149	CEI 0-21, VDE 0126-1-1, VDE-AR-N 4105, G59/2, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149
Available Products Variants		
Standard	PVI-3.8-I-OUTD	PVI-4.6-I-OUTD
With DC Switch	PVI-3.8-I-OUTD-S	PVI-4.6-I-OUTD-S

1. The AC voltage range may vary depending on specific country grid standard

2. For UK G83/1 setting, maximum output current limited to 16A.

3. The Frequency range may vary depending on specific country grid standard

4. Independent MPPT just with negative ground

5. Limited to 3800 W for Germany

6. Limited to 4600 W for Germany

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

PVI-5000-TL-OUTD PVI-6000-TL-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



Designed for residential and small commercial PV installations, this inverter fills a specific niche in the Aurora product line to cater for those installations producing between 5kW and 20kW.

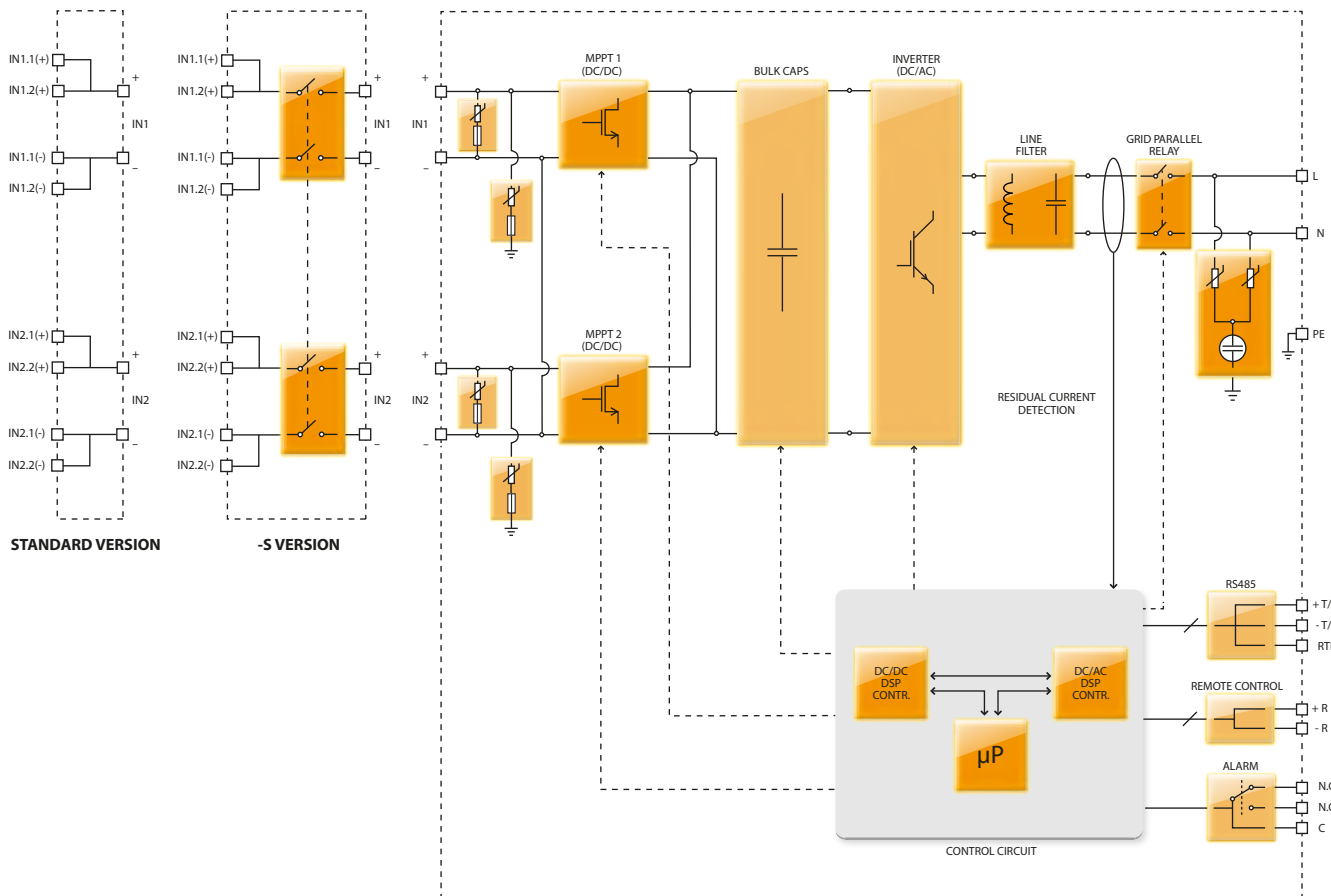
This inverter has all the usual Aurora benefits, including dual input section to process two strings with independent MPPT, high speed and precise MPPT algorithm for real-time power tracking and energy harvesting, as well as transformerless operation for high performance efficiencies of up to 97.0%.

The wide input voltage range makes the inverter suitable to low power installations with reduced string size. This outdoor inverter has been designed as a completely sealed unit to withstand the harshest environmental conditions.

Features

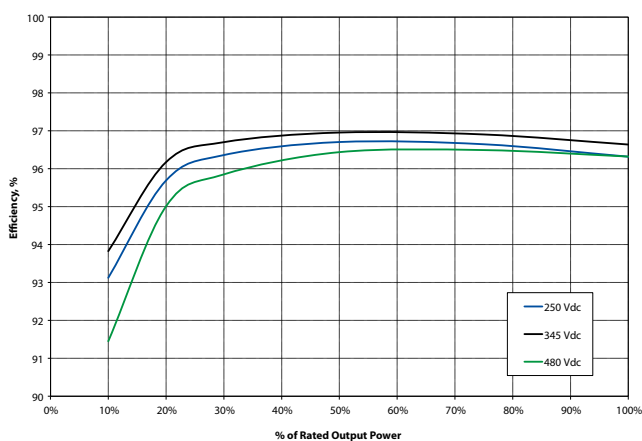
- Single phase output
- Each inverter is set on specific grid codes which can be selected in the field
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP

BLOCK DIAGRAM OF PVI-5000/6000-TL-OUTD

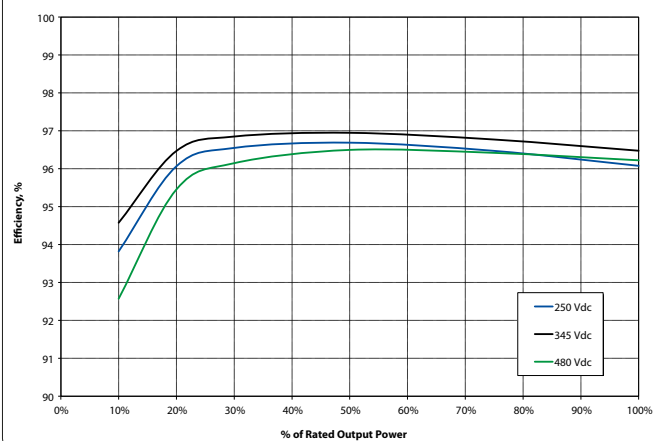


Block Diagram and Efficiency Curves

PVI-5000-TL-OUTD



PVI-6000-TL-OUTD



PARAMETER	PVI-5000-TL-OUTD	PVI-6000-TL-OUTD
Input Side		
Absolute Maximum DC Input Voltage (V _{max,abs})	600 V	
Start-up DC Input Voltage (V _{start})	200 V (adj. 120...350 V)	
Operating DC Input Voltage Range (V _{dcmín} ...V _{dcmáx})	0.7 x V _{start} ...580 V	
Rated DC Input Power (P _{dcr})	5150 W	6200 W
Number of Independent MPPT	2	
Maximum DC Input Power for each MPPT (P _{MPPTmax})	4000 W	
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	150...530 V	180...530 V
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [530V≤V _{MPPT} ≤580V]	
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	4000 W [220V≤V _{MPPT} ≤530V] the other channel: P _{dcr} =4000W [90V≤V _{MPPT} ≤530V]	4000 W [220V≤V _{MPPT} ≤530V] the other channel: P _{dcr} =4000W [120V≤V _{MPPT} ≤530V]
Maximum DC Input Current (I _{dcmáx}) / for each MPPT (I _{MPPTmax})	36.0 A / 18.0 A	
Maximum Input Short Circuit Current for each MPPT	22.0 A	
Number of DC Inputs Pairs for each MPPT	2	
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 / 600 V	
Output Side		
AC Grid Connection Type	Single phase	
Rated AC Power (P _{acr} @cosφ=1)	5000 W	6000 W
Maximum AC Output Power (P _{acmax} @cosφ=1)	5000 W	6200 W
Maximum Apparent Power (S _{max})	5560 VA	6670 VA
Rated AC Grid Voltage (V _{acr})	230 V	
AC Voltage Range	180...264 V ⁽¹⁾	
Maximum AC Output Current (I _{ac,max})	25.0 A	30.0 A
Contributory fault current	32.0 A	40.0 A
Rated Output Frequency (f _r)	50 Hz / 60 Hz	
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz / 57...63 Hz ⁽²⁾	
Nominal Power Factor and adjustable range	> 0.995, adj. ± 0.9 with P _{acr} =5.0 kW	> 0.995, adj. ± 0.9 with P _{acr} =6.0 kW
Total Current Harmonic Distortion	< 3.5%	
AC Connection Type	Terminal block	
Output Protection		
Anti-Islanding Protection	According to local standard	
Maximum AC Overcurrent Protection	32.0 A	40.0 A
Output Overvoltage Protection - Varistor	2 (L - N / L - PE)	
Operating Performance		
Maximum Efficiency (η _{max})	97.0%	
Weighted Efficiency (EURO/CEC)	96.4% / -	
Feed In Power Threshold	10.0 W	
Stand-by Consumption	< 8.0 W	
Communication		
Wired Local Monitoring	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)	
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA LOGGER (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)	-25...+60°C (-13...+ 140°F) with derating above 50°C (122°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)	810mm x 325mm x 222mm / 31.9" x 12.8" x 8.7"	
Weight	< 26.0 kg / 57.3 lb	
Mounting System	Wall bracket	
Safety		
Isolation Level	Transformerless	
Marking	CE	
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, G59/2, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149	
Available Products Variants		
Standard	PVI-5000-TL-OUTD	PVI-6000-TL-OUTD
With DC Switch	PVI-5000-TL-OUTD-S	PVI-6000-TL-OUTD-S

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

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

TRIO-5.8-TL-OUTD TRIO-7.5-TL-OUTD TRIO-8.5-TL-OUTD

GENERAL SPECIFICATIONS
OUTDOOR MODELS



NEW



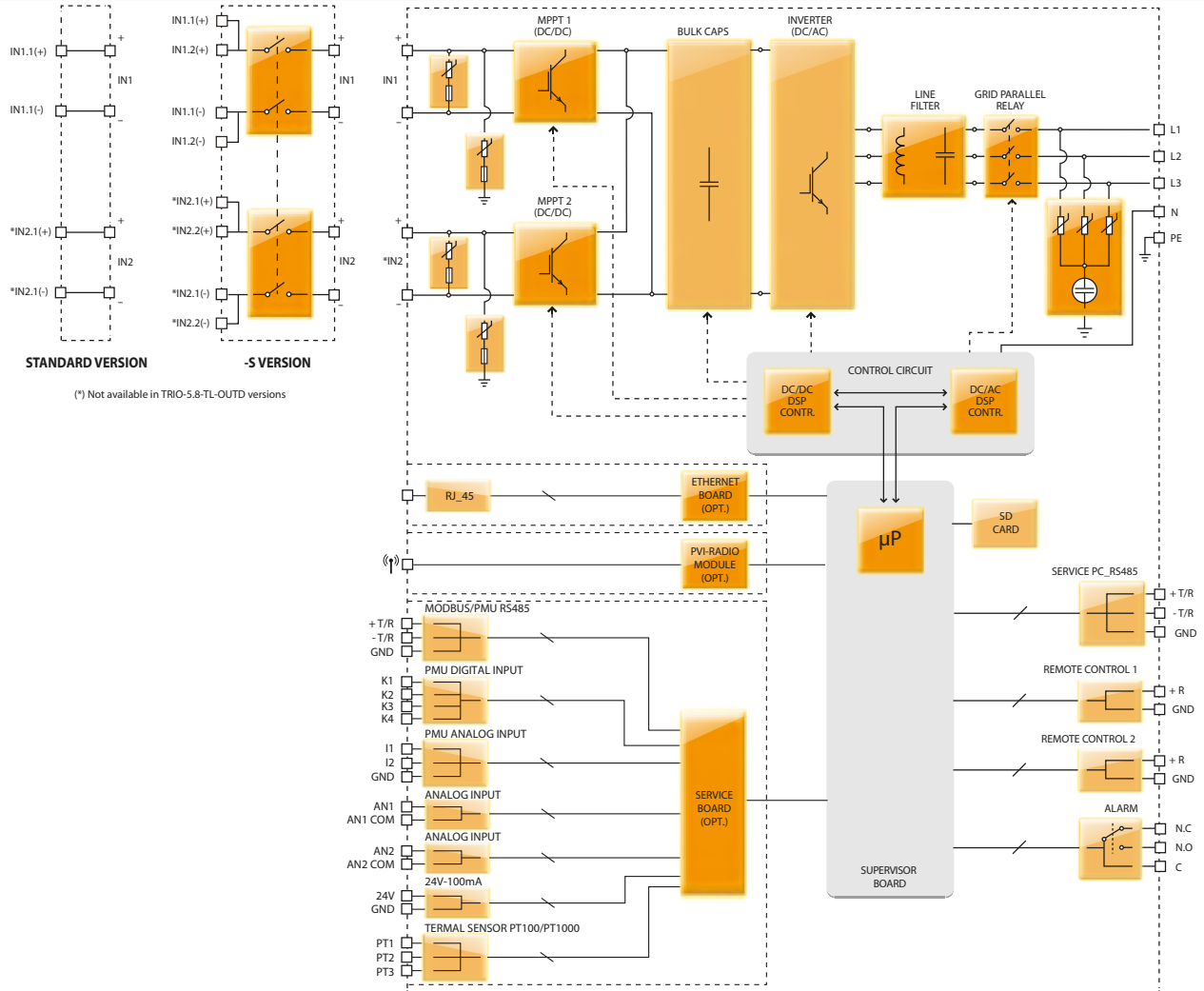
This new generation three-phase inverter for domestic installations, is available in three power ratings: 5.8, 7.5 and 8.5 kW. The compact, transformerless TRIOs are the latest products in the Aurora family for their performance, ease of use and installation, monitoring and control. The topology of the TRIO 20.0/27.6 inverters has been redesigned to ensure that the TRIO 5.8/7.5/8.5 models also enjoy high conversion efficiency across a wide range of input voltages, and the double MPPT gives maximum installation flexibility for an optimal energy production (TRIO 7.5/8.5 models). The new-generation inverters can integrate power control, monitoring functionalities, and environmental sensor inputs, all without requiring external components. A compact expansion card gives access to the Ethernet datalogger, which allows parameters to be monitored both locally (with the integrated webserver) or remotely (via the Aurora Vision portal), via with a LAN connection.

The outer cover with its natural cooling mechanism qualifies at IP65 environmental protection level for external use. It provides for maximum reliability and ease of installation, with a sliding front panel giving access to the connection and configuration area without requiring the complete removal of the cover.

Features

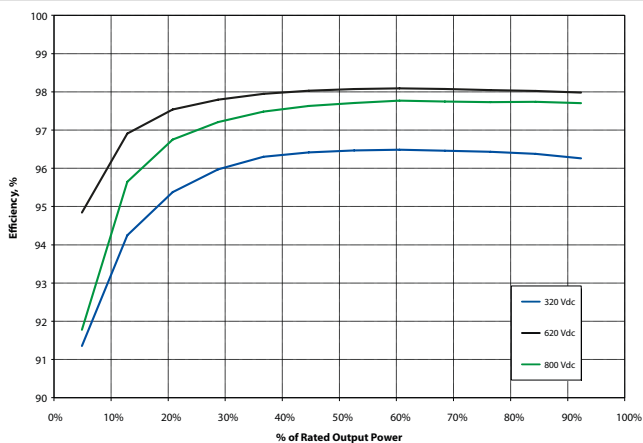
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- Two independent MPPT channels for TRIO-7.5/8.5 allows optimal energy harvesting from two sub- arrays oriented in different directions (one MPPT channel for TRIO-5.8)
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- Wide input voltage range
- Datalogger and smart grid functionalities integrated on expansion cards:
 - PMU expansion card option, with external sensors inputs for monitoring environmental conditions and additional RS-485 for Modbus protocol
 - Ethernet expansion card option with integrated Web Server and remote monitoring capability via Web Portal (Modbus/TCP supported)
- Remote inverter upgrade
- Reactive power management
- Availability of auxiliary DC output voltage (24V, 100mA)
- Natural convection cooling for maximum reliability
- DC switch version option (-S)
- Outdoor enclosure for unrestricted use under any environmental conditions (IP65)
- Sliding cover for the easiest installation and maintenance

BLOCK DIAGRAM OF TRIO-5.8/7.5/8.5-TL-OUTD

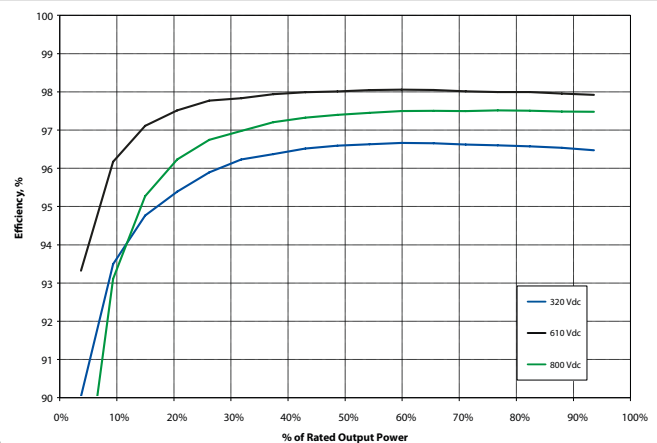


Block Diagram and Efficiency Curves

TRIO-5.8-TL-OUTD*



TRIO-8.5-TL-OUTD*



* Preliminary

PARAMETER	TRIO-5.8-TL-OUTD	TRIO-7.5-TL-OUTD	TRIO-8.5-TL-OUTD
Input Side			
Absolute Maximum DC Input Voltage (V _{max,abs})	1000 V		
Start-up DC Input Voltage (V _{start})	350 V (adj. 200...500 V)		
Operating DC Input Voltage Range (V _{dmin} ...V _{dmax})	0.7 x V _{start} ...950 V		
Rated DC Input Power (P _{dcr})	5950 W	7650 W	8700 W
Number of Independent MPPT	1	2	2
Maximum DC Input Power for each MPPT (P _{MPPTmax})	6050 W Linear Derating From MAX to Null [800V≤V _{MPPT} ≤950V]	4800 W	4800 W
MPPT Input DC Voltage Range (V _{MPPTmin} ... V _{MPPTmax}) at P _{acr}	320...800 V	-	-
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	-	320...800 V	320...800 V
DC Power Limitation with Parallel Configuration of MPPT	-	Linear Derating From MAX to Null [800V≤V _{MPPT} ≤950V]	Linear Derating From MAX to Null [800V≤V _{MPPT} ≤950V]
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	-	4800 W [320V≤V _{MPPT} ≤800V] the other channel: P _{dcr} -4800W [215V≤V _{MPPT} ≤800V]	4800 W [320V≤V _{MPPT} ≤800V] the other channel: P _{dcr} -4800W [290V≤V _{MPPT} ≤800V]
Maximum DC Input Current (I _{dmax}) / for each MPPT (I _{MPPTmax})	18.9 A	30.0 A / 15.0 A	30.0 A / 15.0 A
Maximum Input Short Circuit Current for each MPPT	24.0 A	20.0 A	20.0 A
Number of DC Inputs Pairs for each MPPT	2 (-S Version)		
DC Connection Type	Tool Free PV Connector WM / MC4 (Screw Terminal Block on Standard Version)		
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)	16 A / 1000 V, 25 A / 800 V		
Output Side			
AC Grid Connection Type	Three phase 3W or 4W+PE		
Rated AC Power (P _{acr} @ cosφ=1)	5800 W	7500 W	8500 W
Maximum Apparent Power (S _{max})	5800 VA	7500 VA	8500 VA
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	12.5 A	14.5 A
Contributory fault current	12.0 A	14.5 A	16.5 A
Rated Output Frequency (f _r)	50 Hz / 60 Hz		
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz / 57...63 Hz ⁽²⁾		
Nominal Power Factor and adjustable range	> 0.995, adj. ± 0.9 with P _{acr} =5.22 kW, ± 0.8 with max 5.8 kVA	> 0.995, adj. ± 0.9 with P _{acr} =6.75 kW, ± 0.8 with max 7.5 kVA	> 0.995, adj. ± 0.9 with P _{acr} =7.65 kW, ± 0.8 with max 8.5 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	10.5 A	13.0 A	15.5 A
Output Overvoltage Protection - Varistor	4 plus gas arrester		
Operating Performance			
Maximum Efficiency (η _{max})	98.0%		
Weighted Efficiency (EURO/CEC)	97.4% / -	97.5% / -	97.5% / -
Feed In Power Threshold	32 W	36 W	36 W
Stand-by Consumption	< 15W		
Communication			
Wired Local Monitoring	Ethernet card with webserver (opt.), PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)		
Remote Monitoring	Ethernet card (opt.), PVI-AEC-EVO (opt.), AURORA LOGGER (opt.)		
Wireless Local Monitoring	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)		
User Interface	Graphic display		
Environmental			
Ambient Temperature Range	-25...+60°C / -13...140°F with derating above 50°C/122°F		
Relative Humidity	0...100% condensing		
Noise Emission	< 45 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)	641mm x 429mm x 220mm/ 25.2" x 16.9" x 8.7" (855mm x 429mm x 237mm/ 33.7" x 16.9" x 9.3" with open front cover)		
Weight	25.0 kg / 55.1 lb	28.0 kg / 61.7 lb	28.0 kg / 61.7 lb
Mounting System	Wall bracket		
Safety			
Isolation Level	Transformerless		
Marking	CE		
Safety and EMC Standard	EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3		
Grid Standard	CEI 0-21, CEI 0-16, VDE 0126-1-1, VDE-AR-N 4105, G83/1, C10/11, EN 50438 (not for all national appendices), RD1699, RD 1565, ABNT NBR 16149		
Available Products Variants			
Standard	TRIO-5.8-TL-OUTD	TRIO-7.5-TL-OUTD	TRIO-8.5-TL-OUTD
With DC Switch	TRIO-5.8-TL-OUTD-S	TRIO-7.5-TL-OUTD-S	TRIO-8.5-TL-OUTD-S

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

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

PVI-10.0-I-OUTD PVI-12.0-I-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



Designed for commercial usage, this three-phase inverter is highly unique in its ability to control the performance of the PV panels, especially during periods of variable weather conditions. This device has two independent MPPTs and efficiency ratings of up to 97.3%.

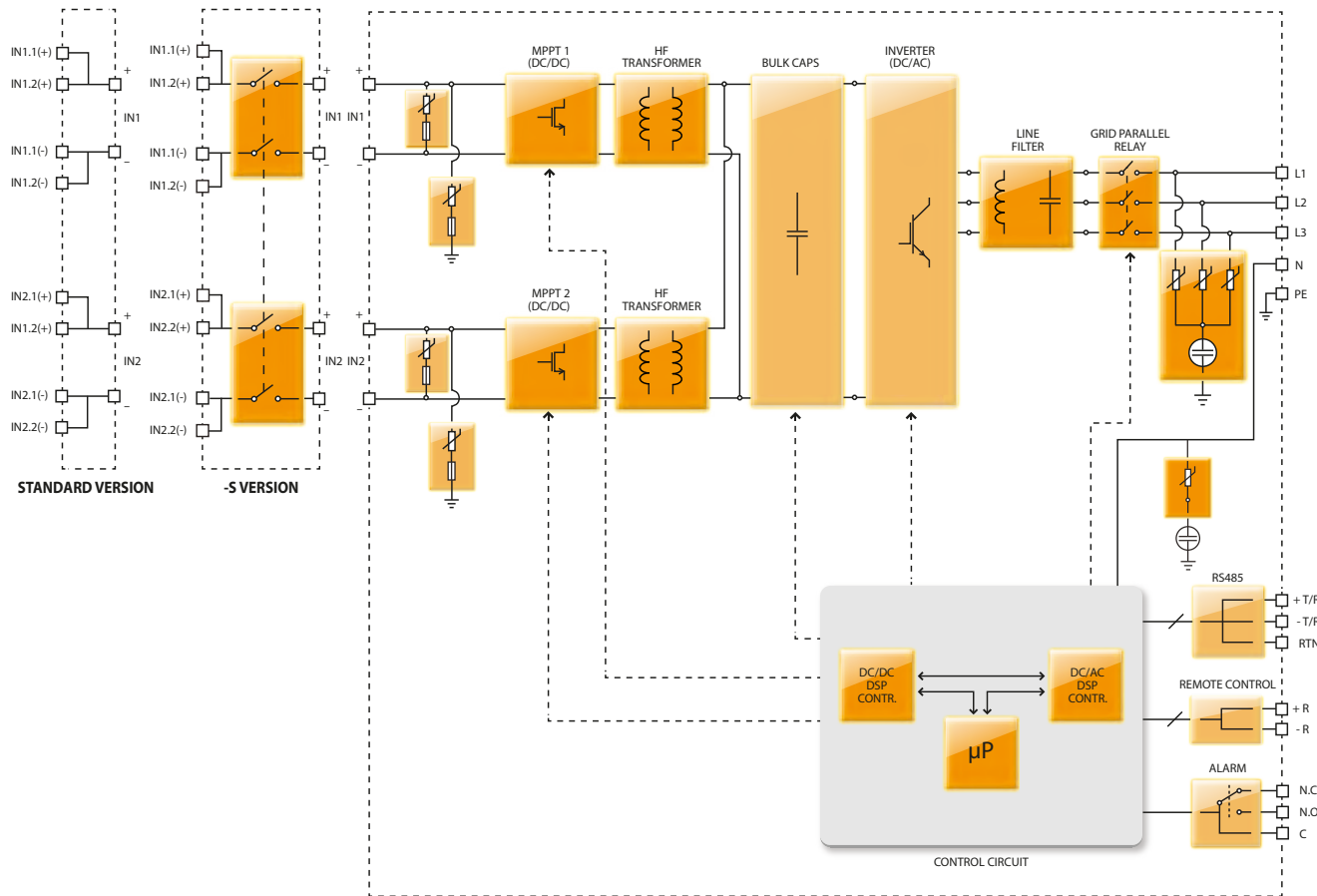
The input voltage range makes the inverter suitable to installations with reduced string size. The HF isolation allows positive or negative ground configuration.

It is available with an optional fully-integrated DC disconnect (-S version). The unit is free of electrolytic capacitors, leading to a longer product lifetime.

Features

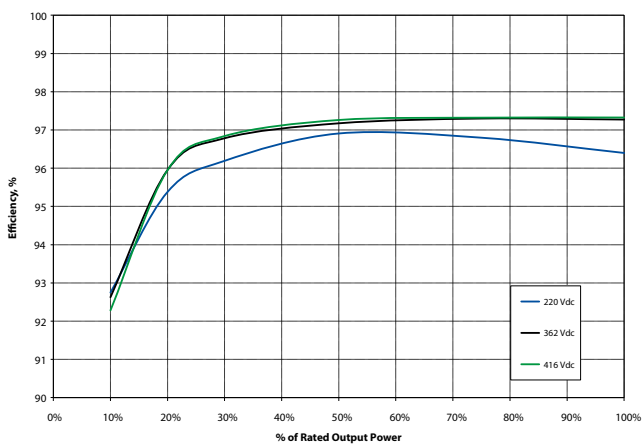
- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- True three-phase bridge topology for DC/AC output converter
- Each inverter is set on specific grid codes which can be selected in the field
- Night Wake up button to access energy harvesting data and error log
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- High speed and precise 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 across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- Integrated DC disconnect switch in compliance with international Standards (-S Version)
- RS-485 communication interface (for connection to laptop or datalogger)
- Compatible with PVI-RADIOMODULE for wireless communication with Aurora PVI-DESKTOP

BLOCK DIAGRAM OF PVI-10.0/12.0-I-OUTD

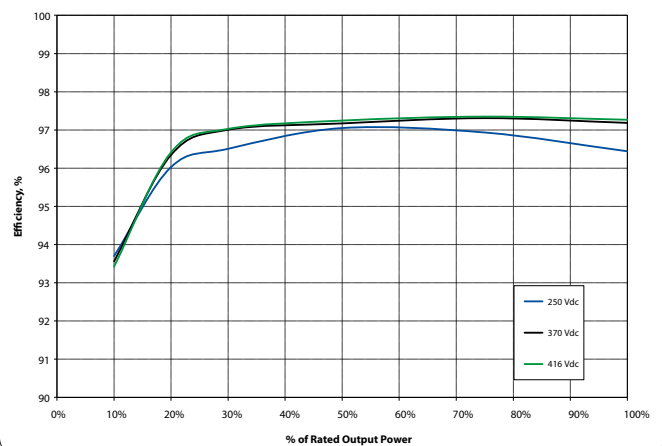


Block Diagram and Efficiency Curves

PVI-10.0-I-OUTD



PVI-12.0-I-OUTD



PARAMETER	PVI-10.0-I-OUTD	PVI-12.0-I-OUTD
Input Side		
Absolute Maximum DC Input Voltage (V _{max,abs})	520 V	
Start-up DC Input Voltage (V _{start})	200 V (adj. 120...350 V)	
Operating DC Input Voltage Range (V _{dcmi} ...V _{dcmx})	0.7 x V _{start} ...520 V	
Rated DC Input Power (P _{dcr})	10500 W	12300 W
Number of Independent MPPT	2 ⁽⁵⁾	
Maximum DC Input Power for each MPPT (P _{MPPTmax})	6800 W	
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	220...470 V	250...470 V
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [470V≤V _{MPPT} ≤520V]	
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	6800 W [285V≤V _{MPPT} ≤470V] the other channel: P _{dcr} -6800W [155V≤V _{MPPT} ≤470V]	6800 W [275V≤V _{MPPT} ≤470V] the other channel: P _{dcr} -6800W [220V≤V _{MPPT} ≤470V]
Maximum DC Input Current (I _{dcmx}) / for each MPPT (I _{MPPTmax})	48.0 A / 24.0 A	50.0 A / 25.0 A
Maximum Input Short Circuit Current for each MPPT	29.0 A	
Number of DC Inputs Pairs for each MPPT	2	
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)	32 A / 600 V	
Output Side		
AC Grid Connection Type	Three phase 3W or 4W+PE	
Rated AC Power (P _{acr} @cosφ=1)	10000 W	12000 W
Maximum AC Output Power (P _{acmax} @cosφ=1)	11000 W ⁽³⁾	12500 W ⁽⁴⁾
Maximum Apparent Power (S _{max})	11100 VA	13300 VA
Rated AC Grid Voltage (V _{acr})	400 V	
AC Voltage Range	320...480 V ⁽¹⁾	
Maximum AC Output Current (I _{ac,max})	16.0 A	18.0 A
Contributory fault current	25.0 A	
Rated Output Frequency (f _r)	50 Hz / 60 Hz	
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz / 57...63 Hz ⁽²⁾	
Nominal Power Factor and adjustable range	> 0.995, adj. ± 0.9 with P _{acr} =10.0 kW	> 0.995, adj. ± 0.9 with P _{acr} =12.0 kW
Total Current Harmonic Distortion	< 2%	
AC Connection Type	Screw terminal block	
Output Protection		
Anti-Islanding Protection	According to local standard	
Maximum AC Overcurrent Protection	20.0 A	
Output Overvoltage Protection - Varistor	3 plus gas arrester	
Operating Performance		
Maximum Efficiency (η _{max})	97.3%	
Weighted Efficiency (EURO/CEC)	97.0% / -	
Feed In Power Threshold	30 W	
Stand-by Consumption	< 8 W	
Communication		
Wired Local Monitoring	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)	
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA LOGGER (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 50°C/122°F	-25...+60°C / -13...140°F with derating above 45°C/113°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	< 45.8 kg / 99.0 lb	
Mounting System	Wall bracket	
Safety		
Isolation Level	HF transformer	
Marking	CE	
Safety and EMC Standard	EN 50178, EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-3-2, , EN61000-3-3, EN61000-6-2, EN61000-6-3	EN 50178, EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12
Grid Standard	CEI 0-21, CEI 0-16, VDE 0126-1-1, VDE-AR-N 4105, G83/1, G59/2, C10/11, EN 50438 (not for all national appendices), RD1699, RD 1565, AS 4777, ABNT NBR 16149	CEI 0-21, CEI 0-16, VDE 0126-1-1, VDE-AR-N 4105, G59/2, C10/11, EN 50438 (not for all national appendices), RD1699, RD 1565, AS 4777, ABNT NBR 16149
Available Products Variants		
Standard	PVI-10.0-I-OUTD-400	PVI-12.0-I-OUTD-400
With DC Switch	PVI-10.0-I-OUTD-S-400	PVI-12.0-I-OUTD-S-400

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 10000 W for Belgium and Germany

4. Limited to 12000 W for Germany

5. Independent MPPT just with negative ground

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

PVI-10.0-TL-OUTD PVI-12.5-TL-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



The three-phase 10.0 and 12.5 kW non-isolated inverter is an industry leader.

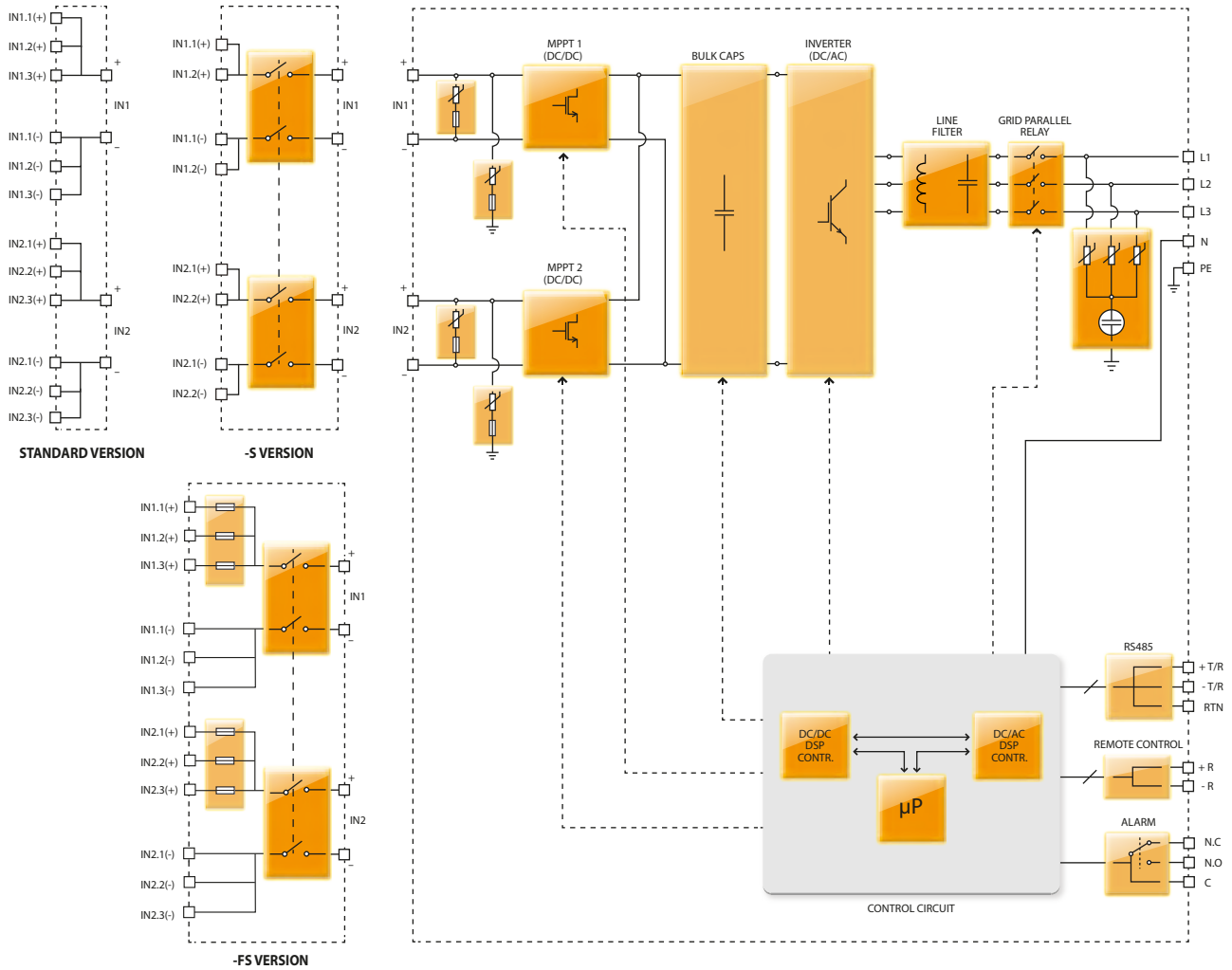
Designed for commercial usage, this three-phase inverter is highly unique in its ability to control the performance of the PV panels, especially during periods of variable weather conditions. This transformerless device has two independent MPPTs and efficiency ratings of up to 97.8%.

The wide input voltage range makes the inverter suitable to low power installations with reduced string size. It is available with an optional fully-integrated DC switch, fuse and remote controlled DC disconnect function. The unit is free of electrolytic capacitors, leading to a longer product lifetime.

Features

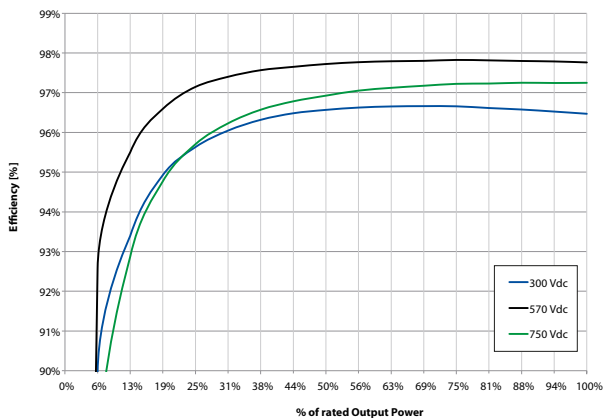
- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- True three-phase bridge topology for DC/AC output converter
- Each inverter is set on specific grid codes which can be selected in the field
- Dual input sections with independent MPP tracking, allows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

BLOCK DIAGRAM OF PVI-10.0/12.5-TL-OUTD

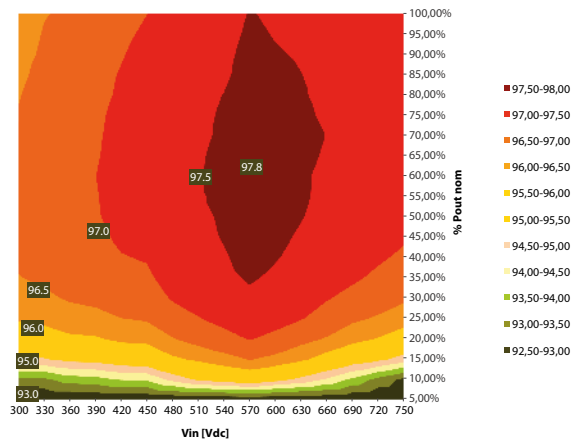


Block Diagram and Efficiency Curves

PVI-10.0-TL-OUTD



PVI-12.5-TL-OUTD



PARAMETER	PVI-10.0-TL-OUTD	PVI-12.5-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 _{dcmín...V_{dcmax}})	0.7 x V _{start} ...850 V	
Rated DC Input Power (P _{dcr})	10300 W	12800 W
Number of Independent MPPT	2	
Maximum DC Input Power for each MPPT (P _{MPPTmax})	6500 W	8000 W
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	300...750 V	360...750 V
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [750V≤V _{MPPT} ≤850V]	
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	6500 W [380V≤V _{MPPT} ≤750V] the other channel: P _{dcr} -6500W [225V≤V _{MPPT} ≤750V]	8000 W [445V≤V _{MPPT} ≤750V] the other channel: P _{dcr} -8000W [270V≤V _{MPPT} ≤750V]
Maximum DC Input Current (I _{dcmáx}) / for each MPPT (I _{MPPTmax})	34.0 A / 17.0 A	36.0 A / 18.0 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	Inverter protection only, from limited current source, for standard and -S versions, and for -FS version when max 2 strings are connected	
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} @cosφ=1)	10000 W	12500 W
Maximum AC Output Power (P _{acmax} @cosφ=1)	11000 W ⁽³⁾	13800 W ⁽⁴⁾
Maximum Apparent Power (S _{max})	11500 VA	13800 VA
Rated AC Grid Voltage (V _{acr})	400 V	
AC Voltage Range	320...480 V ⁽¹⁾	
Maximum AC Output Current (I _{ac,max})	16.6 A	20.0 A
Contributory fault current	19.0 A	22.0 A
Rated Output Frequency (f _r)	50 Hz / 60 Hz	
Output Frequency Range (f _{min} ...f _{max})	47...53 Hz / 57...63 Hz ⁽²⁾	
Nominal Power Factor and adjustable range	> 0.995, adj. ± 0.9 with P _{acr} =10.0 kW, ± 0.8 with max 11.5 kVA	> 0.995, adj. ± 0.9 with P _{acr} =12.5 kW, ± 0.8 with max 13.8 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	19.0 A	22.0 A
Output Overvoltage Protection - Varistor	3 plus gas arrester	
Operating Performance		
Maximum Efficiency (η _{max})	97.8%	
Weighted Efficiency (EURO/CEC)	97.1% / -	97.2% / -
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 LOGGER (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)	-25...+60°C (-13...140°F) with derating above 50°C(122°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 224mm / 28.2" x 25.4" x 8.8"	
Weight	< 41.0 kg / 90.4 lb	
Mounting System	Wall bracket	
Safety		
Isolation Level	Transformerless	
Marking	CE	
Safety and EMC Standard	EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12	
Grid Standard	CEI 0-21, CEI 0-16, VDE 0126-1-1, VDE-AR-N 4105, G59/2, C10/11, EN 50438 (not for all national appendices), RD1699, RD 1565, AS 4777, BDEW, ABNT NBR 16149	
Available Products Variants		
Standard	PVI-10.0-TL-OUTD	PVI-12.5-TL-OUTD
With DC Switch	PVI-10.0-TL-OUTD-S	PVI-12.5-TL-OUTD-S
With DC Switch and Fuse	PVI-10.0-TL-OUTD-FS	PVI-12.5-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 10000 W for Belgium and Germany

4. Limited to 12500 W for Germany

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

TRIO-20.0-TL-OUTD TRIO-27.6-TL-OUTD

GENERAL SPECIFICATIONS OUTDOOR MODELS



The latest in Power-One's Aurora Trio range, this new-look three-phase inverter fills a specific niche in the commercial solar market. This new three-phase inverter benefits from the three-phase inverter technology perfected in the PVI-10.0 and 12.5, probably the world's most commonly used three-phase inverter which has led the way in best-in-class efficiency.

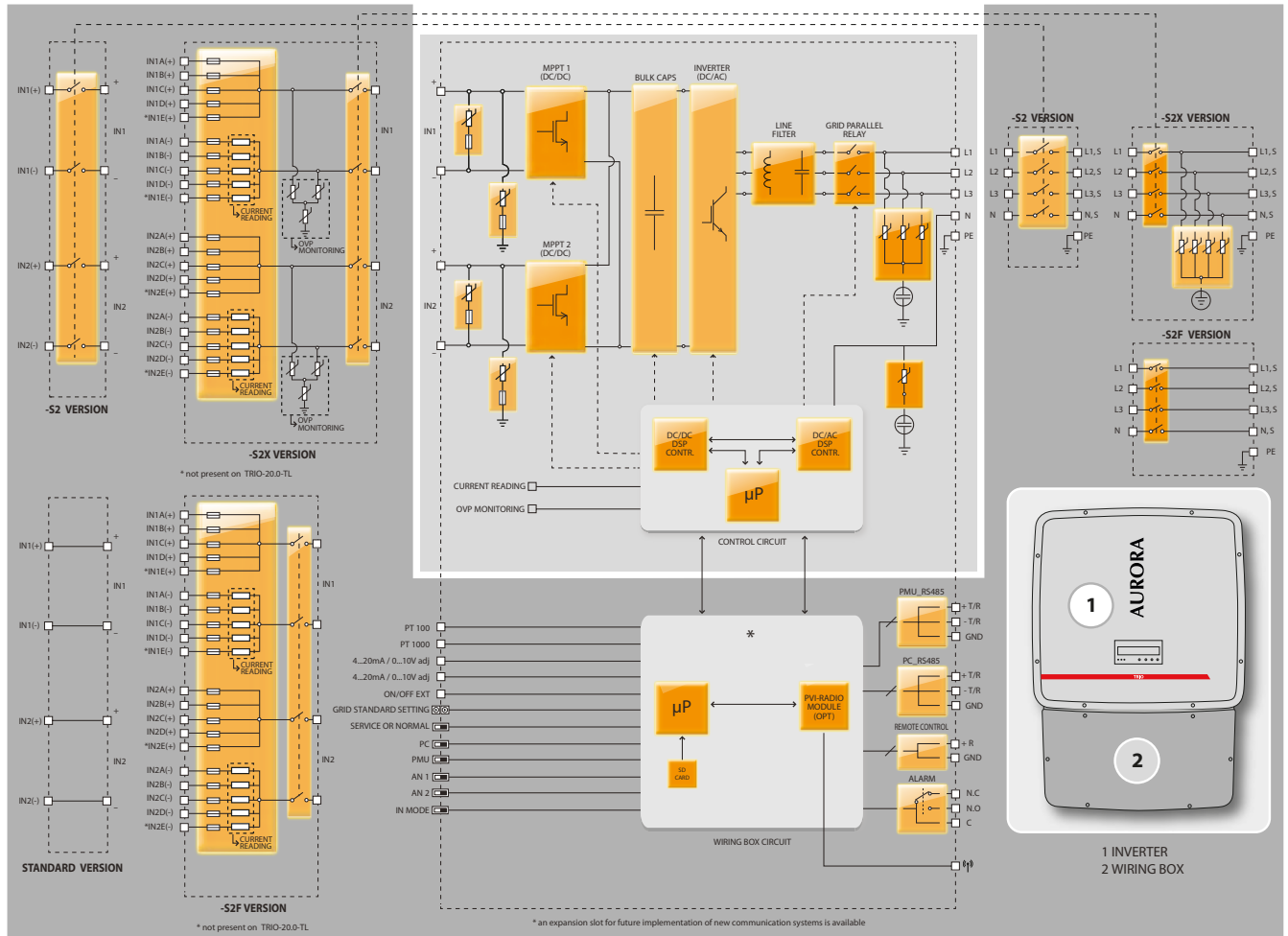
Controlling more PV panels than its smaller predecessor, the Trio-27.6 and Trio-20.0 will offer more flexibility and control to installers who have large installations with varying aspects or orientations. This device has two independent MPPTs and efficiency ratings of up to 98.2%. The very wide input voltage range makes the inverter suitable to installations with reduced string size.

The new look inverter has new features including a special built-in heat sink compartment and front panel display system. The unit is free of electrolytic capacitors, leading to a longer product lifetime.

Features

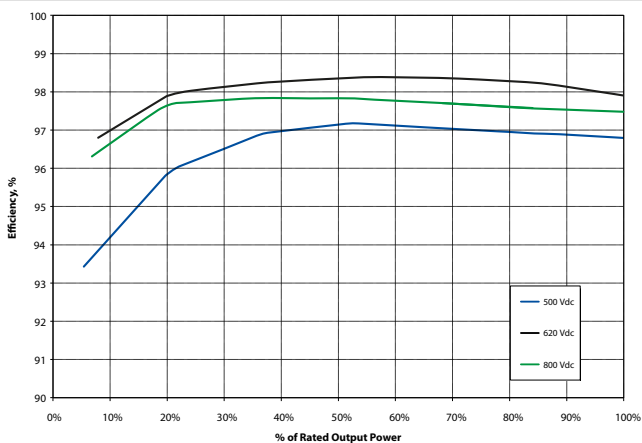
- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- Quiet Rail
- True three-phase bridge topology for DC/AC output converter
- Each inverter is set on specific grid codes which can be selected in the field
- Dual input sections with independent MPP tracking, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- Detachable wiring box to allow an easy installation
- Integrated string combiner with different options of configuration which include DC and AC disconnect switch in compliance with international Standards (-S2, -S2F and -S2X versions)
- High speed and precise 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 across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- Capability to select via display the Active Power reduction and the Reactive Power regulation (fixed $\cos(\phi)$, standard $\cos(\phi)=f(P)$ curve, Fixed Q (Q/Pn))
- Capability to connect external sensors for monitoring environmental conditions
- Availability of auxiliary DC output voltage (24V, 300mA)

BLOCK DIAGRAM OF TRIO-20.0/27.6-TL-OUTD

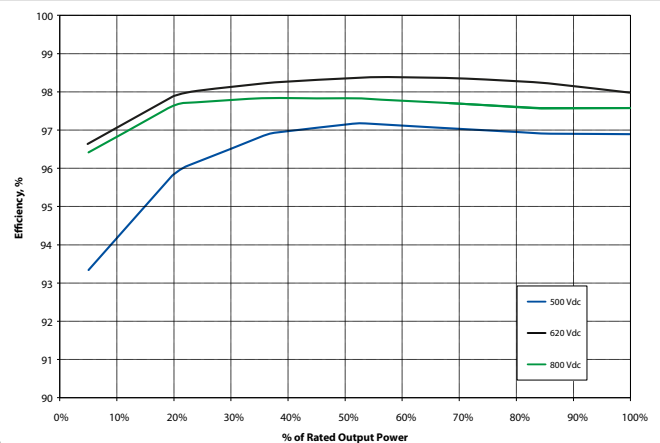


Block Diagram and Efficiency Curves

TRIO-20.0-TL-OUTD



TRIO-27.6-TL-OUTD



PARAMETER	TRIO-20.0-TL-OUTD	TRIO-27.6-TL-OUTD
Input Side		
Absolute Maximum DC Input Voltage (V _{max,abs})	1000 V	
Start-up DC Input Voltage (V _{start})	360 V (adj. 250...500 V)	
Operating DC Input Voltage Range (V _{dcmín...V_{dcmáx}})	0.7 x V _{start} ...950 V	
Rated DC Input Power (P _{dcr})	20750 W	28600 W
Number of Independent MPPT	2	
Maximum DC Input Power for each MPPT (P _{MPPTmax})	12000 W	16000 W
DC Input Voltage Range with Parallel Configuration of MPPT at P _{acr}	440...800 V	500...800 V
DC Power Limitation with Parallel Configuration of MPPT	Linear Derating From MAX to Null [800V≤V _{MPPT} ≤950V]	
DC Power Limitation for each MPPT with Independent Configuration of MPPT at P _{acr} , max unbalance example	12000 W [480V≤V _{MPPT} ≤800V] the other channel: P _{dcr} -12000W [350V≤V _{MPPT} ≤800V]	16000 W [500V≤V _{MPPT} ≤800V] the other channel: P _{dcr} -16000W [400V≤V _{MPPT} ≤800V]
Maximum DC Input Current (I _{dcmáx}) / for each MPPT (I _{MPPTmax})	50.0 A / 25.0 A	64.0 A / 32.0 A
Maximum Input Short Circuit Current for each MPPT	30.0 A	40.0 A
Number of DC Inputs Pairs for each MPPT	1 (4 in -S2X and -S2F Versions)	1 (5 in -S2X and -S2F Versions)
DC Connection Type	Tool Free PV Connector WM / MC4 (Screw Terminal Block on Standard and -S2 versions)	
Input Protection		
Reverse Polarity protection	Inverter protection only, from limited current source, for standard and -S2 versions, and for fused versions when max 2 strings are connected	
Input Over Voltage Protection for each MPPT - Varistor	2	
Input Over Voltage Protection for each MPPT - Plug In Modular Surge Arrester (-S2X Version)	3 (Class II)	
Photovoltaic Array Isolation Control	According to local standard	
DC Switch Rating for each MPPT (Version with DC Switch)	40 A / 1000 V	
Fuse Rating (Versions with fuses)	15 A / 1000 V ⁽⁵⁾	
Output Side		
AC Grid Connection Type	Three phase 3W or 4W+PE	
Rated AC Power (P _{acr} @cosφ=1)	20000 W	27600 W
Maximum AC Output Power (P _{acmax} @cosφ=1)	22000 W ⁽³⁾	30000 W ⁽⁴⁾
Maximum Apparent Power (S _{max})	22200 VA	30000 VA
Rated AC Grid Voltage (V _{acr})	400 V	
AC Voltage Range	320...480 V ⁽¹⁾	
Maximum AC Output Current (I _{ac,max})	33.0 A	45.0 A
Contributory fault current	35.0 A	46.0 A
Rated Output Frequency (f _r)	50 Hz / 60 Hz	
Output Frequency Range (f _{min} ...f _{max})	47 ...53 Hz / 57 ...63 Hz ⁽²⁾	
Nominal Power Factor and adjustable range	> 0.995, adj. ± 0.9 with P _{acr} =20.0 kW, ± 0.8 with max 22.2 kVA	> 0.995, adj. ± 0.9 with P _{acr} =27.6 kW, ± 0.8 with max 30 kVA
Total Current Harmonic Distortion	< 3%	
AC Connection Type	Screw terminal block	
Output Protection		
Anti-Islanding Protection	According to local standard	
Maximum AC Overcurrent Protection	34.0 A	46.0 A
Output Overvoltage Protection - Varistor	4	
Output Over Voltage Protection - Plug In Modular Surge Arrester (-S2X Version)	4 (Class II)	
Operating Performance		
Maximum Efficiency (η _{max})	98.2%	
Weighted Efficiency (EURO/CEC)	98.0% / 98.0%	
Feed In Power Threshold	40 W	
Stand-by Consumption	< 8W	
Communication		
Wired Local Monitoring	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)	
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA LOGGER (opt.)	
Wireless Local Monitoring	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)	
User Interface	Graphic display	
Environmental		
Ambient Temperature Range	-25...+60°C /-13...140°F with derating above 45°C/113°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)	1061 mm x 702 mm x 292 mm/ 41.7" x 27.6" x 11.5"	
Weight	< 70.0 kg / 154.3 lb (Standard version)	< 75.0 kg / 165.4 lb (Standard version)
Mounting System	Wall bracket	
Safety		
Isolation Level	Transformerless	
Marking	CE	
Safety and EMC Standard	EN 50178, EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12	
Grid Standard	CEI 0-21, CEI 0-16, VDE 0126-1-1, VDE-AR-N 4105, G59/2, C10/11, EN 50438 (not for all national appendices), RD1699, RD 1565, AS 4777, BDEW, ABNT NBR 16149, NRS-097-2-1	
Available Products Variants		
Standard	TRIO-20.0-TL-OUTD-400	TRIO-27.6-TL-OUTD-400
With DC+AC Switch	TRIO-20.0-TL-OUTD-S2-400	TRIO-27.6-TL-OUTD-S2-400
With DC+AC Switch and Fuse	TRIO-20.0-TL-OUTD-S2F-400	TRIO-27.6-TL-OUTD-S2F-400
With DC+AC Switch, Fuse and Surge Arrester	TRIO-20.0-TL-OUTD-S2X-400	TRIO-27.6-TL-OUTD-S2X-400

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 20000 W for Germany

4. Limited to 27600 W for Germany

5. Since April 2013

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