

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.

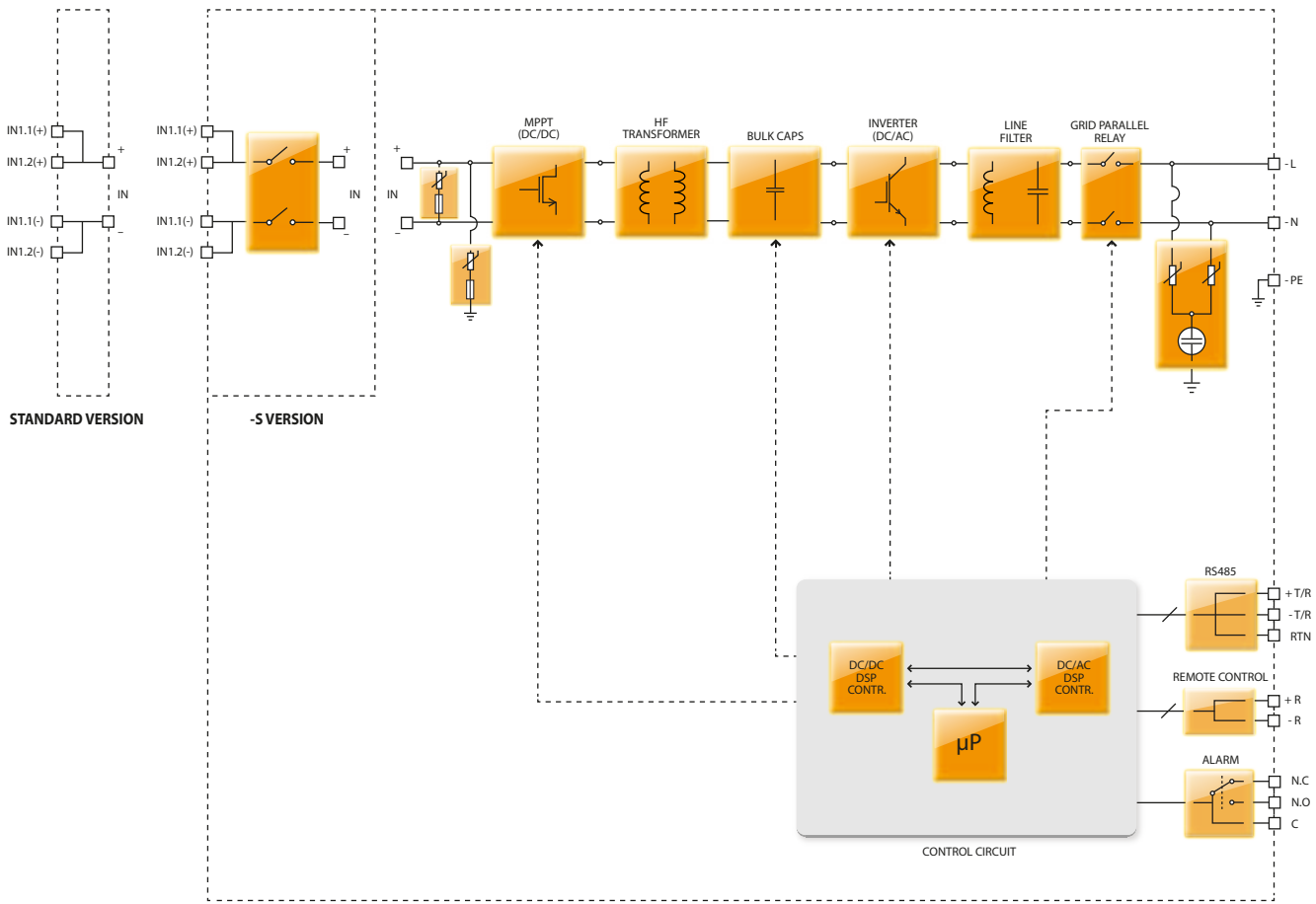
Despite the isolated operation, the UNO-2.0-I and UNO-2.5-I feature an efficiency of 96.3%. The wide input voltage range makes the inverter suitable to low power installations with reduced string size.



Features

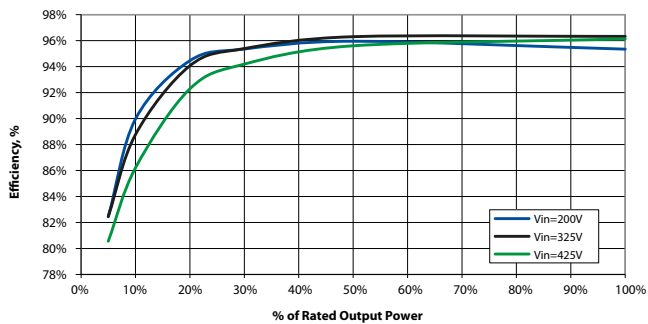
- Single phase output
- Each inverter is set on specific grid codes which can be selected in the field
- Wide input range
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent 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

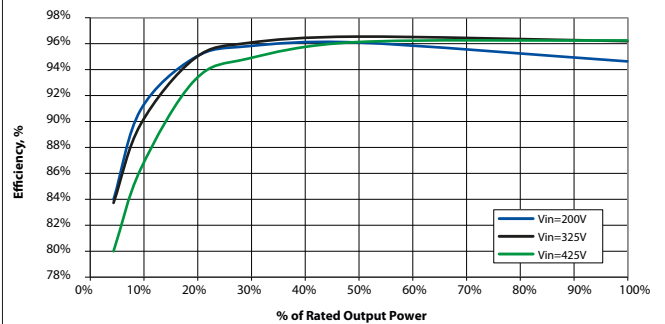


Block Diagram and Efficiency Curves

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 ($V_{max,abs}$)	550 V	
Start-up DC Input Voltage (V_{start})	200 V (adj. 120...350 V)	
Operating DC Input Voltage Range ($V_{dcrmin} \dots V_{dcrmax}$)	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 ($V_{MPPTmin} \dots V_{MPPTmax}$) 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_{dcrmax}) / 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 ($P_{acr} @ \cos\phi=1$)	2000 W	2500 W
Maximum AC Output Power ($P_{acmax} @ \cos\phi=1$)	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 ($f_{min} \dots f_{max}$)	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



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Power-One Renewable Energy

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