

## UNO-2.0-I UNO-2.5-I

### 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.

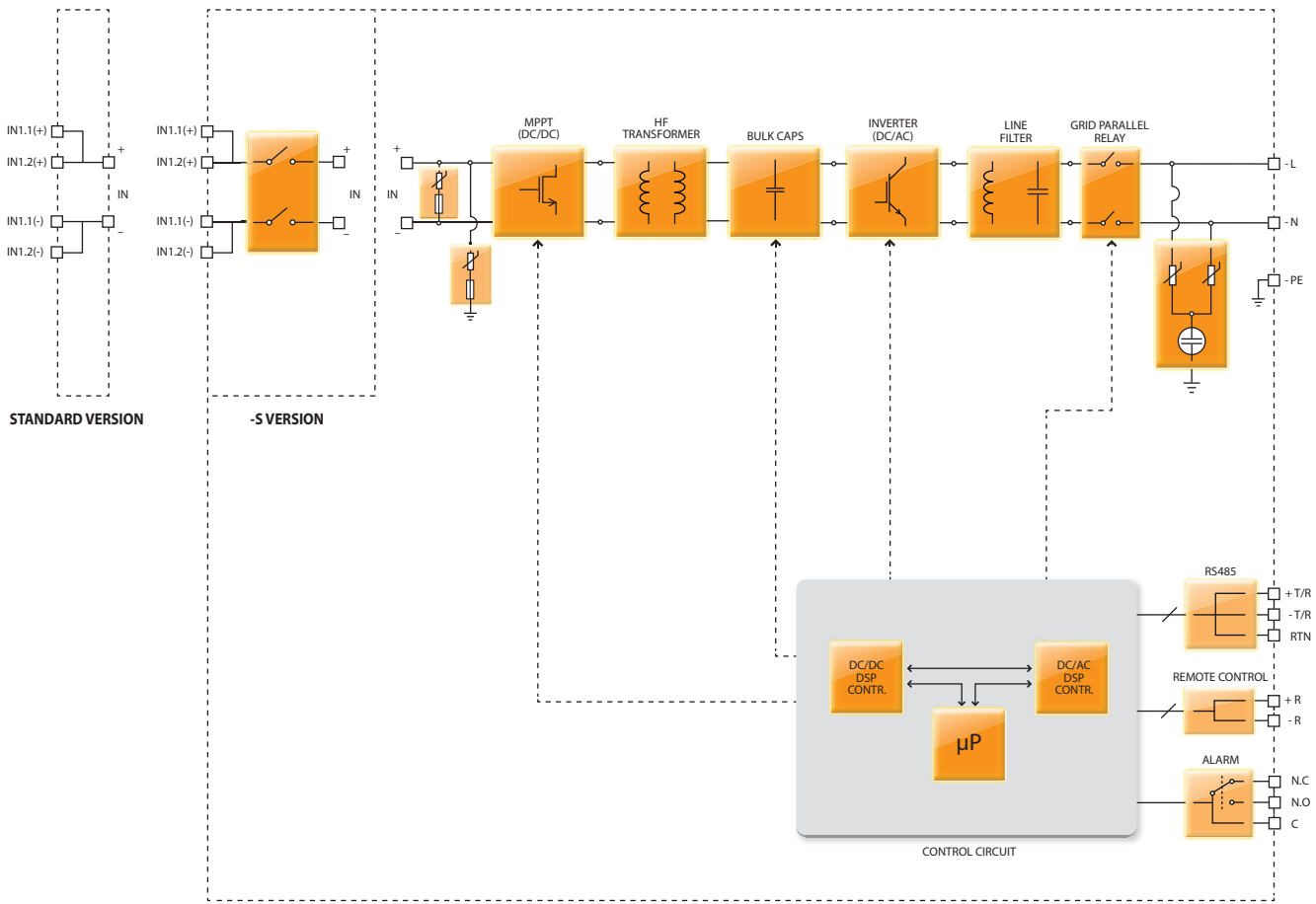
Despite the isolated operation, the UNO-2.0-I and UNO-2.5-I feature an efficiency of 96.3%. The wide input voltage range makes the inverter suitable to low power installations with reduced string size.



## Features

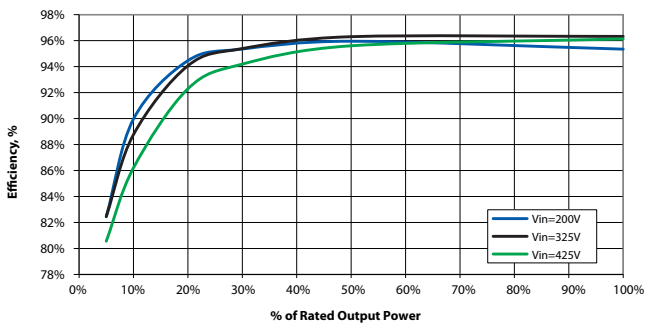
- Each inverter is set on specific grid codes which can be selected in the field
- Single phase output
- Wide input range
- High speed and precise MPPT algorithm for real time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent 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-I AND UNO-2.5-I

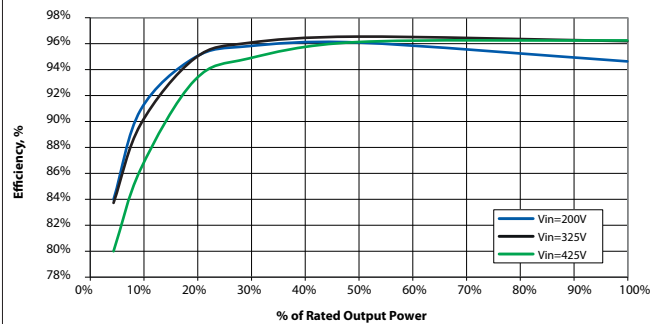


## Block Diagram and Efficiency Curves

UNO-2.0-I-OUTD



UNO-2.5-I-OUTD



PARAMETER	UNO-2.0-I-OUTD	UNO-2.5-I-OUTD
<b>Input Side</b>		
Absolute Maximum DC Input Voltage ( $V_{max,abs}$ )	520 V	520 V
Start-up DC Input Voltage ( $V_{start}$ )	200 V (adj. 120...350 V)	200 V (adj. 120...350 V)
Operating DC Input Voltage Range ( $V_{dcmin}...V_{dcmax}$ )	$0.7 \times V_{start}...520 V$	$0.7 \times V_{start}...520 V$
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 [ $470V \leq V_{MPPT} \leq 520V$ ]	2900 W Linear Derating From MAX to Null [ $470V \leq V_{MPPT} \leq 520V$ ]
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	not applicable
Maximum DC Input Current ( $I_{dcmx}$ ) / 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	15.0 A
Number of DC Inputs Pairs for each MPPT	2	2
DC Connection Type	Tool Free PV Connector WM / MC4	Tool Free PV Connector WM / MC4
<b>Input Protection</b>		
Reverse Polarity protection	Yes, from limited current source	Yes, from limited current source
Input Over Voltage Protection for each MPPT - Varistor	2	2
Photovoltaic Array Isolation Control	According to local standard	According to local standard
DC Switch Rating for each MPPT (Version with DC switch)	16 A / 600 V	16 A / 600 V
<b>Output Side</b>		
AC Grid Connection Type	Single phase	Single phase
Rated AC Power ( $P_{acr}$ )	2000 W	2500 W
Maximum AC Output Power ( $P_{acmax}$ )	2200 W <sup>(4)</sup>	2750 W <sup>(5)</sup>
Rated AC Grid Voltage ( $V_{acr}$ )	230 V	230 V
AC Voltage Range	180...264 V <sup>(1)</sup>	180...264 V <sup>(1)</sup>
Maximum AC Output Current ( $I_{ac,max}$ )	10.0 A	12.0 A
Rated Output Frequency ( $f_r$ )	50 Hz	50 Hz
Output Frequency Range ( $f_{min}...f_{max}$ )	47...53 Hz <sup>(2)</sup>	47...53 Hz <sup>(2)</sup>
Nominal Power Factor ( $\cos\phi_{i,acr}$ )	> 0.990	> 0.990
Total Current Harmonic Distortion	< 2%	< 2%
AC Connection Type	Screw terminal block	Screw terminal block
<b>Output Protection</b>		
Anti-Islanding Protection	According to local standard	According to local standard
Maximum AC Overcurrent Protection	15.0 A	15.0 A
Output Overvoltage Protection - Varistor	2 (L - N / L - PE)	2 (L - N / L - PE)
<b>Operating Performance</b>		
Maximum Efficiency ( $\eta_{max}$ )	96.3%	96.3%
Weighted Efficiency (EURO/CEC)	95.1% / -	95.4% / -
Feed In Power Threshold	24.0 W	24.0 W
Stand-by Consumption	< 8.0 W <sup>(3)</sup>	< 8.0 W <sup>(3)</sup>
<b>Communication</b>		
Wired Local Monitoring	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)	PVI-USB-RS232_485 (opt.), PVI-DESKTOP (opt.)
Remote Monitoring	PVI-AEC-EVO (opt.), AURORA-UNIVERSAL (opt.)	PVI-AEC-EVO (opt.), AURORA-UNIVERSAL (opt.)
Wireless Local Monitoring	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)	PVI-DESKTOP (opt.) with PVI-RADIOMODULE (opt.)
User Interface	Graphic display	Graphic display
<b>Environmental</b>		
Ambient Temperature Range	-25...+60°C (-13...+ 140°F) with derating above 45°C (113°F)	
Relative Humidity	0...100 % condensing	0...100 % condensing
Noise Emission	< 50 dB(A) @ 1 m	< 50 dB(A) @ 1 m
Maximum Operating Altitude without Derating	2000 m / 6560 ft	2000 m / 6560 ft
<b>Physical</b>		
Environmental Protection Rating	IP 65	IP 65
Cooling	Natural	Natural
Dimension (H x W x D)	518mm x 367mm x 161mm / 20.4" x 14.4" x 6.3"	518mm x 367mm x 161mm / 20.4" x 14.4" x 6.3"
Weight	< 17 kg / 37.4 lb	< 17 kg / 37.4 lb
Mounting System	Wall bracket	Wall bracket
<b>Safety</b>		
Isolation Level	HF transformer	HF transformer
Marking	CE	CE
Safety and EMC Standard	EN 50178, AS/NZS3100, AS/NZS 60950, EN61000-6-1, EN61000-6-3, EN61000-3-11, EN61000-3-12	EN 50178, AS/NZS3100, AS/NZS 60950, EN61000-6-1, EN61000-6-3, EN61000-3-11, EN61000-3-12
Grid Standard	Enel Guideline (CEI 0-21 + Attachment A70 Terna) <sup>(6)</sup> , VDE 0126-1-1, VDE-AR-N 4105 <sup>(7)</sup> , G83/1, EN 50438, RD1663, AS 4777	Enel Guideline (CEI 0-21 + Attachment A70 Terna) <sup>(6)</sup> , VDE 0126-1-1, VDE-AR-N 4105 <sup>(7)</sup> , G83/1, EN 50438, RD1663, AS 4777
<b>Available Products Variants</b>		
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

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. Night time consumption < 0.6W

4. Limited to 2000 W for Germany

5. Limited to 2500 W for Germany

6. Since their applicability dates, limited to plant power  $\leq 3kW$

7. Limited to plant power  $\leq 3.68 kVA$

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



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