

MICRO-0.25-I MICRO-0.3-I

GENERAL SPECIFICATIONS OUTDOOR MODELS

The new Aurora 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.

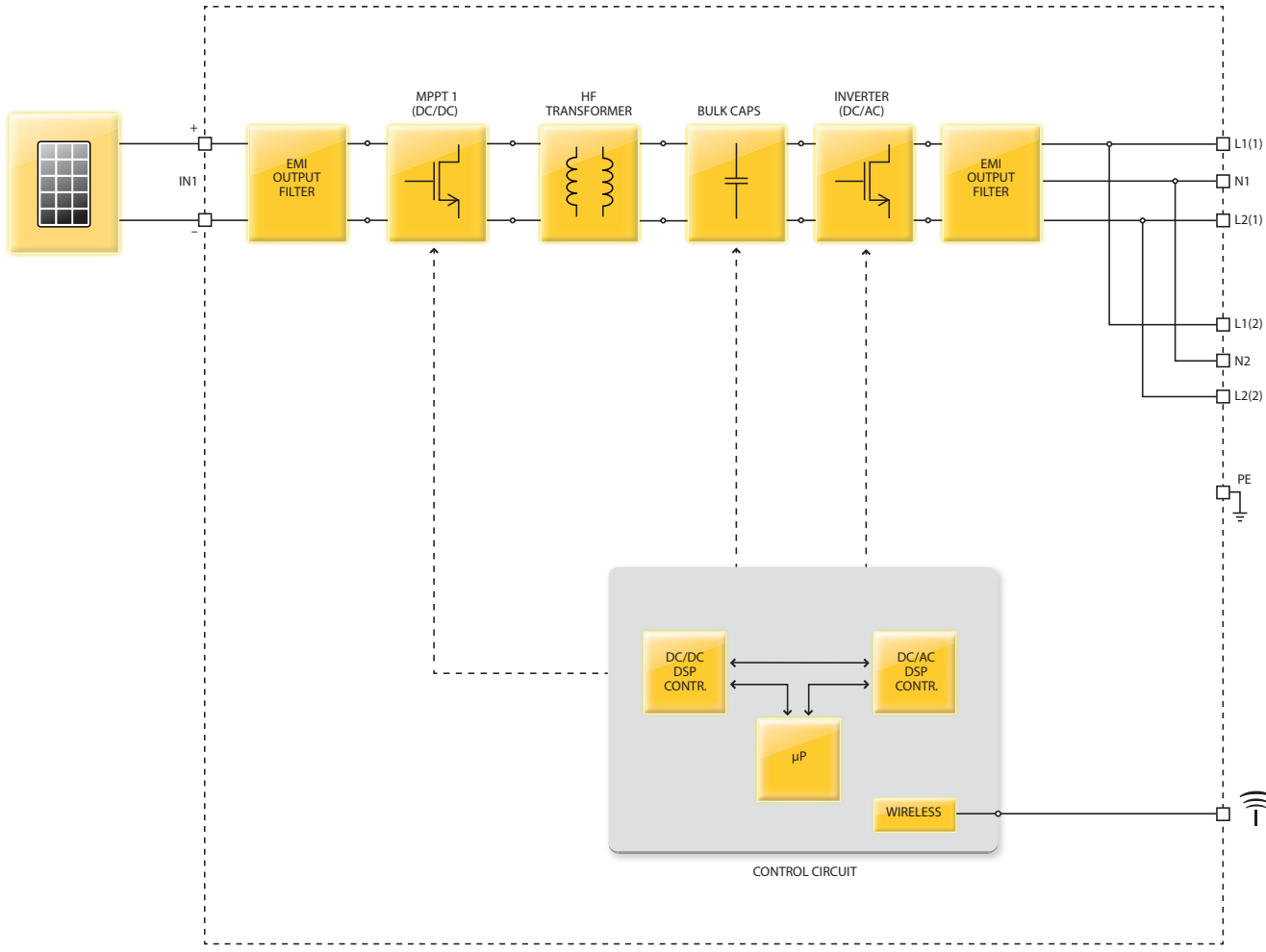


AURORA MICRO

Features

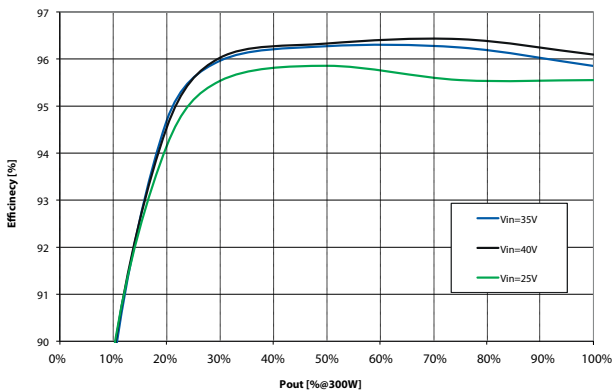
- 'Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- Outdoor enclosure for unrestricted use under any environmental conditions
- Increased energy harvesting thanks to the MPPT algorithm which works at the level of each solar panel in any light condition
- No DC input current ripple
- The HF isolation allows it to fit any application that requires the grounding of either one of the input terminations
- 95.5% of efficiency
- Ease of installation by the implementation of a package inclusive of proprietary wireless communication hub and grid interface
- Reduced susceptibility to fault. In case of a component failure only the energy produced from one PV module will be lost
- Up to 10 micro inverters directly connectable in a string

BLOCK DIAGRAM OF MICROINVERTER

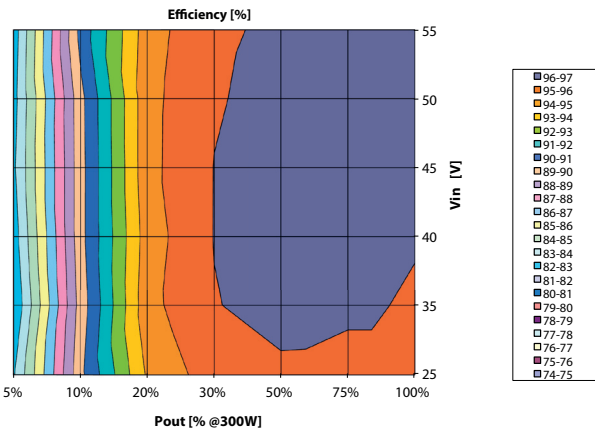


Block Diagram and Efficiency Curves

MICRO-0.3-I



MICRO-0.3-I



PARAMETER	MICRO-0.25-I-OUTD	MICRO-0.3-I-OUTD	MICRO-0.25-I-OUTD-US	MICRO-0.3-I-OUTD-US
Input Side				
Maximum DC Input Power (P_{dcmax})	265 Wp	320 Wp	265 Wp	320 Wp
Operating DC Input Voltage Range ($V_{dcmin} \dots V_{dcmax}$)	18...58 V	18...58 V	18...58 V	18...58 V
MPPT Input DC Voltage Range ($V_{MPP Tmin} \dots V_{MPP Tmax}$)	20...50 V	30...50 V	20...50 V	30...50 V
Absolute Maximum DC Input Voltage ($V_{max,abs}$)	65 V	65 V	65 V	65 V
Maximum DC Input Current (I_{dcmax})	10.0 A	10.0 A	10.0 A	10.0 A
Number of DC Inputs Pairs for each MPPT	1	1	1	1
DC Connection Type	Tool Free PV connector WM / MC4	Tool Free PV connector WM / MC4	Tool Free PV connector WM / MC4	Tool Free PV connector WM / MC4
Start-up DC Input Voltage (V_{start})	25V	25V	25V	25V
Output Side				
AC Grid Connection Type	Single phase	Single phase	Single phase/Split phase	Single phase/Split phase
Rated AC Power (P_{acr})	250 W	300 W	250 W	300 W
Rated AC Grid Voltage (V_{acr})	230 V	230 V	208 V / 240 V	208 V / 240 V
AC Voltage Range ($V_{acmin} \dots V_{acmax}$)	180...264 V ⁽¹⁾	180...264 V ⁽¹⁾	183-228 V / 211-264 V	183-228 V / 211-264 V
Maximum AC Output Current ($I_{ac,max}$)	1.2 A	1.5 A	1.3 A / 1.15 A	1.5 A / 1.3 A
Rated Output Frequency (f_r)	50 Hz	50 Hz	60 Hz	60 Hz
Output Frequency Range ($f_{min} \dots f_{max}$)	47...53 Hz ⁽²⁾	47...53 Hz ⁽²⁾	59.3...60.5 Hz	59.3...60.5 Hz
Nominal Power Factor ($\cos\phi_{acr}$)	> 0.95	> 0.95	> 0.95	> 0.95
Maximum number of units per string	10	10	10	10
Output Protection				
Anti-Islanding Protection	According to local standard	According to local standard	According to local standard	According to local standard
Output Overvoltage Protection - Varistor	Yes	Yes	Yes	Yes
Operating Performance				
Maximum Efficiency (η_{max})	96.0%	96.3%	96.0%	96.3%
Weighted Efficiency (η_{EURO} / η_{CEC})	95.4% / 95.5%	95.5% / 95.5%	95.4% / 95.5%	95.5% / 95.5%
Stand-by Consumption	< 50mW	< 50mW	< 50mW	< 50mW
Communication				
Monitoring System (PC/Data logger)	Wireless	Wireless	Wireless	Wireless
Remote Monitoring	Wireless	Wireless	Wireless	Wireless
Environmental				
Ambient Temperature Range	-40...+85°C / -40...185°F with derating above 65°C/149°F	-40...+85°C / -40...185°F with derating above 65°C/149°F	-40...+85°C / -40...185°F with derating above 65°C/149°F	-40...+85°C / -40...185°F with derating above 65°C/149°F
Relative Humidity	0...100 % condensing	0...100 % condensing	0...100 % condensing	0...100 % condensing
Noise Emission	< 30 db(A) @ 1 m	< 30 db(A) @ 1 m	< 30 db(A) @ 1 m	< 30 db(A) @ 1 m
Maximum Operating Altitude without Derating	2000 m / 6560 ft	2000 m / 6560 ft	2000 m / 6560 ft	2000 m / 6560 ft
Physical				
Environmental Protection Rating	IP 65	IP 65	NEMA 4X	NEMA 4X
Cooling	Natural	Natural	Natural	Natural
Dimension (H x W x D)	262mm x 244mm x 35mm / 10.3" x 9.6" x 1.37"	262mm x 244mm x 35mm / 10.3" x 9.6" x 1.37"	262mm x 244mm x 35mm / 10.3" x 9.6" x 1.37"	262mm x 244mm x 35mm / 10.3" x 9.6" x 1.37"
Weight	< 1.65 kg / 3.5 lb	< 1.65 kg / 3.5 lb	< 1.65 kg / 3.5 lb	< 1.65 kg / 3.5 lb
Safety				
Isolation Level	HF Transformer	HF Transformer	HF Transformer	HF Transformer
Marking	CE	CE	cCSAus	cCSAus
Safety and EMC Standard	EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12, EN 50178	EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12, EN 50178	EN 61000-6-2, EN 61000-6-3, FCC Part15 Class B, UL 1741	EN 61000-6-2, EN 61000-6-3, FCC Part15 Class B, UL 1741
Grid Standard	VDE0126-1-1, DK5940, AS4777, G83/1	VDE0126-1-1, DK5940, AS4777, G83/1	IEEE 1547	IEEE 1547
Available Products Variants				
Standard	MICRO-0.25-I-OUTD-230	MICRO-0.3-I-OUTD-230	MICRO-0.25-I-OUTD-US-208/240	MICRO-0.3-I-OUTD-US-208/240

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



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