

MICRO-0.25-I MICRO-0.3-I

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.

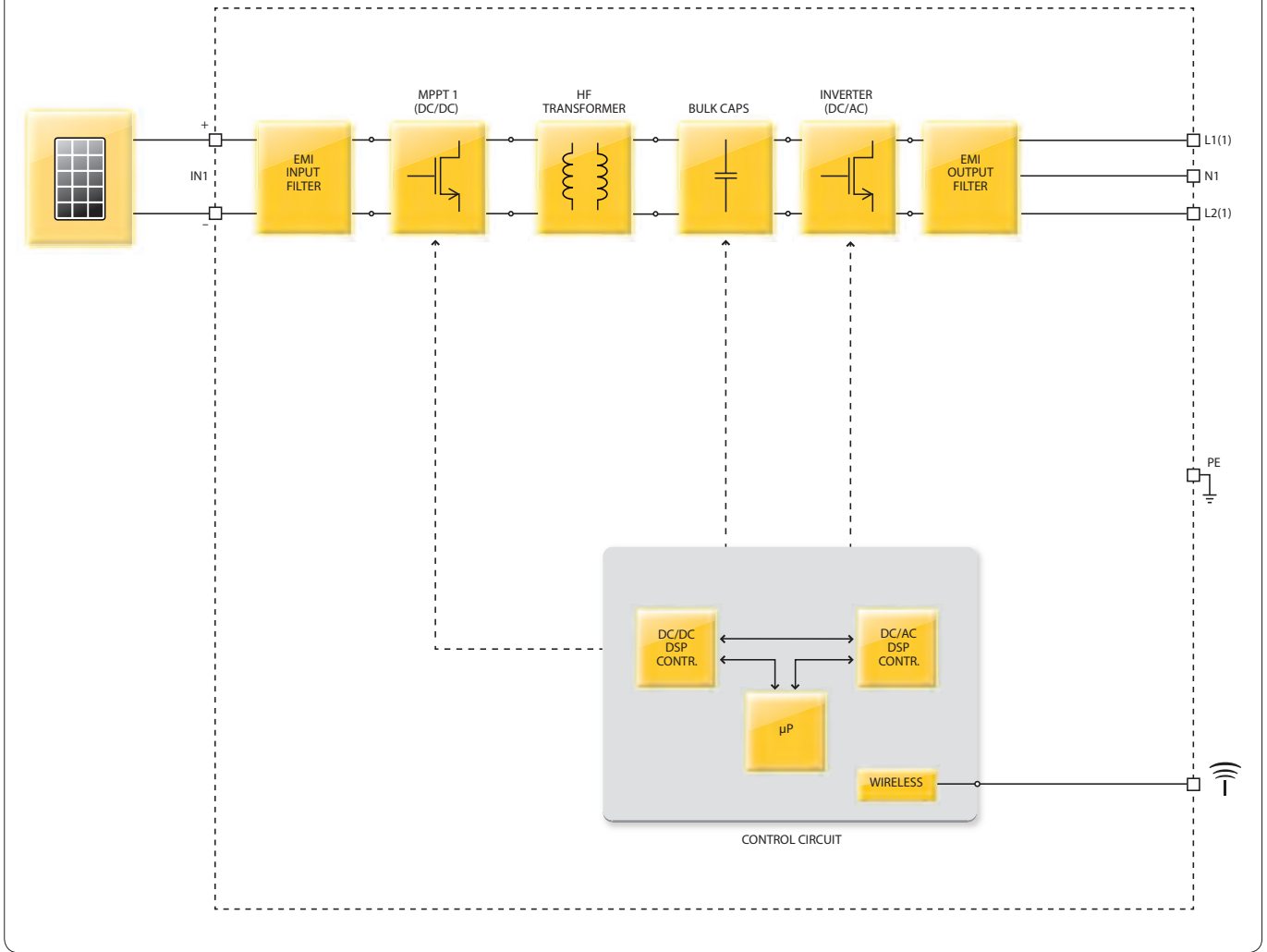
They also allow you to control individual panels in different ways and reduce the losses in efficiency in a variety of challenging conditions.



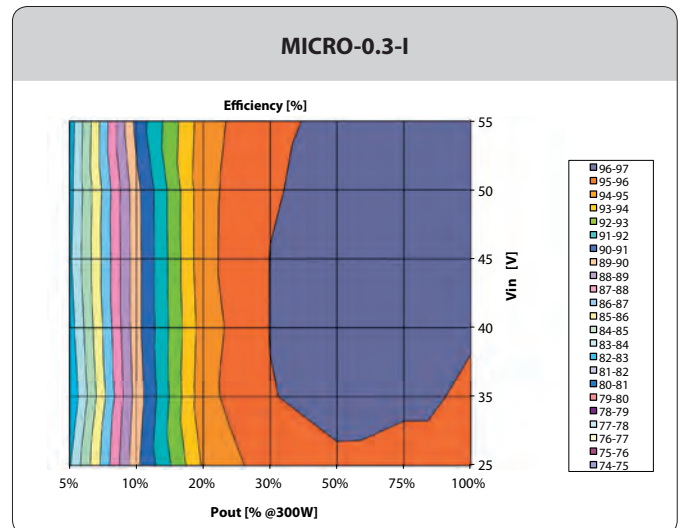
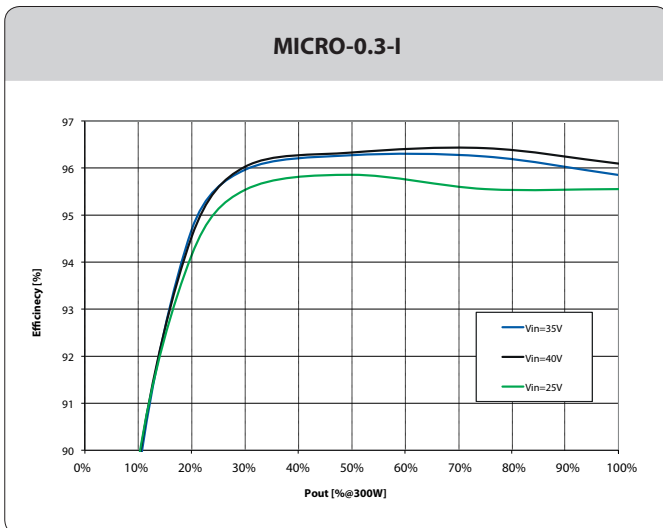
Features

- '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 MICROINVERTER



Block Diagram and Efficiency Curves



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 ($V_{dcmin} \dots V_{dcmax}$)	12...60 V	12...60 V
MPPT Input DC Voltage Range ($V_{MPPTmin} \dots V_{MPPTmax}$)	25...60 V	30...60 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	Tool Free PV connector WM / MC4	
Start-up DC Input Voltage (V_{start})	25V	25V
Output Side		
AC Grid Connection Type	Single phase	Single phase
Rated AC Power (P_{acr})	250 W	300 W
Rated AC Grid Voltage (V_{acr})	230 V	230 V
AC Voltage Range ($V_{acmin} \dots V_{acmax}$)	180...264 V ⁽¹⁾	180...264 V ⁽¹⁾
Maximum AC Output Current ($I_{ac,max}$)	1.3 A	1.5 A
Rated Output Frequency (f_r)	50 Hz	50 Hz
Output Frequency Range ($f_{min} \dots f_{max}$)	47...53 Hz ⁽²⁾	47...53 Hz ⁽²⁾
Nominal Power Factor ($\cos\phi_{acr}$)	> 0.95	> 0.95
Maximum number of units per string	17	17
Output Protection		
Anti-Islanding Protection	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)	
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"	
Weight	< 1.65 kg / 3.5 lb	< 1.65 kg / 3.5 lb
Safety		
Isolation Level	HF Transformer	HF Transformer
Marking	CE	CE
Safety and EMC Standard	EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12, EN 50178	
Grid Standard	Enel Guideline (CEI 0-21 + Attachment A70 Terna) ⁽⁴⁾ , VDE 0126-1-1, VDE-AR-N 4105 ⁽⁵⁾ , G83/1, RD1663, 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. With Derating below 200V for the 208V version

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

5. Limited to plant power \leq 3.68 kVA

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



www.power-one.com

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