

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.

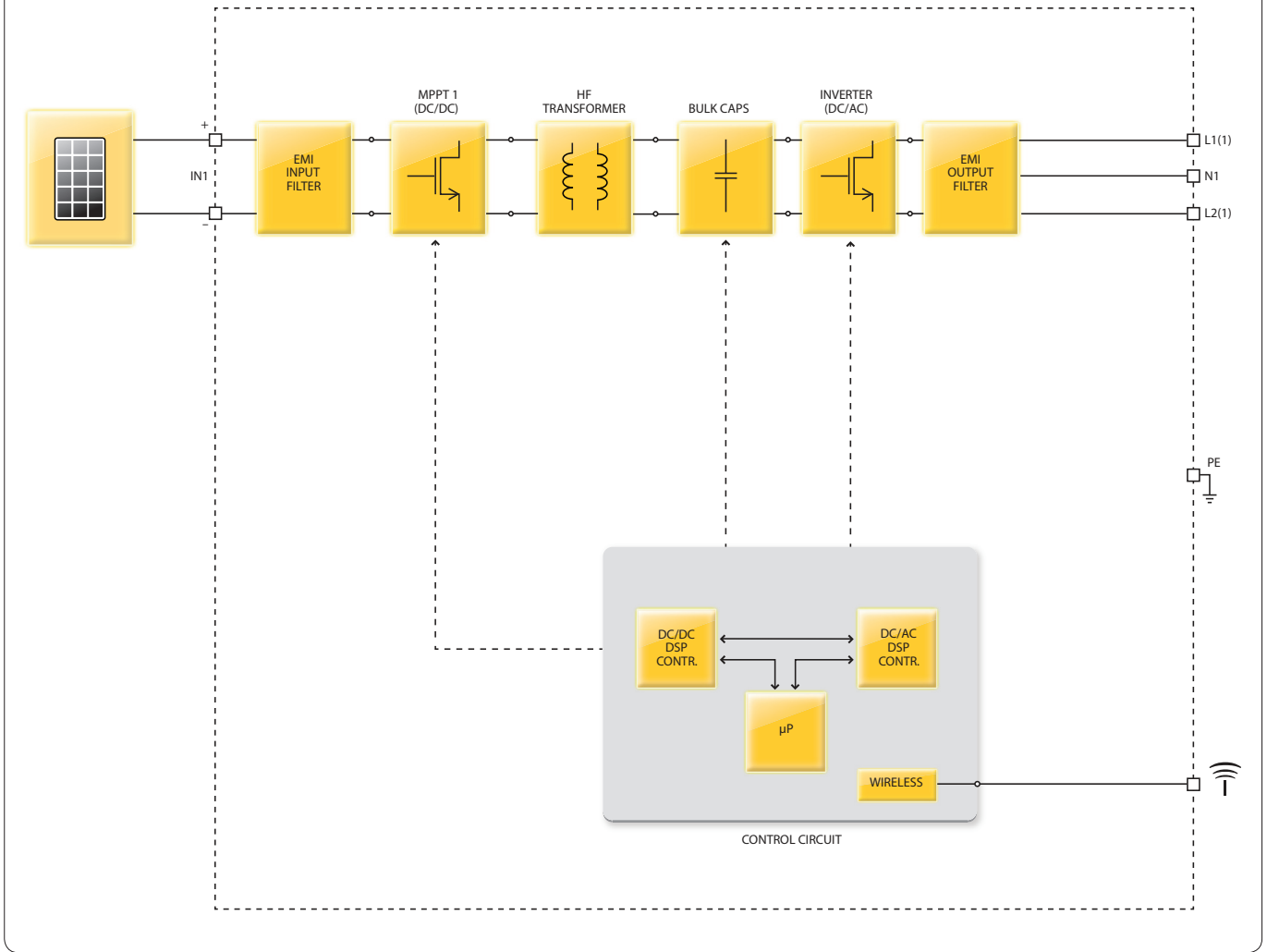
They also allow you to control individual panels in different ways and reduce the losses in efficiency in a variety of challenging conditions.



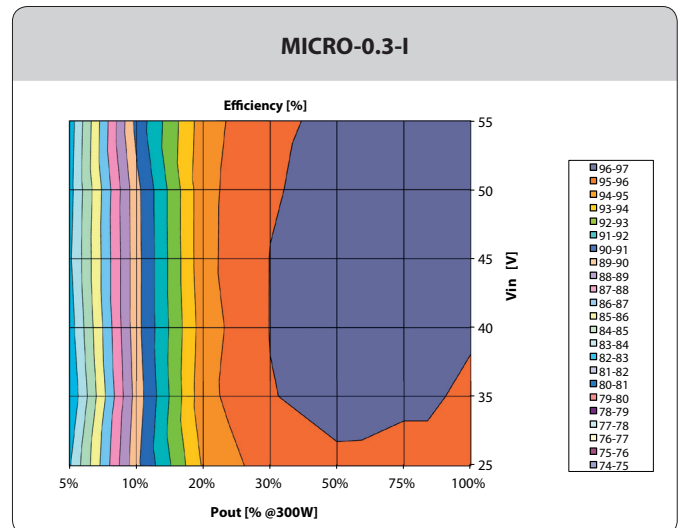
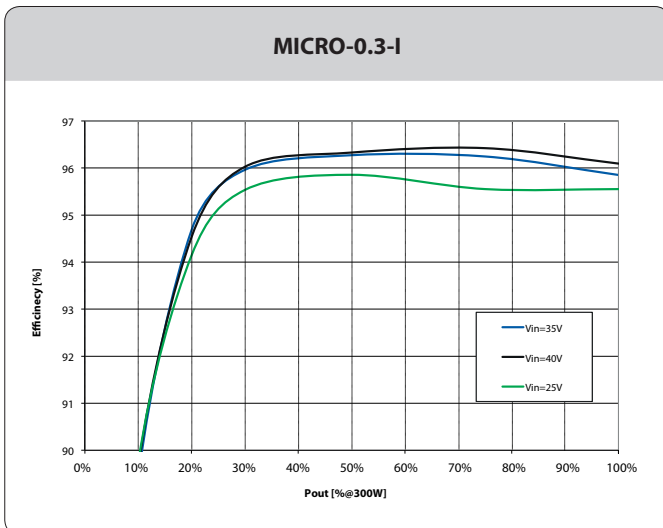
Features

- '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



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