



DS3

The most powerful Dual Microinverter

- One microinverter connects to two modules
- Max output power reaching 600VA, 799VA
- Two input channels with independent MPPT
- Large input current to adapt to large modules
- Reactive Power Control
- Maximum reliability, IP67
- Encrypted ZigBee Communication
- Safety protection relay integrated

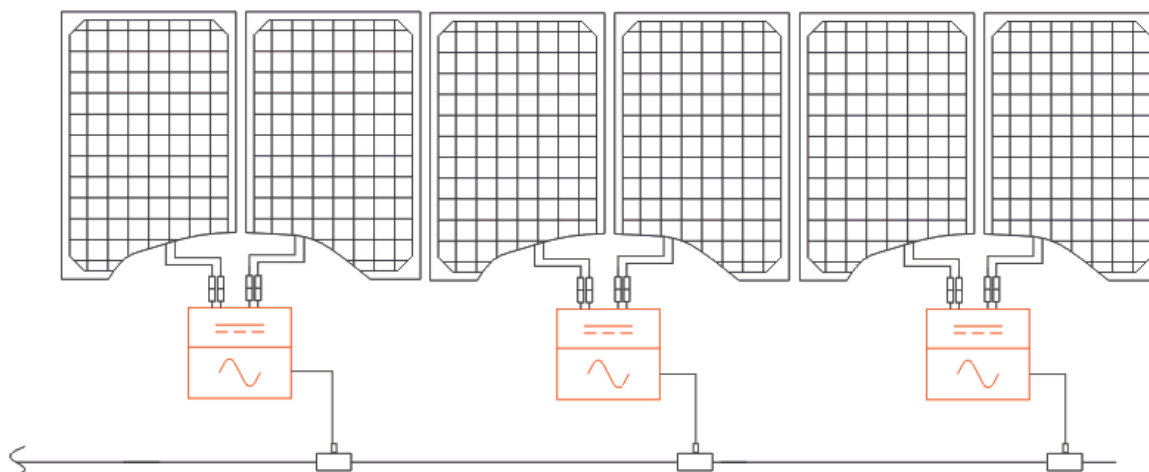
PRODUCT FEATURES

APsystems 3rd generation dual microinverters benefit from an entirely new architecture. With 2 independent MPPT, large input current and output power, the DS3 series products adapt to today's high power modules.

The innovative and compact design make the product lighter while maximizing power production. The components are encapsulated with silicone to reduce stress on the electronics, facilitate thermal dissipation, enhance waterproof properties and ensure maximum reliability of the system via rigorous testing methods including accelerated life testing. A 24/7 energy access through apps or web based portal facilitate remote diagnosis and maintenance.

The new DS3 series is interactive with power grids through a feature referred to as RPC (Reactive Power Control) to better manage photovoltaic power spikes in the grid. With a performance and an efficiency of 97.3%, APsystems DS3-S & DS3-M are a game changer to residential and commercial PV.

WIRING SCHEMATIC



Datasheet | DS3 Microinverter Series

| | | |
|---------------|-------|-------|
| Model | DS3-S | DS3-M |
| Region | EMEA | |

Input Data (DC)

| | | |
|--|--------------|--------------|
| Recommended PV Module Power (STC) Range | 255Wp-550Wp+ | 300Wp-620Wp+ |
| Peak Power Tracking Voltage ⁽¹⁾ | 28V-45V | |
| Operating Voltage Range | 16V-60V | |
| Maximum Input Voltage | 60V | |
| Maximum Input Current | 18A x 2 | 20A x 2 |
| Isc PV | 22.5A x 2 | 25A x 2 |

Output Data (AC)

| | | |
|--|--------------------------------|-----------------------------|
| Maximum Continuous Output Power | 600VA | 600VA ⁽²⁾ /799VA |
| Nominal Output Voltage/Range ⁽³⁾ | 230V/184V-253V | |
| Nominal Output Current | 2.6A | 2.6A ⁽²⁾ /3.5A |
| Nominal Output Frequency/ Range ⁽³⁾ | 50Hz/48Hz-51Hz | |
| Power Factor(Default/Adjustable) | 0.99/0.8 leading...0.8 lagging | |
| Maximum Units per 2.5mm ² Branch ⁽⁴⁾ | 8 | 6 |
| Maximum Units per 4mm ² Branch ⁽⁴⁾ | 10 | 8 |

Efficiency

| | |
|-------------------------|-------|
| Peak Efficiency | 97.3% |
| Nominal MPPT Efficiency | 99.5% |
| Night Power Consumption | 20mW |

Mechanical Data

| | |
|--|---|
| Operating Ambient Temperature Range ⁽⁵⁾ | - 40 °C to + 65 °C |
| Storage Temperature Range | - 40 °C to + 85 °C |
| Dimensions (W x H x D) | 263mm x 218mm x 41.2mm |
| Weight | 2.7kg |
| AC Bus Cable | 2.5mm ² (23A)/4mm ² (28A) |
| DC Connector Type | Stäubli MC4 PV-ADBP4-S2&ADSP4-S2 |
| Cooling | Natural Convection - No Fans |
| Enclosure Environmental Rating | IP67 |

Features

| | |
|--|--|
| Communication (Inverter To ECU) ⁽⁶⁾ | Encrypted ZigBee |
| Isolation Design | High Frequency Transformers, Galvanically Isolated |
| Energy Management | Energy Management Analysis (EMA) system |
| Warranty ⁽⁷⁾ | 12 Years Standard ; 20 Years Optional |

Compliances

| | |
|--------------------------------|--|
| Safety, EMC & Grid Compliances | DS3-S: EN 62109-1/-2; EN 61000-1/-2/-3/-4; VDE-AR-N 4105 DS3-M: EN 62109-1/-2; EN 61000-6-1/-2/-3/-4; VDE-AR-N 4105 |
|--------------------------------|--|

(1) VMP values may be different on previous DS3 models with a 34-45V range for microinverters not connected to an ECU and 30-45V range for devices upgraded with an ECU.

(2) DS3-M's certified maximum continuous output power is 799VA, and its factory setting could be 600VA as default and raise to 799VA after installation according to the regulation adjustment.

(3) Nominal voltage/frequency range can be extended beyond nominal if required by the utility.

(4) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

(5) The inverter may enter to power de-grade mode under poor ventilation and heat dissipation installation environment.

(6) Recommend no more than 80 inverters register to one ECU for stable communication.

(7) To be eligible for the warranty, APsystems microinverters need to be monitored via the EMA portal. Please refer to our warranty T&Cs available on emea.APsystems.com.



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