



## DS3 Series

### The most powerful Dual Microinverter

- One microinverter connects to two solar modules
- Max output power reaching 640VA, 768VA or 880VA
- Two independent input channels (MPPT)
- CA Rule 21 (UL 1741 SB) compliant
- NEC 2023 690.12 Rapid Shutdown Compliant
- Encrypted Wireless ZigBee Communication
- Phase Monitored and Phase Balanced

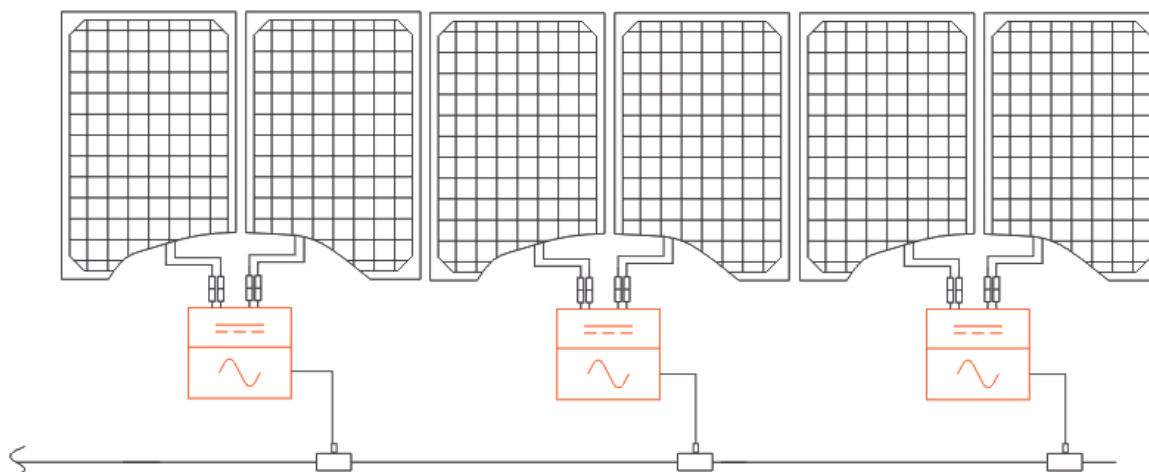
## PRODUCT FEATURES

**APsystems' 3<sup>rd</sup> generation of dual-module microinverters, the DS3 product family represents the culmination of years of power conversion expertise and innovation in high-efficiency, high-density power conversion to maximize the peak performance of today's high-capacity PV modules.**

The DS3 series reaches unprecedented levels of power output. It features 2 input channels, each with independent MPPT, and encrypted wireless ZigBee communication. An innovative and compact design makes the product lighter while maximizing power production, and silicone-encapsulated components reduce stress on electronics, facilitate thermal dissipation, and enhance weatherproofing. Reliability is significantly increased thanks to 20% fewer components than previous generations. A 24/7 energy access through apps or web based portal facilitate remote diagnosis and maintenance.

The DS3 series is grid-interactive and fully compliant with CA Rule 21 requirements. With an excellent performance and high conversion efficiency, a unique integration with less components, the APsystems DS3 series is a gamechanger for residential and commercial solar.

## WIRING SCHEMATIC



# Datasheet | DS3 Microinverter Series

|               |       |       |     |
|---------------|-------|-------|-----|
| <b>Model</b>  | DS3-S | DS3-L | DS3 |
| <b>Region</b> |       | USA   |     |

## Input Data (DC)

|   |               |                 |               |
|---|---------------|-----------------|---------------|
| Recommended PV Module Power (STC) Range | 250Wp-480Wp+  | 265Wp-570Wp+    | 300Wp-660Wp+  |
| Peak Power Tracking Voltage             | 28V-45V       |                 |               |
| Operating Voltage Range                 | 26V-60V       |                 |               |
| Maximum Input Voltage                   | 60V           |                 |               |
| Maximum Input Current                   | 16A x 2       | 18A x 2         | 20A x 2       |
| Maximum input short circuit current     | 20A per input | 22.5A per input | 25A per input |

## Output Data (AC)

|  |  |                         |                         |
|--|--|-------------------------|-------------------------|
| Maximum Continuous Output Power                                | 640VA                                    | 768VA                   | 880VA                   |
| Nominal Output Voltage/Range <sup>(1)</sup>                    | 208V/183.04-228.8V; 240V/211V-264V       |                         |                         |
| Nominal Output Current   | 3.08A@208V/<br>2.66A@240V                | 3.7A@208V/<br>3.2A@240V | 4.2A@208V/<br>3.7A@240V |
| Maximum Output Fault Current (ac) And Duration                 | 5.691Apk, 26.75ms of duration; 3.307Arms |                         |                         |
| Nominal Output Frequency/ Range <sup>(1)</sup>                 | 60Hz/58.8Hz-61.2Hz(HECO:57Hz-63Hz)       |                         |                         |
| Power Factor (Default/Adjustable)                              | 0.99/0.8 leading...0.8 lagging           |                         |                         |
| Maximum Units per 12AWG Branch with 20A breaker <sup>(2)</sup> | 5@208V; 6@240V                           | 4@208V; 5@240V          | 3@208V; 4@240V          |
| Maximum Units per 10AWG Branch with 30A breaker <sup>(2)</sup> | 8@208V; 9@240V                           | 6@208V; 7@240V          | 5@208V; 6@240V          |

## Efficiency

|                         |       |
|-------------------------|-------|
| Peak Efficiency         | 97.3% |
| CEC Efficiency          | 97%   |
| Nominal MPPT Efficiency | 99.5% |
| Night Power Consumption | 20mW  |

## Mechanical Data

|  |   |   |
|--|---|---|
| Operating Ambient Temperature Range <sup>(3)</sup> | -40°F to +149°F (-40°C to +65°C)                |   |
| Storage Temperature Range                          | -40°F to +185°F (-40°C to +85°C)                |   |
| Dimensions (W x H x D)                             | 10.3" x 8.6" x 1.6"<br>(263mm x 218mm x 41.2mm) | 10.3" x 8.6" x 1.7"<br>(263mm x 218mm x 42.5mm) |
| Weight   | 5.7lbs(2.7kg)                                   | 6.8lbs(3.1kg)                                   |
| DC Connector Type                                  | Stäubli MC4 PV-ADBP4-S2&ADSP4-S2                |   |
| Cooling  | Natural Convection - No Fans                    |   |
| Enclosure Environmental Rating                     | Type 6  |   |

## Features

|  |  |
|--|--|
| Communication (Inverter To ECU) <sup>(4)</sup> | Encrypted ZigBee                                   |
| Isolation Design                               | High Frequency Transformers, Galvanically Isolated |
| Energy Management                              | Energy Management Analysis (EMA) system            |
| Warranty <sup>(5)</sup>                        | 25 Years Standard                                  |

## Compliance

|                           |   |
|---------------------------|---|
| Safety and EMC Compliance | UL1741; CSA C22.2 No.107.1-16; FCC Part15B; ICES-003 Class B; IEEE1547; UL1741SB;CA Rule 21 (UL1741-SA);SRD-V2.0; NEC2014 & NEC2017 & NEC2020 & NEC2023 Section 690.11 DC Arc-Fault circuit Protection NEC2014 & NEC2017 & NEC2020 & NEC2023 Section 690.12 Rapid Shutdown of PV systems on Buildings |
|---------------------------|---|

(1) Nominal voltage/frequency range can be extended beyond nominal if required by the utility.  
 (2) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.  
 (3) The inverter may enter to power de-grade mode under poor ventilation and heat dissipation installation environment.  
 (4) Recommend no more than 80 inverters register to one ECU for stable communication.  
 (5) 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 [usa.APsystems.com](http://usa.APsystems.com).

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