



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 SA) compliant
- NEC 2020 690.12 Rapid Shutdown Compliant
- Encrypted Wireless ZigBee Communication
- Phase Monitored and Phase Balanced

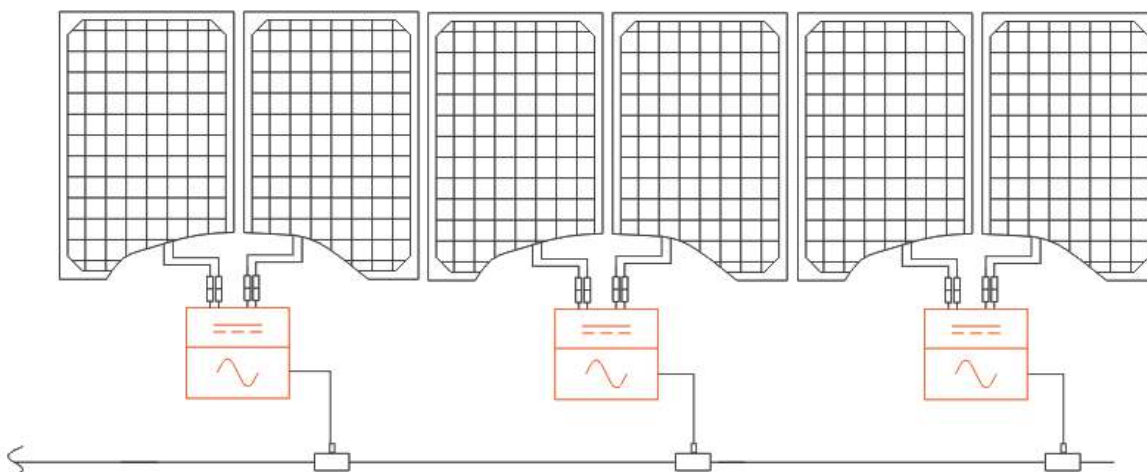
PRODUCT FEATURES

APsystems 3rd generation of dual microinverters are reaching unprecedented power outputs of 640VA or 768VA or 880VA to adapt to today's larger power module. With 2 independent MPPT, encrypted ZigBee signals, the DS3-S, DS3-L and DS3 benefit from an entirely new architecture and are fully backwards compatible with the QS1 and YC600 microinverters.

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 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%, a unique integration with 20% less components, APsystems DS3-S, DS3-L and DS3 are a game changer to residential and commercial PV.

WIRING SCHEMATIC



Datasheet | DS3 Microinverter Series

Model	DS3-S	DS3-L	DS3
Input Data (DC)			
Recommended PV Module Power (STC) Range	250Wp-480Wp+	265Wp-570Wp+	300Wp-660Wp+
Peak Power Tracking Voltage	22V-48V	25V-55V	32V-55V
Operating Voltage Range	16V-60V	16V-60V	26V-60V
Maximum Input Voltage	60V		
Maximum Input Current	16A x 2	18A x 2	20A x 2

Output Data (AC)			
Maximum Continuous Output Power	640VA	768VA	880VA
Nominal Output Voltage/Range ^①	240V / 211V-264V		
Nominal Output Current	2.66A	3.20A	3.7A
Nominal Output Frequency/ Range ^①	60Hz/59.3Hz-60.5Hz		
Power Factor(Default/Adjustable)	0.99/0.7 leading...0.7 lagging		
Maximum Units per 20A and 30A Branch ^②	6/9	5/7	4/6
AC Bus Cable	12AWG / 10AWG		

Efficiency	
Peak Efficiency	97%
CEC Efficiency	96.5%
Nominal MPPT Efficiency	99.5%
Night Power Consumption	20mW

Mechanical Data	
Operating Ambient Temperature Range	-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" (262mm X 218mm X41.2mm)
Weight	5.7lbs(2.6kg)
DC Connector Type	Stäubli MC4 PV-ADBP4-S2&ADSP4-S2
Cooling	Natural Convection - No Fans
Enclosure Environmental Rating	NEMA 6

Features	
Communication (Inverter To ECU) ^③	Encrypted ZigBee
Isolation Design	High Frequency Transformers, Galvanically Isolated
Energy Management	Energy Management Analysis (EMA) system
Warranty ^④	10 Years Standard ; 25 Years Optional

Compliance	
Safety and EMC Compliance	UL1741;CSA C22.2 No. 107.1-16;CA Rule 21 (UL 1741 SA); FCC Part15; ANSI C63.4; ICES-003; IEEE1547; NEC2014&NEC2017 Section 690.11 DC Arc-Fault circuit; Protection NEC2014&NEC2017 Section 690.12 Rapid Shutdown of PV systems on Buildings; NEC 2020

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 Recommend no more than 80 inverters register to one ECU for stable communication.
 ④ 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.

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