

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

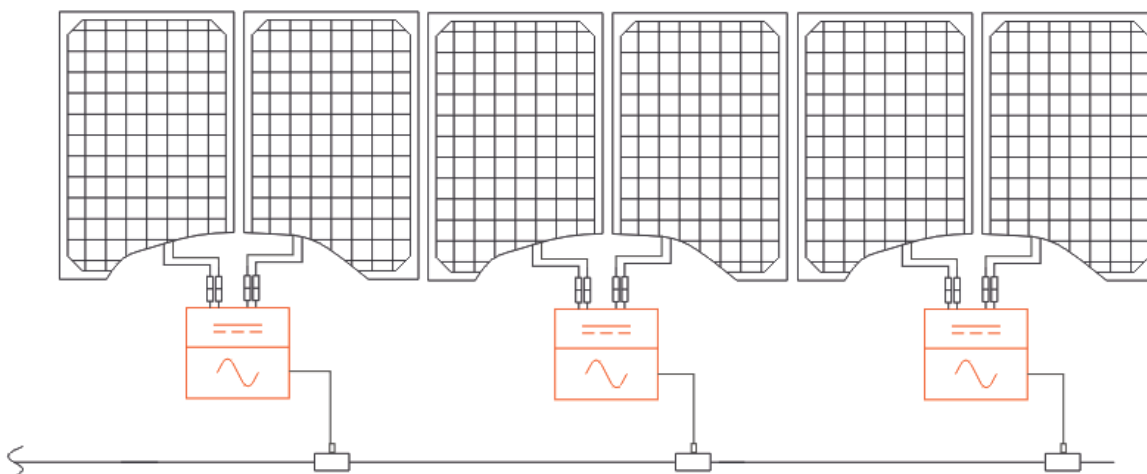
PRODUCT FEATURES

APsystems' 3rd generation of dual-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 and is fully backwards compatible with QS1 and YC600 microinverters and accessories. 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 its unparalleled performance, efficiency of 97.3%, and increased reliability, the APsystems DS3 series is a gamechanger for residential and commercial solar.

WIRING SCHEMATIC



Datasheet | DS3 Microinverter Series

Model	DS3-S	DS3-L	DS3
Region	USA / Canada		

Input Data (DC)

Recommended PV Module Power (STC) Range	250Wp-480Wp+	265Wp-570Wp+	300Wp-660Wp+
Peak Power Tracking Voltage ⁽¹⁾	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 ⁽²⁾	240V / 211V-264V		
Nominal Output Current	2.66A	3.2A	3.7A
Maximum Output Fault Current (ac) And Duration	5.691Apk, 26.75ms of duration; 3.307Arms		
Nominal Output Frequency/ Range ⁽²⁾	60Hz/59.3Hz-60.5Hz		
Power Factor (Default/Adjustable)	0.99/0.8 leading...0.8 lagging		
Maximum Units per 20A Branch ⁽³⁾	6	5	4
Maximum Units per 30A Branch ⁽³⁾	9	7	6
AC Bus Cable	12AWG / 10AWG		

Efficiency

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

Mechanical Data

Operating Ambient Temperature Range ⁽⁴⁾	-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" (263mm x 218mm x 41.2mm)	10.3" x 8.6" x 1.7" (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) ⁽⁵⁾	Encrypted ZigBee
Isolation Design	High Frequency Transformers, Galvanically Isolated
Energy Management	Energy Management Analysis (EMA) system
Warranty ⁽⁶⁾	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; ICES-003; IEEE1547; NEC2014&NEC2017&NEC2020 Section 690.11 DC Arc-Fault circuit Protection; NEC2014&NEC2017&NEC2020 Section 690.12 Rapid Shutdown of PV systems on Buildings
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(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) Nominal voltage/frequency range can be extended beyond nominal if required by the utility.
(3) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

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

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

(6) 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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Specifications subject to change without notice please ensure you are using the most recent update found at web : usa.APsystems.com

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