APsystems

Leading the Industry in
Solar Microinverter Technology

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

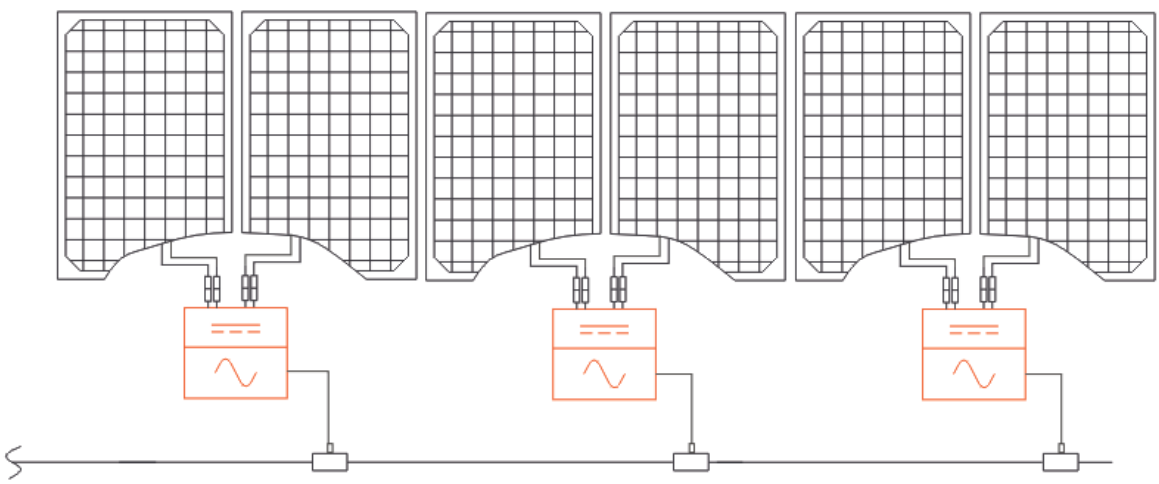
PRODUCT FEATURES

APsystems' 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. 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 converstion 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

Model	DS3-S	DS3-L	DS3
Region		Canada	
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(1)		208V/183.04-228.8V; 240V/211V-264V	
Nominal Output Current	3.08A@208V/ 2.66A@240V	3.7A@208V/ 3.2A@240V	4.2A@208V/ 3.7A@240V
Maximum Output Fault Current (ac) And Duration		5.691Apk, 26.75ms of duration; 3.307Arms	
Nominal Output Frequency/ Range(1)		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(2)	5@208V; 6@240V	4@208V; 5@240V	3@208V; 4@240V
Maximum Units per 10AWG Branch with 30A breaker(2)	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(3)		-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" × 8.6" × 1.6" (263mm x 218mm x 41.2mm)		10.3" × 8.6" × 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) (4)		Encrypted ZigBee	
Isolation Design		High Frequency Transformers, Galvanically Isolated	
Energy Management		Energy Management Analysis (EMA) system	
Warranty(5)		12 Years Standard ; 25 Years Optional	
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 canada.APsystems.com.

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Meets the standard requirements for Distributed Energy Resources (UL 1741) and identified with the CSA Listed Mark