



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 S8) compliant
- NEC 2020 690.12 Rapid Shutdown Compliant
- Encrypted Wireless ZigBee Communication
- Phase Monitored and Phase Balanced

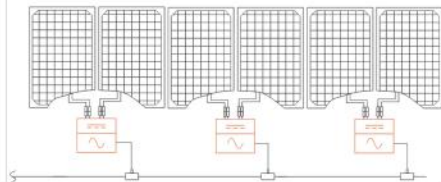
PRODUCT FEATURES

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. 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 facilitates 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



2024/02/22 Rev2.0

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		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⁾		240V / 231V-264V	
Nominal Output Current	2.66A	3.2A	3.7A
Maximum Output Fault Current (ac) And Duration		5.691A _{pk} , 26.75ms of duration; 3.307A _{ms}	
Nominal Output Frequency/ Range ⁽²⁾		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 ⁽³⁾	6 (20A breaker)	5 (20A breaker)	4 (20A breaker)
Maximum Units per 10AWG Branch ⁽³⁾	9 (30A breaker)	7 (30A breaker)	6 (30A breaker)
Efficiency			
Peak Efficiency		97.3%	
CEC Efficiency		97%	
Nominal MPPT Efficiency		99.5%	
Night Power Consumption		20mW	

Mechanical Data		
Operating Ambient Temperature Range ⁽¹⁾	-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 6.6" x 1.6" (263mm x 218mm x 41mm)	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	StaUBLi MC4 PV-ADBP4-S2&ADSP4-S2	
Cooling	Natural Convection - No Fans	
Enclosure Environmental Rating	Type 6	

Features	
Communication (Inverter To ECU) ⁽¹⁾	Encrypted ZigBee
Isolation Design	High Frequency Transformers, Galvanically Isolated
Energy Management	Energy Management Analysis (EMA) system
Warranty ⁽²⁾	10 Years Standard ; 25 Years Optional

Compliance	
Safety and EMC Compliance	UL1741; CSA C22.2 No. 1071-16; UL1741SA; UL1741SB; IEEE1547; Rule 21; SRD-V2.0; FCC Part15; ICES-003; NEC2014&NEC2017&NEC2020 Section 690.11 DC Arc-Fault circuit Protection; NEC2014&NEC2017&NEC2020 Section 690.12 Rapid Shutdown of PV systems on Buildings

⁽¹⁾ Nominal voltage/frequency design can be extended beyond nominal if required by the utility.
⁽²⁾ Units may vary due to local requirements to define the number of microinverters per panel in a unit area.
⁽³⁾ The inverter may enter to power derate mode under poor ventilation and heat dissipation limitation environment.
⁽⁴⁾ Recommended no more than 80 inverters register to one ECU for stable communication.
 © It is eligible for the warranty. APsystems microinverters need to be monitored via the ECU portal. Please refer to our warranty. ECU available on us.apsystems.com

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 Specifications subject to change without notice please ensure you are using the most recent update found at us.apsystems.com