



## DS3-L-SPE

### The most powerful single Microinverter

- Max output power reaching 500VA
- Reactive Power Control
- Maximum reliability, IP67
- Encrypted ZigBee Communication
- Safety protection relay integrated

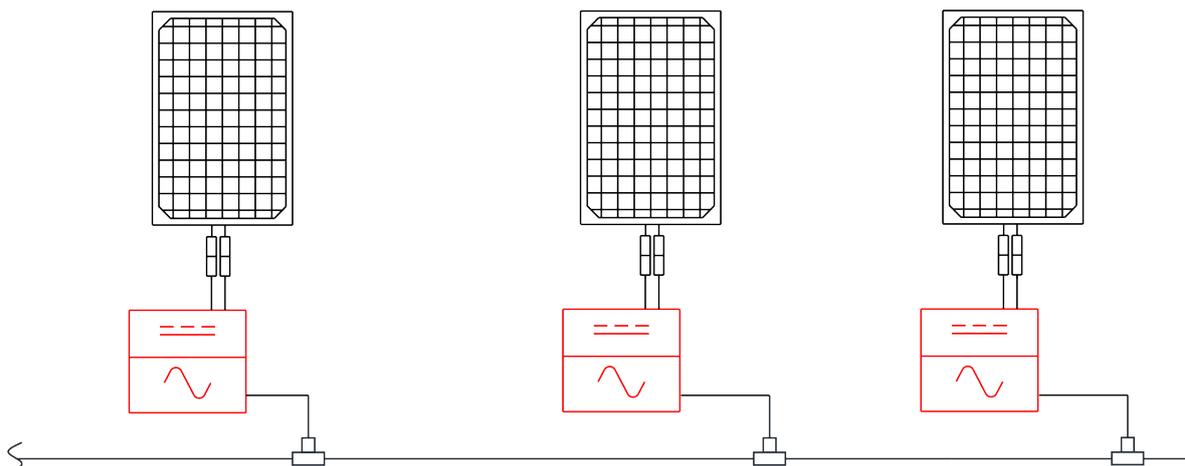
## PRODUCT FEATURES

APsystems 3<sup>rd</sup> generation of single microinverters are reaching unprecedented power outputs of 500VA to adapt to today's larger power module. encrypted ZigBee signals, the DS3-L-SPE benefit from an entirely new architecture.

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-L-SPE 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 97.3%, a unique integration with 20% less components, APsystems DS3-L-SPE is a game changer to residential and commercial PV.

## WIRING SCHEMATIC



# Datasheet | DS3-L-SPE Microinverter

**Model** DS3-L-SPE

**Region** EMEA

## Input Data (DC)

Recommended PV Module Power (STC) Range	255Wp-550Wp+
Peak Power Tracking Voltage <sup>(1)</sup>	28V-45V
Operating Voltage Range	16V-60V
Maximum Input Voltage	60V
Maximum Input Current	18A
Isc PV	22.5A

## Output Data (AC)

Maximum Continuous Output Power	500VA
Nominal Output Voltage/Range <sup>(2)</sup>	230V/184V-253V
Nominal Output Current	2.2A
Nominal Output Frequency/ Range <sup>(2)</sup>	50Hz/48Hz-51Hz
Power Factor(Default/Adjustable)	0.99/0.8 leading...0.8 lagging
Maximum Units per 2.5mm <sup>2</sup> Branch <sup>(3)</sup>	10

## Efficiency

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

## Mechanical Data

Operating Ambient Temperature Range <sup>(4)</sup>	- 40 °C to + 65 °C
Storage Temperature Range	- 40 °C to + 85 °C
Dimensions (W x H x D)	263mm x 218mm x 41.2mm
Weight	2.3kg
AC Bus Cable	2.5mm <sup>2</sup> (23A)
DC Connector Type	Stäubli MC4 PV-ADBP4-S2&ADSP4-S2
Cooling	Natural Convection - No Fans
Enclosure Environmental Rating	IP67

## Features

Communication (Inverter To ECU) <sup>(5)</sup>	Encrypted ZigBee
Isolation Design	High Frequency Transformers, Galvanically Isolated
Energy Management	Energy Management Analysis (EMA) system
Warranty <sup>(6)</sup>	10 Years Standard ; 20 Years Optional

## Compliances

Safety, EMC & Grid Compliances	EN 62109-1/-2; EN 61000-1/-2/-3/-4; EN 50549-1; PN-EN 50549-1; DIN V VDE V 0126-1-1; CEI 0-21; UNE 217002; NTS; RD647; VDE-AR-N 4105; G98; G99; G98/NI; G99/NI
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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](http://emea.apsystems.com).

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## European offices

### APsystems

Karspeldreef 8, 1101 CJ, Amsterdam, The Netherlands  
Email : [emea@apsystems.com](mailto:emea@apsystems.com)

### APsystems

244c rue du Point du Jour 01000 Saint Denis lès Bourg,  
France  
Email : [emea@apsystems.com](mailto:emea@apsystems.com)