

Deye RW-F5.3-1H3

All-in-one 3.6kW inverter + 5.3kWh battery with 4ms switching and IP65 protection.

Models Covered: RW-F5.3-1H3

Manufacturer: Ningbo Deye Technology Co., Ltd. (Stock Code: 605117.SH)

Application: The Deye RW-F5.3-1H3 combines a 3.6kW hybrid inverter with a robust 5.3kWh LiFePO4 battery in one integrated unit. With 4ms switching time for seamless power transitions, 97% max efficiency, and scalability up to 80kW/164.3kWh, it's the perfect all-in-one solution for residential energy storage.

Technical Specifications

Parameter	RW-F5.3-1H3
PV String Input Data	
Max PV Input Power	8000 W
Max PV Input / Array Open Circuit Voltage	500 V
Max PV Input Current	18+18 A
MPPT Efficiency	>99%
MPPT Voltage Range	150 to 425 V
MPPT Voltage Range at Full Load	300 to 425 V
Number of MPP Trackers	2
Start-up Voltage	125 V
Strings per MPP Tracker	1 + 1
MPPT Nominal Voltage	370 V
Electrical / AC Output Data	
Max AC Apparent Power	5500* VA
Max Efficiency	97%
Peak / Surge Power (W)	2 time of rated power, 10s
Rated AC Power	3.6 kW
AC Frequency Range	50Hz/45Hz-55Hz, 60Hz/55Hz-65Hz
AC Grid Connection Type	L+N+PE
AC Output Voltage	220/230 V
Grid / AC Frequency	50Hz/45Hz-55Hz , 60Hz/55Hz-65Hz
Grid Switching / Transfer Time	4 ms
Max Parallel Units	16
Nominal Voltage	51.2 V
Output Frequency	50/60 Hz
Output Voltage Range	220 V – 230 V
Rated AC Output Current	22 .8/21.8 A

Parameter	RW-F5.3-1H3
THD / THDi	<3% (of nominal power)
Adjustable Power Factor Range	0.8 leading to 0.8 lagging
Max AC Output Current	25/24 A
Battery Data	
Battery Energy Capacity	5.3 kWh
Max System Capacity	80kW/164.3kWh
Battery Type / Chemistry	LiFePO4
Cycle Life	≥6000 cycles
Max Charge Current	75 A
Max Discharge Current	100 A
Protection Features	
IP Rating	IP65
Mechanical Data	
Cooling	Intelligent Air Cooling
Installation / Mounting	Wall-mounted
Operating Conditions	
Noise Level	<30 dB
Operating Temperature	-10 to 55 °C

Note: Specifications are based on the official Deye RW-F5.3-1H3 datasheet. Values may be subject to change; always verify against the latest manufacturer documentation before system design and procurement.

Availability & grid compliance in UAE

Market	UAE
Grid authority / regulator	DEWA, ADDC, SEWA
Quotation currency	AED
Support hours timezone	Asia/Dubai
Delivery & installation coverage	Dubai, Abu Dhabi, Sharjah, Ajman, Ras Al Khaimah

Figures on this page are the manufacturer's own, measured at the test conditions the datasheet states — they do not change by country. What changes is the approval that has to be met before the unit is energised: in UAE that is DEWA, ADDC, SEWA. Confirm the grid code, import requirements and any local certification with them, or with us, before you order.

Key Features & Technical Highlights

- **All-in-One Design:** Inverter and battery integrated in single unit
- **4ms Switching:** Ultra-fast grid to backup transition
- **97% Efficiency:** Maximum solar-to-home efficiency
- **Scalable to 164 kWh:** Up to 16 units parallel + 31 expansion batteries
- **IP65 Protection:** Outdoor-rated with intelligent air cooling
- **Ultra Quiet:** Less than 30dB noise level

Frequently Asked Questions

- ▶ What makes the RW-F5.3-1H3 an 'all-in-one' system?
- ▶ How fast does it switch to backup power?
- ▶ Can I expand the system later?
- ▶ Is it suitable for outdoor installation?

Official Source & Documentation

This technical datasheet is derived from official manufacturer documentation provided by **Ningbo Deye Technology Co., Ltd.**. For the latest specifications, firmware updates, and official documentation, visit the manufacturer's website.

- **Manufacturer Website:** www.deyeinverter.com
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Disclaimer: All specifications and technical data presented on this page are based on the official Deye RW-F5.3-1H3 datasheet published by Ningbo Deye Technology Co., Ltd. Specifications are subject to change without notice. Always verify against the latest manufacturer documentation at deyeinverter.com before system design, procurement, or installation. Compliance with local regulations, grid codes (DEWA, ADDC, SEWA) and utility requirements in UAE is the responsibility of the system designer/installer.

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