Deye SUN-3-6-6-2K-G05P1/3.6K-G05P1-EU-AM2/4.2K-G04/4.2K-G05P1-EU-AM2/4.6K-G04/4.6K-G05P1-EU-AM2/4K-G04/4K-G05P1-EU-AM2/5.2K-G04/5.2K-G05P1-EU-AM2/5K-G04/5K-G05P1-EU-AM2/6.2K-G04/6.2K-G05P1-EU-AM2/6K-G04/6K-G05P1-EU-AM2

3.6-6.2kW Single Phase String Inverter for residential and commercial solar installations.

Models Covered: SUN-3-6-6-2K-G05P1, SUN-3.6K-G05P1-EU-AM2, SUN-4.2K-G04, SUN-4.2K-G05P1-EU-AM2, SUN-4.6K-G04, SUN-4.6K-G05P1-EU-AM2, SUN-4K-G04, SUN-4K-G05P1-EU-AM2, SUN-5.2K-G04, SUN-5.2K-G05P1-EU-AM2, SUN-5K-G04, SUN-5K-G05P1-EU-AM2, SUN-6.2K-G04, SUN-6.2K-G05P1-EU-AM2, SUN-6K-G04, SUN-6K-G05P1-EU-AM2

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

Application: The Deye SUN-3-6-6-2K-G05P1 is a high-efficiency single phase string inverter designed for solar installations. With 3.6-6.2kW power output, it offers excellent performance, reliability, and easy installation for both residential and commercial applications.

Technical Specifications

Parameter	SUN-3-6-6-2K-G05P1	SUN-3.6K-G05P1-EU-AM2	SUN-4.2K-G04	SUN-4.2K-G05P1-EU-AM2	SUN-4.6K-G04	SUN-4.6K-G05P1-EU-AM2
General Data						
Inverter Type	String Inverter	—	—	—	—	—
PV String Input Data						
Max PV Array Power	—	7200 W	—	—	—	—
Max PV Input Power	7.8 kW	4.7 kW	5.5 kW	5.5 kW	6 kW	6 kW
Max PV / DC Voltage	—	550 V	550 V	550 V	550 V	550 V
Max PV Input / Array Open Circuit Voltage	550 V					
Max PV Input Current	18+18 A	18+18 A	18+18 A	18+18 A	18+18 A	18+18 A
MPPT Efficiency	>99%					
MPPT Voltage Range	70 V – 500 V					
MPPT Voltage Range at Full Load	—	300 V – 425 V	—	—	—	—
Number of MPP Trackers	—	2	2	2	2	2
PV Operating Voltage Range	—	125 V – 500 V	—	—	—	—
Start-up Voltage	80 V					
Max PV Short-Circuit Current	27+27 A	27+27 A	27+27 A	27+27 A	27+27 A	27+27 A
MPPT Nominal Voltage	360 V					

Parameter	SUN-3-6-6-2K-G05P1	SUN-3.6K-G05P1-EU-AM2	SUN-4.2K-G04	SUN-4.2K-G05P1-EU-AM2	SUN-4.6K-G04	SUN-4.6K-G05P1-EU-AM2
PV Connection Type	—	—	—	—	—	—
Electrical / AC Output Data						
European Efficiency	97.0%	96.9%	97.0%	97.0%	97.0%	97.0%
Max AC Apparent Power	6.6 kVA	3960 VA	4.62 kVA	4.62 kVA	5.06 kVA	5.06 kVA
Max Efficiency	97.5%	97.3%	97.5%	97.5%	97.5%	97.5%
Rated AC Power	6 kW	3.6 kW	4.2 kW	4.2 kW	4.6 kW	4.6 kW
AC Grid Connection Type	L/N/PE	L/N/PE	L/N/PE	L/N/PE	L/N/PE	L/N/PE
Grid / AC Frequency	50/45-55, 60/55-65 Hz	50/45-55, 60/55-65 Hz	50/45-55, 60/55-65 Hz	50/45-55, 60/55-65 Hz	50/45-55, 60/55-65 Hz	50/45-55, 60/55-65 Hz
Max Operating Current	—	18+18 A	13+13 A	18+18 A	13+13 A	18+18 A
Output Voltage Range	0.85 V – 1.1 V					
Phase	Single Phase	Single-phase	—	Single-phase	—	Single-phase
Rated AC Output Current	27.3/26.1 A	16.4/15.7 A	19.1/18.3 A	19.1/18.3 A	21/20 A	21/20 A
THD / THDi	<3%					
Adjustable Power Factor Range	0.8 leading to 0.8 lagging	0.8 leading to 0.8 lagging	0.8 leading to 0.8 lagging	0.8 leading to 0.8 lagging	0.8 leading to 0.8 lagging	0.8 leading to 0.8 lagging
Max AC Output Current	30/28.7 A	18/17.3 A	21/20.1 A	21/20.1 A	23/22 A	23/22 A
Topology	Non-Isolated	Non-Isolated	Non-Isolated	Non-Isolated	Non-Isolated	Non-Isolated
Battery Data						
Max Charge Current	—	90 A	—	—	—	—

Parameter	SUN-3-6-6-2K-G05P1	SUN-3.6K-G05P1-EU-AM2	SUN-4.2K-G04	SUN-4.2K-G05P1-EU-AM2	SUN-4.6K-G04	SUN-4.6K-G05P1-EU-AM2
Max Discharge Current	—	90 A	—	—	—	—
Number of Battery Inputs	—	1	—	—	—	—
Protection Features						
IP Rating	IP65					
AC Short-Circuit Protection	—	—	—	—	—	—
AC/DC Surge Protection	TYPE II(DC), TYPE II(AC)	TYPE II(DC), TYPE II(AC)	TYPE II(DC), TYPE II(AC)	TYPE II(DC), TYPE II(AC)	TYPE II(DC), TYPE II(AC)	TYPE II(DC), TYPE II(AC)
Anti-Islanding Protection	Yes	Yes	Yes	Yes	Yes	Yes
DC Component Monitoring	—	—	—	—	—	—
DC Reverse Polarity Protection	—	Yes	—	—	—	—
DC Switch	—	—	—	—	—	—
Grid Connection Standards	IEC 61727, IEC 62116, EN 50549, NRS 097, RD 140, UNE 217002, G99	IEC 61727, IEC 62116, EN 50549, NRS 097, RD 140, UNE 217002, G99	IEC 61727, IEC 62116, EN 50549, NRS 097, RD 140, UNE 217002, G99	IEC 61727, IEC 62116, EN 50549, NRS 097, RD 140, UNE 217002, G99	IEC 61727, IEC 62116, EN 50549, NRS 097, RD 140, UNE 217002, G99	IEC 61727, IEC 62116, EN 50549, NRS 097, RD 140, UNE 217002, G99
Grid Monitoring	Yes	Yes	Yes	Yes	Yes	Yes
Ground Fault Monitoring	Yes	Yes	Yes	Yes	Yes	Yes
Over-Current Protection	—	—	—	—	—	—
Over-Temperature / Thermal Protection	Yes	Yes	Yes	Yes	Yes	Yes
Over-Voltage Protection	—	—	—	—	—	—

Parameter	SUN-3-6-6-2K-G05P1	SUN-3.6K-G05P1-EU-AM2	SUN-4.2K-G04	SUN-4.2K-G05P1-EU-AM2	SUN-4.6K-G04	SUN-4.6K-G05P1-EU-AM2
Overload Protection	Yes	Yes	Yes	Yes	Yes	Yes
Overvoltage Category	OVC II(DC), OVC III(AC)	OVC II(DC), OVC III(AC)	OVC II(DC), OVC III(AC)	OVC II(DC), OVC III(AC)	OVC II(DC), OVC III(AC)	OVC II(DC), OVC III(AC)
Protection Features	—	Yes	—	—	—	—
Residual Current Monitoring Unit	Yes	Yes	Yes	Yes	Yes	Yes
Safety / EMC Standards	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
Surge Protection Level	—	—	—	—	—	—
Mechanical Data						
Cooling	—	Natural Cooling	Natural Cooling	Natural Cooling	Natural Cooling	Natural Cooling
Cooling Method	Natural Cooling	Natural Cooling	Natural Cooling	Natural Cooling	Natural Cooling	Natural Cooling
Operating Conditions						
Max Altitude	3000 m	3000 m	3000 m	3000 m	3000 m	3000 m
Noise Level	≤35 dB	≤35 dB	≤35 dB	≤35 dB	≤35 dB	≤35 dB
Operating Temperature	-25 to +60 °C	-25 to +60°C, >45°C Derating °C	-25 to +60°C, >45°C Derating °C	-25 to +60°C, >45°C Derating °C	-25 to +60°C, >45°C Derating °C	-25 to +60°C, >45°C Derating °C
Relative Humidity	0-100%	0-100%	0-100%	0-100%	0-100%	0-100%
Communication						
Communication Interface	RS485/RS232 /WiFi/LAN	RS485/RS232 /WiFi/LAN	RS485/RS232 /WiFi/LAN	RS485/RS232 /WiFi/LAN	RS485/RS232 /WiFi/LAN	RS485/RS232 /WiFi/LAN

Note: Specifications are based on the official Deye SUN-3-6-6-2K-G05P1/3.6K-G05P1-EU-AM2/4.2K-G04/4.2K-G05P1-EU-AM2/4.6K-G04/4.6K-G05P1-EU-AM2/4K-G04/4K-G05P1-EU-AM2/5.2K-G04/5.2K-G05P1-EU-AM2/5K-G04/5K-G05P1-EU-AM2/6.2K-G04/6.2K-G05P1-EU-AM2/6K-G04/6K-G05P1-EU-AM2 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

- **3.6-6.2kW Output:** High efficiency power conversion
- **Wide MPPT Range:** Optimized for various solar configurations
- **IP65 Protection:** Suitable for outdoor installation
- **Smart Monitoring:** Real-time performance tracking
- **97.5% Efficiency:** High energy conversion
- **Dual MPPT:** Two independent trackers
- **80V Start-up:** Works in low-light conditions
- **Zero Export:** Manage grid export limits
- **Anti-PID:** Prevents panel degradation
- **Multiple Comms:** GPRS, WiFi, Bluetooth, 4G, LAN

Frequently Asked Questions

▶ Is the DEYE SUN-3-6-6-2K-G05P1 suitable for the Middle East climate?

▶ What is the warranty period?

▶ Can this be used for off-grid systems?

▶ Why does this model have dual MPPT?

▶ What is the Anti-PID function?

▶ What is the maximum PV input?

▶ Is this suitable for commercial use?

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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- **Sales Inquiries:** sales@deyeinverters.net | +971 4 255 0887

Disclaimer: *All specifications and technical data presented on this page are based on the official Deye SUN-3-6-6-2K-G05P1/3.6K-G05P1-EU-AM2/4.2K-G04/4.2K-G05P1-EU-AM2/4.6K-G04/4.6K-G05P1-EU-AM2/4K-G04/4K-G05P1-EU-AM2/5.2K-G04/5.2K-G05P1-EU-AM2/5K-G04/5K-G05P1-EU-AM2/6.2K-G04/6.2K-G05P1-EU-AM2/6K-G04/6K-G05P1-EU-AM2 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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