



● POWER PV500 Photovoltaic Inverter

- Maximum efficiency $\geq 98.6\%$.
- Permanent power 500 kVA at 50°C.
- Robustness and reliability.
- High MTBF.
- Latest MPPT technology.
- Latest generation IGBTs modules ($T_j = 175^\circ\text{C}$).
- Protection devices for AC and DC.
- Adjustable power factor (0.95 inductive - 0.95 capacitive).
- Voltage dips compensation.

General description

Supsonik POWER PV500 photovoltaic inverters are designed for a direct connection to a medium-voltage transformer. They are a robust and efficient solution for medium and large photovoltaic installations.

Thanks to the modulation latest technology, the IGBT transistors new generation and the excellent control algorithm used, these PV500 photovoltaic inverters generate, with maximum performance, a perfect sine-wave from the photovoltaic panels direct current. Maximum performance $\geq 98,6 \%$ and European performance $\geq 98,4 \%$.

It is a unit with excellent features, such as, full power at 50°C, secure protection devices, high MTBF, minimum harmonic distortion even at low power, among others.

POWER PV500 photovoltaic inverters are easy to operate with intuitive software tools that allow the configuration of all parameters as well as the monitoring and display through a retro-illuminated Graphic display, with RS-485 communication and MODBUS RTU protocol.

Optional Data logger with remote control to send information through a high speed LAN connection (TCP / IP).

Our photovoltaic inverters design, the manufacturing process and quality tests, ensure our clients a maximum power generation, high efficiency energy conversion and compliance with applicable directives and standards in the European Union.

SUPSONIK offers the possibility to customize each machine according to the specific needs of our clients.

*Supsonik S.L. manufactures a wide range of photovoltaic inverters, from
33 kVA to 1 MVA maximum power.
For further information, please contact with the manufacturer.*

DC INPUT

Nominal power	509.5 kW
Peak power	570 kWp
MPPT voltage range	450 V – 820 V*
Maximum input voltage	1000 V
Maximum direct current	1266 A
Number of DC inputs	8 + 8

AC OUTPUT

Nominal power at 50°C	500 kVA
Nominal power at 30°C	560 kVA
Nominal voltage ± 10%	3 x 270 V
Frequency	50/60 Hz
Nominal current	1070 A
Power factor	0.95 inductive - 0.95 capacitive
Maximum harmonic distortion	< 3%

POWER CONSUMPTION

Working internal consumption	≤ 1200 W
Stand-by consumption	≤ 110 W
External auxiliary power supply	3 x 400 V, 3 x 230 V

PERFORMANCE

Maximum performance	≥ 98.6%
European performance	≥ 98.4%

ENVIRONMENTAL SPECIFICATIONS

Protection level	IP20 (IP23 optional)
Working temperature	-15°C to 50°C
Storage temperature	-25°C to 65°C
Relative humidity	15% to 95% without condensation
Altitude	1000 meters above sea level

DIMENSIONS AND WEIGHT

Dimensions (Width x Depth x Height)	3200 x 800 x 2200 (mm)
Weight	2000 Kg

PROTECTIONS

Protections	<ul style="list-style-type: none"> • Against grid overvoltage/undervoltage according to RD 1663/2000. • Grid overfrequency/underfrequency detection according to RD 1663/2000. • Manual grid disconnection. • Against inverse polarization. • Against insulation failure and DC voltage to Earth leakages. • Against overload. • Against output short circuit. • Against asymmetric and magnetizing currents. • Motorized circuit breaker for DC side protection. • Thermal-magnetic circuit breaker for AC side protection. • Fuse in positive and negative for each string. • Contactor for grid insulation. • Preload contactor. • Emergency stop.
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USER INTERFACE

<ul style="list-style-type: none"> • OP monitoring with display. • MODBUS, PROFIBUS, TCP/IP through RS485 and Ethernet communication protocols. • PC communications software for monitoring (graphics, alarms, parameters modifications...) RS-232.
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CERTIFICATIONS AND STANDARDS

CE marking	EMC 61000-6-2, 61000-6-3 directive EN 50178 low voltage directive
According to Royal Decrees	RD 1663/2000
ENEL-DK5940 declaration of conformity	

* Minimum Vdc with nominal Vac ±5% and Cos (φ) = 1

