

SMART PV INVERTERS

PV500WD / PV630WD / PV750WD / PV900WD



HIGHEST FLEXIBILITY IN INVERTER PERFORMANCE

- Flexible power operation range based on the required power factor.
- Wide DC operation range due to the 1530 A maximum input current.
- Maintains maximum power at extreme ambient conditions
- Redundant air cooling system for best performance in extreme climates.

ADVANCED POWER CONTROL

- Remote control of active and reactive power.
- Ramp rate response of programmable power in order to guarantee the grid balance.
- Three modes of operation for Low Voltage Ride Through
 - 1· Maximum reactive power injection
 - 2· Constant power factor
 - 3· No current injection
- Instant power regulation according to frequency variations.

> GPTech Smart PVWD inverters comply with the most demanding grid codes in the world. They adapt to the necessities of any market due to a flexible power operation range depending on the power factor. With an easy integration to the grid and low power consumption, these devices offer remote control of active and reactive power, as well as ramp rate response guaranteeing the grid stability

	PV500WD	PV630WD
DC Input		
Voltage range (MPPT) (1)	395 - 825 Vdc	495 - 825 Vdc
Maximum DC voltage	1000 Vdc	
Maximum input current	1530 A	
DC inputs (optional external box)	10 - 20. Protected by fuses	
AC Output		
Rated AC voltage	3 x 240 Vac	3 x 300 Vac
AC voltage range (2)	216 - 264 Vac	270 - 330 Vac
Frequency rated	50/60 Hz	
Frequency operation range	47 - 63 Hz	
Rated AC power @ 50°C	560 kVA	700 kVA
Rated AC power @ 25°C	600 kVA	750 kVA
Rated AC power @ 50°C and PF of 0,9	500 kW	630 kW
Maximum output current	1450 A	
Total Harmonic Distortion (THD)	<3%	
Power Factor at rated power	adjustable (0.9 inductive ... 0.9 capacitive)	
Galvanic insulation	No	
Efficiency		
Maximum European efficiency (3)	98,00%	98,30%
Maximum CEC efficiency (3)	97,99%	98,29%
Self-consumption at night	<= 200 W	
Self-consumption in operation (4)	<= 3 kW	
Ambient conditions		
Operation temperature	-4°F / 140°F (-20°C/60°C)	
Operation ambient temperature (without derating)	-4°F / 122°F (-20°C/50°C)	
Storage and transport temperature	-22°F / 149°F (-30°C/65°C)	
Maximum relative humidity	95% without condensation	
Maximum fresh air consumption (Indoor/Outdoor)	4000 m ³ /h / 6000 m ³ /h	
Maximum altitude above the sea level	3000 m	
Mechanical characteristics		
Dimensions (H / W / D) Indoor Application	2100 x 2000 x 780 mm / 82,67 x 78,74 x 30,70 in	
Dimensions (H / W / D) Outdoor Application	300 x 2000 x 845 mm / 90,55 x 78,74 x 33,26 in	
Weight (Indoor/Outdoor)	1870 kg (4122 lbs) / 2100 kg (4629 lbs)	
Environment rating (Indoor/Outdoor)	NEMA 2, IP20 / NEMA 3R, IP54	
AC Protections		
AC over voltage protection	Class II	
Anti-islanding	Yes	
Grid voltage variations	Yes	
Frequency failures	Yes	
Asymmetric currents	Yes	
Low Voltage Ride Through (LVRT) Capability	Yes	
DC Protections		
DC overvoltage protection	Class II	
Inverter shutting down on overload error	Yes	
PV-field isolation detector	Yes	
Panel Disconnection Capability	Yes. Contactor	
Other Protections		
Breaker protections of auxiliary systems	Yes	
Auxiliary systems overvoltage protection	Yes	
Power Control Features		
Reactive control by external signal	Yes	
Reactive control by internal configuration	Yes. Timetable PF configuration or voltage dependent function	
Reactive injection in LVRT	Yes. Three different operation modes	
Over frequency active power response	Yes. Configurable droop	
Ramp rate control	Yes. Under irradiance value restriction	
External power limitation	Yes. Control allows continuous limit values	
STATCOM mode for night compensation	Optional (additional elements required)	
Interfaces		
Touch-HMI	Yes	
MODBUS RTU/TCP communication protocol	Yes / Yes	
Luminous indicator, start/stop control and emergency stop	Yes	
Remote monitoring system, with GSM/GPRS modem	Optional (additional elements required)	
Master / Slave Mode	Optional (additional elements required)	
Legal standards		
UL1741 (5)	Yes	
United States - UL Listing Mark (5)	Yes	
Canada - cUL Listing Mark (5)	Yes	
IEEE 1547	Yes	
CSI/CEC Performance Testing (California)	Yes	
IEC 62109-1, IEC 62109-2	Yes	

Notes

1. At VAC, nom and $\cos\phi=1$
2. Further AV voltages can be configured
3. Calculated for AC nominal power at 25° C and PF = 1. Self-consumption not considered in efficiency measures
4. Self-consumption at rated operation
5. For UL certification, please, consult special sales conditions

	PV750WD	PV900WD
DC Input		
Voltage range (MPPT) (1)	585 - 825 Vdc	705 - 825 Vdc
Maximum DC voltage	1000 Vdc	
Maximum input current	1530 A	
DC inputs (optional external box)	10 - 20. Protected by fuses	
AC Output		
Rated AC voltage	3 x 355 Vac	3 x 430 Vac
AC voltage range (2)	319 - 391 Vac	387 - 473 Vac
Frequency rated	50/60 Hz	
Frequency operation range	47 - 63 Hz	
Rated AC power @ 50°C	830 kVA	1000 kVA
Rated AC power @ 25°C	890 kVA	1080 kVA
Rated AC power @ 50°C and PF of 0.9	750 kW	900 kW
Maximum output current	1450 A	
Total Harmonic Distortion (THD)	<3%	
Power Factor at rated power	adjustable (0.9 inductive ... 0.9 capacitive)	
Galvanic insulation	No	
Efficiency		
Maximum European efficiency (3)	98,49%	98,68%
Maximum CEC efficiency (3)	98,48%	98,67%
Self-consumption at night	<= 200 W	
Self-consumption in operation (4)	<= 3 kW	
Ambient conditions		
Operation temperature	-4°F / 140°F (-20°C / 60°C)	
Operation ambient temperature (without derating)	-4°F / 122°F (-20°C / 50°C)	
Storage and transport temperature	-22°F / 149°F (-30°C / 65°C)	
Maximum relative humidity	95% without condensation	
Maximum fresh air consumption (Indoor/Outdoor)	4000 m ³ /h / 6000 m ³ /h	
Maximum altitude above the sea level	3000 m	
Mechanical characteristics		
Dimensions (H / W / D) Indoor Application	2100 x 2000 x 780 mm / 82,67 x 78,74 x 30,70 in	
Dimensions (H / W / D) Outdoor Application	2300 x 2000 x 845 mm / 90,55 x 78,74 x 33,26 in	
Weight (Indoor/Outdoor)	1870 kg (4122 lbs) / 2100 kg (4629 lbs)	
Environment rating (Indoor/Outdoor)	NEMA 2, IP20 / NEMA 3R, IP54	
AC Protections		
AC over voltage protection	Class II	
Anti-islanding	Yes	
Grid voltage variations	Yes	
Frequency failures	Yes	
Asymmetric currents	Yes	
Low Voltage Ride Through (LVRT) Capability	Yes	
DC Protections		
DC overvoltage protection	Class II	
Inverter shutting down on overload error	Yes	
PV-field isolation detector	Yes	
Panel Disconnection Capability	Yes. Contactor	
Other Protections		
Breaker protections of auxiliary systems	Yes	
Auxiliary systems over voltage protection	Yes	
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STATCOM mode for night compensation	Optional (additional elements required)	
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Touch-HMI	Yes	
MODBUS RTU/TCP communication protocol	Yes/ Yes	
Luminous indicator, start/stop control and emergency stop	Yes	
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IEC 62109-1, IEC 62109-2	Yes	

Notes

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4. Self-consumption at rated operation
5. For UL certification, please, consult special sales conditions

Best expertise in power electronics

- Outdoor and indoor models
- Compact, reliable and robust design for all climate conditions
- Convenient front access for service and maintenance
- Best peak efficiency of over 98%
- Wide thermal operation range 4°F/140°F (-20°C/60°C)

Certifications

- UL1741, cUL1741
- IEEE 1547
- CEC/CIS Performance Testing (California)
- IEC
- EMC
- CE Marking

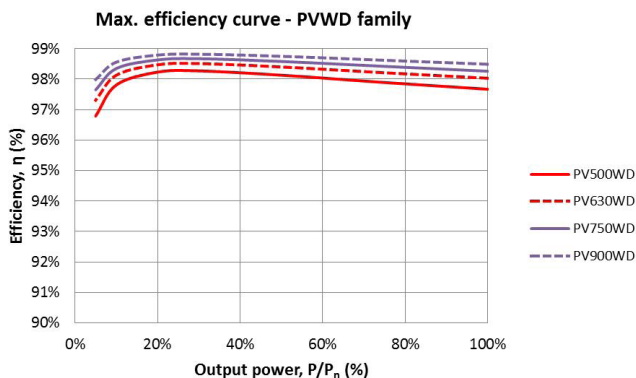
Optionals

- Reactive power compensation at night. No extra devices needed for VAR support
- Up to 20 DC inputs protected by fuses
- External DC and AC disconnection modules
- Remote monitoring
- Extended warranty according to customer needs

Services and Warranty

- Global After Sales Service, Maintenance and Technical Assistance 24/7
- Warranty Services
- Preventive Maintenance Programs
- Training Programs

Maximum Efficiency Curve



PVWD series one-line diagram

