

# 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)			
Power Factor at rated power	adjustable (0.9 inductive 0.9 capacitive)		
Galvanic insulation Efficiency	No		
	00.00%	905.00	
Maximum European efficiency (3)	98,00%	98,30%	
Maximum CEC effienciy (3)	97,99% <= 200 W	98,29%	
Self-consumption at night Self-consumption in operation (//)	<= 200 W <= 3 kW		
Self-consumption in operation (4) Ambient conditions	<= 3 KW		
Operation temperature	-4°F/140°F (-20°C/6	:0°C)	
Operation temperature Operation ambient temperature (without derating)	-4°F/122°F (-20°C/5		
Storage and transport temperature	-4 F/122 F (-20 C/- -22°F/149°F (-30°C/-		
Maximum relative humidity	95% without condens		
Maximum fresh air consumption (Indoor/Outdoor)	4000 m³/h / 6000 n		
Maximum altitude above the sea level	3000 m		
Mechanical characteristics			
Dimensions (H / W / D) Indoor Aplication	2100 x 2000 x 780 mm / 82,67 x	78,74 x 30,70 in	
Dimensions (H / W / D) Outdoor Aplication	300 x 2000 x 845 mm / 90,55 x		
Weight (Indoor/Outdoor)	1870 kg (4122 lbs) / 2100 k		
Environment rating (Indoor/Outdoor)	NEMA 2, IP20 / NEMA 3		
AC Protections			
AC over voltage protection	Class II		
Anti-islanding	Yes	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 Yes		
PV-field isolation detector Panel Disconnnection Capability	Yes		
PV-field isolation detector Panel Disconnection Capability Other Protections	Yes Yes Yes. Contactor		
PV-field isolation detector Panel Disconnnection Capability Other Protections Breaker protections of auxiliary systems	Yes Yes Yes.Contactor Yes		
PV-field isolation detector Panel Disconnnection Capability Other Protections Breaker protections of auxiliary systems Auxiliary systems overvoltage protection	Yes Yes Yes. Contactor		
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features	Yes		
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal	Yes		
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration	Yes Yes. Timetable PF configuration or volta		
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT	Yes Yes. Three different operations	ion modes	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response	Yes       Yes. Contactor       Yes. Contactor       Yes       Yes       Yes       Yes       Yes       Yes. Timetable PF configuration or voltor       Yes. Three different operat       Yes. Configurable different operate	ion modes oop	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control	Yes Yes. Contactor Yes Yes. Contactor Yes Yes Yes Yes Yes Yes Yes Yes. Timetable PF configuration or volta Yes. Three different operat Yes. Configurable dr Yes. Under irradiance value	restriction	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation	Yes       Yes. Contactor       Yes. Contactor       Yes       Yes       Yes       Yes       Yes       Yes. Timetable PF configuration or volt.       Yes. Three different operat       Yes. Configurable dr       Yes. Under irradiance value       Yes. Control allows continuou	ion modes oop restriction s limit values	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation	Yes Yes. Contactor Yes Yes. Contactor Yes Yes Yes Yes Yes Yes Yes Yes. Timetable PF configuration or volta Yes. Three different operat Yes. Configurable dr Yes. Under irradiance value	ion modes oop restriction s limit values	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation	Yes       Yes. Contactor       Yes. Contactor       Yes.       Yes       Yes       Yes       Yes       Yes.       Y	ion modes oop restriction s limit values	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI	Yes       Yes. Contactor       Yes. Contactor       Yes       Yes       Yes       Yes       Yes       Yes. Timetable PF configuration or volt.       Yes. Three different operat       Yes. Configurable dr       Yes. Under irradiance value       Yes. Control allows continuou	ion modes oop restriction s limit values	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol	Yes       Yes. Contactor       Yes. Contactor       Yes       Yes       Yes       Yes       Yes       Yes. Timetable PF configuration or volt.       Yes. Timetable PF configuration or volt.       Yes. Three different operat       Yes. Under irradiance value       Yes. Under irradiance value       Yes. Control allows continuou       Optional (additional element       Yes	ion modes oop restriction s limit values	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI	Yes	on modes oop restriction s limit values ts required)	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive control to prever response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol         Luminous indicator, start/stop control and emergency stop	Ves       Yes	ts required)	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol         Luminous indicator, start/stop control and emergency stop         Remote monitoring system, with GSM/GPRS modem         Master / Slave Mode	Yes       Yes </td <td>ts required)</td>	ts required)	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive control to prevent response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol         Luminous indicator, start/stop control and emergency stop         Remote monitoring system, with GSM/GPRS modem	Yes       Yes </td <td>ts required)</td>	ts required)	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol         Luminous indicator, start/stop control and emergency stop         Remote monitoring system, with GSM/GPRS modern         Master / Slave Mode         Legal standards	Yes       Yes </td <td>ts required)</td>	ts required)	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol         Luminous indicator, start/stop control and emergency stop         Remote monitoring system, with GSM/GPRS modern         Master / Slave Mode         Legal standards         UL1741 (5)	Ves       Yes	ts required)	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol         Luminous indicator, start/stop control and emergency stop         Remote monitoring system, with GSM/GPRS modern         Master / Slave Mode         Legal standards         UL1741 (5)         United States - UL Listing Mark (5)	Ves       Ves       Yes	ts required)	
PV-field isolation detector         Panel Disconnnection Capability         Other Protections         Breaker protections of auxiliary systems         Auxiliary systems overvoltage protection         Power Control Features         Reactive control by external signal         Reactive control by internal configuration         Reactive injection in LVRT         Over frequency active power response         Ramp rate control         External power limitation         STATCOM mode for night compensation         Interfaces         Touch-HMI         MODBUS RTU/TCP communication protocol         Luminous indicator, start/stop control and emergency stop         Remote monitoring system, with GSM/GPRS modem         Master / Slave Mode         Legal standards         UL1741 (5)         United States - UL Listing Mark (5)         Canada - cUL Listing Mark (5)	Ves       Ves       Yes	ts required)	

 Notes

 1. At VAC, nom and cose= 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



 Notes

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 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	50/6		
Frequency operation range	47 - 6		
Rated AC power @ 50°C	830 kVA	1000 kVA	
Rated AC power @ 25°C Rated AC power @ 50°C and PF of 0,9	890 kVA	1080 kVA	
Maximum output current		750 kW 900 kW 1450 A	
Total Harmonic Distortion (THD)	1450 A <3%		
Power Factor at rated power	adjustable (0.9 inductive 0.9 capacitive)		
Galvanic insulation		aujustable (0.9 inductive 0.9 capacitive)	
Efficiency			
Maximum European efficiency (3)	98,49%	98,68%	
Maximum CEC effienciy (3)	98,48%	98,67%	
Self-consumption at night	<= 20	10 W	
Self-consumption in operation (4)	<= 3		
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 c	ondensation	
Maximum fresh air consumption (Indoor/Outdoor)	4000 m³/h /	6000 m³/h	
Maximum altitude above the sea level	3000	3000 m	
Mechanical characteristics			
Dimensions (H / W / D) Indoor Aplication	2100 x 2000 x 780 mm /	82,67 x 78,74 x 30,70 in	
Dimensions (H / W / D) Outdoor Aplication	2300 x 2000 x 845 mm /	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 2, IP20 / NEMA 3R, IP54	
AC Protections			
AC over voltage protection		Class II	
Anti-islanding	Ye		
Grid voltage variations	Ye		
Frequency failures	Ye		
Asymmetric currents	Ye		
Low Voltage Ride Through (LVRT) Capability	Ye	5	
DC Protections	Clas		
DC overvoltage protection Inverter shutting down on overload error	Ye		
PV-field isolation detector			
Panel Disconnection Capability		Yes Yes. Contactor	
Other Protections			
Breaker protections of auxiliary systems	Ye	·s	
Auxiliary systems over voltage protection	Ye		
Power Control Features			
Reactive control by external signal	Ye	15	
Reactive control by external configuration	Yes. Timetable PF configuration	Yes. Timetable PF configuration or voltage dependent function	
Reactive injection in LVRT	Yes. Three different	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	Ye	·5	
MODBUS RTU/TCP communication protocol	Yes/	Yes	
Luminous indicator, start/stop control and emergency stop	Ye	Yes	
Remote monitoring system, with GSM/GPRS modem	Optional (additional	Optional (additional elements required)	
Master / Slave Mode	Optional (additional	Optional (additional elements required)	
Legal standards			
	Ye	15	
		Yes	
United States - UL Listing Mark (5)	Ye		
United States - UL Listing Mark (5) Canada - cUL Listing Mark (5)	Ye	5	
UL1741 (5) United States - UL Listing Mark (5) Canada - cUL Listing Mark (5) IEEE 1547	Ye Ye Ye	is	
United States - UL Listing Mark (5) Canada - cUL Listing Mark (5)	Ye	15 15 15	

### 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

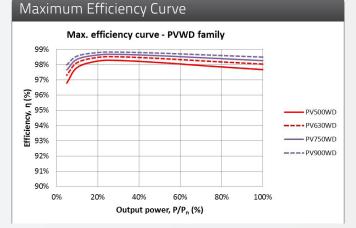
- UL1741, cUL1741
- IEEE 1547
- CEC/CIS Performance Testing (California)
- IEC
- EMC
- CE Marking

# Optionals

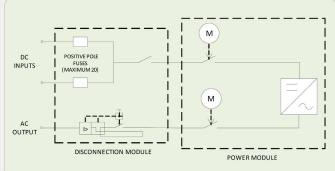
- Reactive power compensation at night. No extra devices needed for VAR support
- Up to 20 DC inputs protected by fuses
- External DC and AC disconnection modules
- Remote monitoring
- Extended warranty according to customer needs

## Services and Warranty

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



#### PVWD series one-line diagram



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