

High Voltage Commercial Scale Power Conversion Center



Utility Interactive Renewable Energy

- ▶ Utility interactive, three-phase inverter, with models ranging from 10kW to 225 kW. Multiple inverters may be paralleled for larger power installations.
- ▶ Designed for cost-effectiveness, high performance, easy installation, and reliability.
- ▶ Advanced MPPT technology maximizes PV array output (not for use with batteries).
- ▶ Revolutionary switching technology utilizes insulated gate bi-polar transistors (IGBT), greatly reducing power losses during the conversion process.
- ▶ Meets all applicable UL, IEEE, and NEC codes.
- ▶ Automatic operation includes start-up, shut-down, self-diagnosis, and fault detection.

Features

- ▶ Efficient design, with over 95% peak efficiency for the inverter, and overall efficiency, including transformer losses, in excess of 93%.
- ▶ Digital Signal Processor (DSP) based controls with self-diagnostics and LCD for display of operating status.
- ▶ Inverter shut off and reset toggle switch.
- ▶ Over- and under-voltage and frequency protection, shutting down the inverter in compliance with UL1741.
- ▶ Anti-islanding protection - prevents back-feeding inverter-generated power to the grid in the event of a utility outage.
- ▶ User definable power tracking matches the inverter to the array, as well as adjustable delay periods to customize system shut-down sequences.

Options

- ▶ Variety of system accessories for ease of system installation, including combiner boxes, isolation transformers, disconnect switches, etc.
- ▶ Complete inverter kits, incorporating all required accessories for NEC code compliant installation, are available.

Xantrex Technology Inc.

Headquarters
8999 Nelson Way
Burnaby, British Columbia
Canada V5A 4B5
800 670 0707 Toll Free
604 420 1591 Fax

5916 195th Street NE
Arlington, Washington
USA 98223
800 446 6180 Toll Free
360 925 5144 Fax

161 - G South Vasco Road
Livermore, California
USA 94551
925 245 5400 Phone
925 245 1022 Fax

PV Inverter

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Electrical Specifications

Models	PV10	PV15	PV20	PV30	PV45	PV100	PV225	
Continuous Power Rating	10 kW	15 kW	20 kW	30 kW	45 kW	100 kW	225 kW	
Nominal AC Voltage	208 VAC	208 VAC	208 VAC	208 VAC	208 VAC	208 VAC	208 VAC	Three-phase, +10% / -12%
Nominal AC Frequency	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	+ 0.5 Hz / -0.7 Hz
Line Power Factor	> 0.99	> 0.99	> 0.99	> 0.99	> 0.99	> 0.99	>0.99	Above 20% rated power
Maximum AC Line Current	30.8 amps AC	46.3 amps AC	61.7 amps AC	94 amps AC	143 amps AC	316 amps AC	625 amps AC	
AC Current Distortion	< 5% THD	< 5% THD	< 5% THD	< 5% THD	< 5% THD	< 5% THD	< 5% THD	At rated power
Max. Open Circuit Voltage	600 VDC	600 VDC	600 VDC	600 VDC	600 VDC	600 VDC	600 VDC	
Power Tracking Window Range	330 to 600 VDC all models							
Max. DC Input Current	31.9 amps DC	47.8 amps DC	63.8 amps DC	100 amps DC	150 amps DC	319 amps DC	710 amps DC	
Max. Ripple Current	< 5%	< 5%	< 5%	< 5%	< 5%	< 5%	< 5%	% of rated current
Peak Inverter Efficiency	> 95%	> 95%	> 95%	> 95%	> 95%	> 95%	> 95%	
Standby Tare Losses	< 30 watts	< 30 watts	< 30 watts	< 30 watts	< 30 watts	< 90 watts	< 90 watts	

General Specifications

Temperature Range								
Ambient	-4 °F to 122 °F (-20 °C to 50 °C)							
Storage	-40 °F to 122 °F (-40 °C to 50 °C)							
Enclosure Environmental Rating	NEMA4	NEMA4	NEMA4	NEMA3R	NEMA3R	NEMA3R	NEMA 3R	
Enclosure	Galvaneal folded steel enclosure							
Weight	115 lb	160 lb	160 lb	260 lb	260 lb	1140 lb	2150 lb	
	52 kg	73 kg	73 kg	118 kg	118 kg	518 kg	977 kg	
Dimensions (H x W x D)	26x16x12	28x24x15"	28x24x15"	54x36x19"	54x 36x19"	83x76x20"	89x102x27"	
	66x41x30cm	71x61x38cm	71x61x38cm	137x91x48cm	137x91x48cm	211x193x51cm	226x259x68cm	
Altitude	6,600' (2,012 m)							
Relative Humidity	0 to 95%	0 to 95%	0 to 95%	0 to 95%	0 to 95%	0 to 95%	0 to 95%	non-condensing
Array Configuration	Monopole, negative grounded							

Features & Options

Cooling Method	Forced convection cooling
Protective Functions	AC over / under voltage, AC over / under frequency, ground over current, over temperature, AC and DC over current, DC over voltage
User Display	Standard - LCD, four-line, twenty-characters, with on/off toggle switch
AC Disconnect	Optional - NEMA3R wall mount enclosure, load break rated; Standard and integral to inverter assembly for PV100 and PV225
DC Disconnect	Optional - NEMA3R wall mount enclosure, 600 VDC load break rated; Standard and integral to inverter assembly for PV100 and PV225
Isolation Transformer	Optional - High efficiency, NEMA3R wall or floor mount enclosure
Combiner Enclosures	Optional - 10 or 12 pole, with or without diodes, NEMA3R wall mount enclosure
Communications Software	Optional - Serial communications and control software

Regulatory Approvals

Listed to UL Standard 1741, UL File No. E199356

Specifications subject to change without notice.