



PVI-500/1 MW

Harvest more green with Aurora's Maximum Power Point Tracking (MPPT) algorithm that maximizes energy gleaned under varying light conditions to help reduce thermal energy losses from the inverter's Insulated Gate Bi-polar Transistors (IGBTs). The revolutionary switching technology utilized in the E-Force large-scale inverter includes state-of-the-art Insulated Gate Bi-polar Transistors (IGBTs) to reduce switching losses. E-Force has been designed with large de-rating criteria on all critical components, achieving an extremely robust and reliable inverter designed to last for 25 years and to deliver true maximum output power on a continuous basis. With this design concept, E-Force achieves peak efficiencies of over 97%. Total current harmonic distortion is typically less than 3% through E-Force's control switching technology.

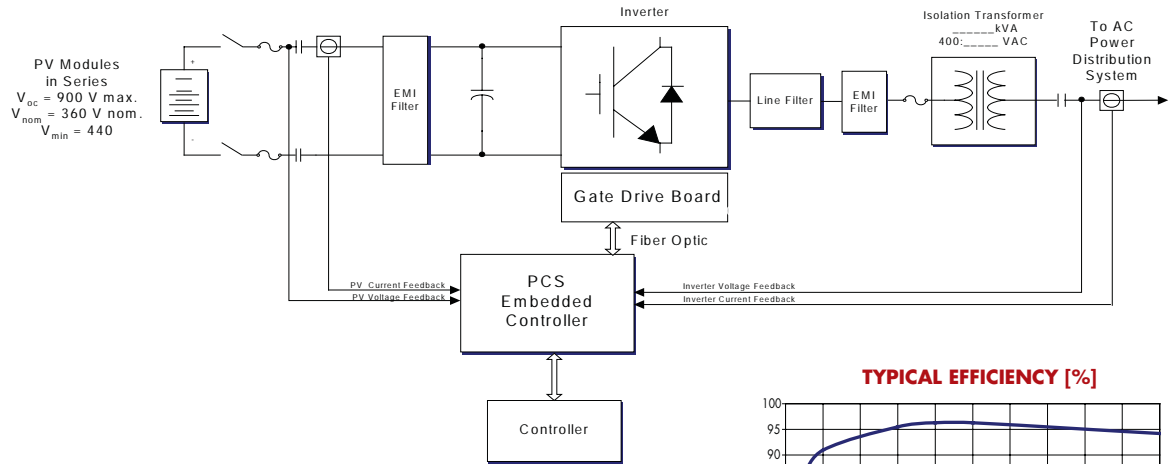
SMART CONTROLS

E-Force controls are Digital Signal Processor (DSP) based with sophisticated control and self-diagnostic algorithms. An LCD display shows the unit's operating status and a built-in Data Logger records and sends daily performance and operational data.

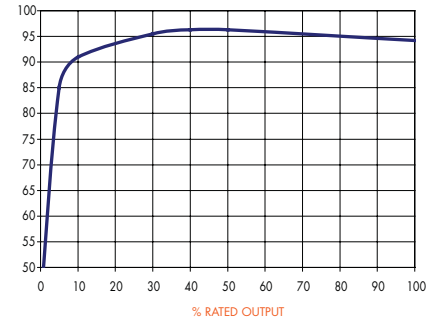
BENEFITS

- Single input section to process MPPT (430 – 880 VDC)
- NEMA 1 (IP23), (optional) NEMA 3R (IP44) ruggedized, sealed unit to with stand the harsh environmental conditions
- 500 kW — 106"H x 40"W x 40"D, and 1 MW 106"H x 80"H x 40"D
- Compact size and high power density: 500 kW of output power in a box just 128"H x 42"W x 32"D
- Rear air-cooled heatsink keeps the unit cleaner and more efficient over time
- Isolation transformer (optional) is dependent upon utility interconnection
- High overload capability works up to 500 kW under most ambient conditions
- True Sine Wave Output
- Parallel up to 4 units for 2.0 MW capability
- Certified grid-connected operation according to international standards
- LCD display on the front to monitor the main parameters

BLOCK DIAGRAM



TYPICAL EFFICIENCY [%]



CHARACTERISTICS	PVI-500	PVI-1 MW
Power Rating (kW)	500	1000
DC Power Rating	520	1040
Open Circuit Voltage Range (Vdc)	430-1000 (640 nominal)	430-1000 (640 nominal)
Power Tracking Window Range (Vdc)	430-880 (640 nominal)	430-880 (640 nominal)
Array Configuration	One array	One array x2 with common negative grounding and independent MPPT
Nominal AC Voltage Range (Vms)	3-phase 300VAC (may be changed to comply with local regulations)	3-phase 300VAC (may be changed to comply with local regulations)
Nominal AC Frequency (Hz)	50/60	50/60
Line Power Factor	1	1
Maximum AC Line Current (Ams)	802	3208
AC Current Distortion (%)	<1% THD at rated power	<1% THD at rated power
Max Efficiency (%)	>97	>97
Tare Losses (W)	<40	<40
Operating Ambient Temperature (°C)	-25 to +50	-25 to +50
Enclosure Environmental Rating	NEMA1/IP23 - NEMA 3R/IP44	NEMA1/IP23 - NEMA 3R/IP44
Relative Humidity	0 — 100% condensing	0 — 100% condensing
Elevation	Derated above 6,600ft (2,000m)	Derated above 6,600ft (2,000m)
Audible Noise (dBA)	<80	<80
Size (Inches)	106"H x 40"W x 40"D	106"H x 80"W x 40"D
Weight (Lbs)	3,600	7,200

MODEL SUMMARY AND ORDERING CODES

Model Number	Power
PVI-500-OUTD-US	500 kW
PVI-1 MW-OUTD-US	1 MW

Options Suffix	Description
-T	Transformer
-S	Switchgear Cabinet
-W	Weather Station



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BEST-IN-CLASS COMMUNICATION CAPABILITIES

E-Force Easy Control allows several units to work in parallel and records data from each unit and stores the data to be transmitted daily over modem or optional Internet access.

STANDARDS AND CODES

E-Force inverters comply with standards set for grid-tied operation, safety and electromagnetic compatibility: UL, NEC690, IEEE 929, IEC61683, IEC61727, EN50081.