

PVI-CENTRAL-50 PVI-CENTRAL-100

GENERAL SPECIFICATIONS CENTRALIZED MODELS

PVI-CENTRAL-50-US
PVI-CENTRAL-100-US

These Aurora commercial-grade inverters are designed for large solar applications such as apartment buildings and industrial facilities. These extremely scalable modular inverter systems, based on 50kW conversion modules, increase usable power and improve availability.

The reduction of performance in any individual inverter will not impact the energy-harvesting capabilities of other modules.

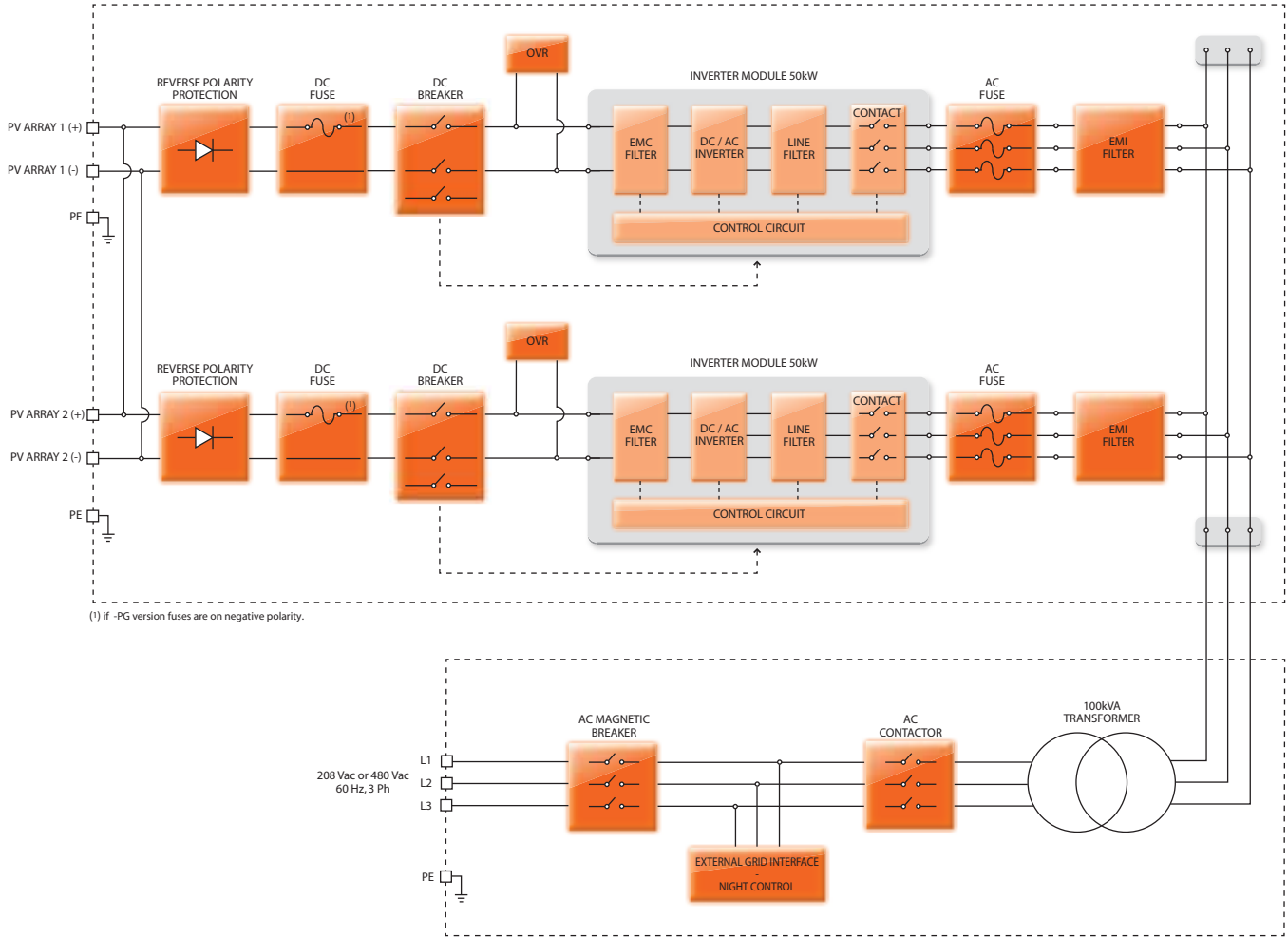
Industry-leading power conversion efficiencies of up to 95.8%, combined with high-speed Maximum Power Point Tracking (MPPT) channels, optimize energy harvesting across a wide array of operating conditions. Inverter systems are delivered pre-configured and pre-tested, significantly reducing on-site wiring and testing.



Features

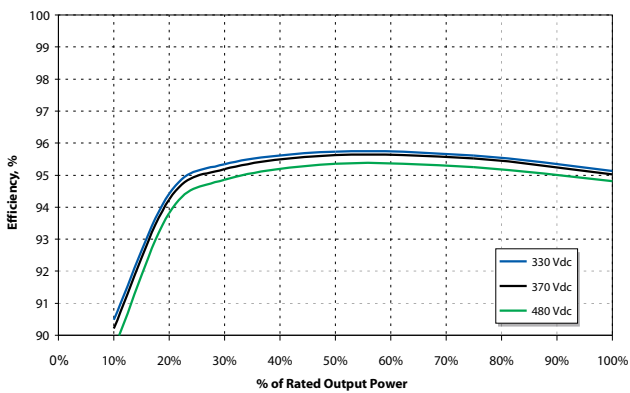
- Reduced susceptibility to a single fault. In case of a component failure, a maximum of 50kW will be lost
- Reduced acoustic noise due to the high switching frequency
- Reverse-polarity protection minimizes potential damage caused by array mis-wiring
- Maximum input voltage up to 600Vdc, high design flexibility and reduced DC distribution losses for large scale PV plants
- Integrated DC and AC distribution and protection. Fully equipped for connection, additional accessories not required
- Easy installation and maintenance procedure. Front extractable DC/AC converters and accessibility to all critical parts
- High efficiencies deliver more energy
- Two independent RS-485 communication interfaces - for inverter and intelligent string combiner monitoring
- Integrated DC disconnect switch for each 50 kW module AC and DC side integrated protection (fuses and OVR) easily replaceable
- Integrated fuse grounding kit with ground-fault detection and interruption (GFDI) compliant to UL1741

BLOCK DIAGRAM OF PVI-CENTRAL-100 WITH TRANSFORMER FOR NORTH AMERICA

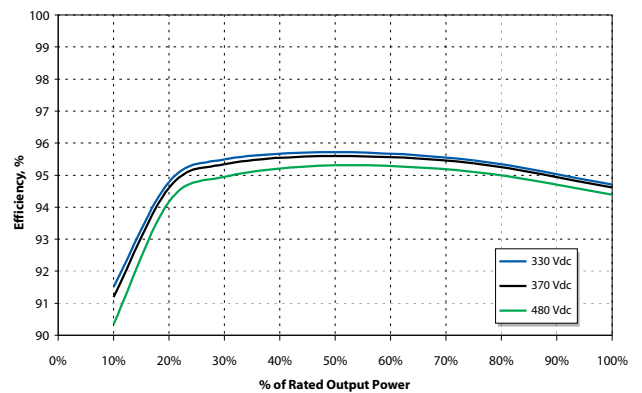


Block Diagram and Efficiency Curves

PVI-CENTRAL-50



PVI-CENTRAL-100



TECHNICAL DATA		PVI-CENTRAL- 50-US-208	PVI-CENTRAL- 100-US-208	PVI-CENTRAL- 50-US-480	PVI-CENTRAL- 100-US-480
Nominal Output Power	kW	50	100	50	100
Rated Grid AC Voltage	V	208	208	480	480
Input Data (DC)	Values				
Absolute Maximum Input Voltage	V	600		600	
Start-Up Voltage	V	330		330	
MPPT Voltage Range	V	330-600		330-600	
Number of Inputs (MPPT)		1x50kW	1x100kW	1x50kW	1x100kW
Max Current per 50kW inverter module		170		170	
DC Switch		Yes, 1 per module load break		Yes, 1 per module load break	
DC Fuses	A/V	200A (Module protection, 1per 50kW)		200A (Module protection, 1per 50kW)	
DC Connections		1pr. x 10mm threaded stud per input 90° C terminals/Al/Cu wire capable		1pr. x 10mm threaded stud per input 90° C terminals/Al/Cu wire capable	
Output Values (AC)					
Maximum Output Current	A	139	278	61	121
Grid Standard		Three-Phase-208/ 3W + PE		Three-Phase-480/ 3W + PE	
Grid Frequency (Range)	Hz	60(59.3-60.5)		60(59.3-60.5)	
Voltage Range	V	183-228		422-528	
AC Connection		3x2/0 AWG 90°/ M10		3x2/0 AWG 90°/ M10	
Power Factor		>0.995		>0.995	
Total Harmonic Distortion	% of P _{ac,r}	<4		<3	
Mechanical Specifications					
Cooling		Air Forced		Air Forced	
Required Air Cooling Flow	CFM (m³/h)	885 (1500)		885 (1500)	
Dimension (HxWxD)	ft(mm)	50.2x66.0x33.5 (1275x1675x850)		50.2x66.0x33.5 (1275x1675x850)	
Unit Weight	lb(kg)	1550 (700)	1873(850)	1550(700)	1873 (850)
Weight of the Module	lb(kg)	154(<70)		154(<70)	
Shipping Weight	lb(kg)	1664(754.78)	2224(1008.80)	1664(754.78)	2224(1008.80)
Environmental Protection Rating		NEMA 1		NEMA 1	
Auxiliary Power Supply Consumption	% of P _{ac,r}	<0.40		<0.40	
Operation Temperature Range	°F(°C)	-14...+122°F (-10...+50 °C) with derating above 104°F (40°C)		-14...+122°F (-10...+50 °C) with derating above 104°F (40°C)	
Noise Emission Level	dBa@1m	<62		<62	
Maximum Operating Altitude without Derating	ft(m)	3280(1000)		3280(1000)	
Relative Humidity	%	0-95 non condensing		0-95 non condensing	
Operating Performance					
Consumption in Standby (nighttime)	W	<15	<30	<15	<30
Safety Agency Marking		cCSAus		cCSAus	
Utility Interconnect Standard		UL 1741/ IEEE1547/CSA - C22.2 N. 107.1-01		UL 1741, CSA - C22.2 N. 107.1-01	
Efficiency					
Weighted CEC Efficiency	%	95		95	
Maximum Efficiency	%	95.6		95.8	
Communication					
Wired Local Monitoring		PVI-USB-RS485_232 (opt.)		PVI-USB-RS485_232 (opt.)	
Remote Monitoring		AURORA-UNIVERSAL (opt.)		AURORA-UNIVERSAL (opt.)	
AURORA String Combiner		PVI-STRINGCOMB-US (opt.)		PVI-STRINGCOMB-US (opt.)	
User Interface		16 Characters x 2 lines LCD display for each module		16 Characters x 2 lines LCD display for each module	
Standard Warranty	Years	5		5	
Protection Devices					
Input					
Overvoltage Protection		Yes; varistor		Yes; varistor	
PV Array Isolation Control		Fused, GFDI (UL1741) 1 per MPPT Input			
Number of Overvoltage Protection Inputs		1	2(1 per 50kW module)	1	2(1 per 50kW module)
Output					
Reverse Polarity Protection		Yes; series diode		Yes; series diode	
Overvoltage Protection		Yes; varistor		Yes; varistor	
AC Fusing		Yes, 3 per module		Yes, 3 per module	
AC Switch	kA	Yes; 65		Yes; 65	
General Data					
Inverter Switching Frequency	kHz	18		18	
Auxiliary Power Supply Connection Type		External Feed 15A/208 or 480 4-wire + PE		External Feed 15A/208 or 480 4-wire + PE	
Auxiliary Power Supply Consumption	% of P _{ac,r}	<0.40		<0.40	



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