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AE 500

The complete inverter solution for large commercial and utility-scale projects

Leading the industry in reliability, performance, and innovation, Advanced Energy introduces the AE 500 for large commercial and utility-scale projects. New features include an integrated DC circuit breaker subcombiner that enables low cost compliance with NEC2011 and improves serviceability. The DC subcombiner, disconnects, isolation transformer, and performance monitoring options are all contained within the AE 500's single enclosure, NEMA 4 rated cabinet significantly reducing installation time and expense. The optional DC circuit breaker subcombiner is highly configurable to accommodate flexible array design and monitoring. Optional performance monitoring hardware and 24V auxiliary power supply are housed in a dedicated low power compartment that enhances safety and serviceability. A revenue grade meter can also be factory installed and included in the performance monitoring data stream to deliver a completely integrated inverter solution.

The AE 500 maximizes energy harvest and accelerates payback with a 97% weighted CEC efficiency and the ability to produce full power all the way to 55°C. Uptime and revenue generation are assured by superior built-in reliability consisting of engineered busbar power connections, redundant cooling system and power supply, and a card cage circuit board design.

Advanced power controls provide essential utility support functions including power factor and curtailment with controlled ramp rate making it easy to comply with interconnection requirements.



Total integration, reliability, and utility-support functionality make the AE 500 the complete inverter solution for large commercial and utility-scale projects.

Advanced Energy backs all its commercial inverters with an industry-leading 10-year nationwide warranty and a comprehensive optional 20-year warranty; plus the best service and support team in the business.

Superior Reliability

- Redundant cooling system with Smart Air Management™
- Low parts count reduces potential failure points
- Engineered busbar power connections
- Card cage circuit board system minimizes electronic interconnections

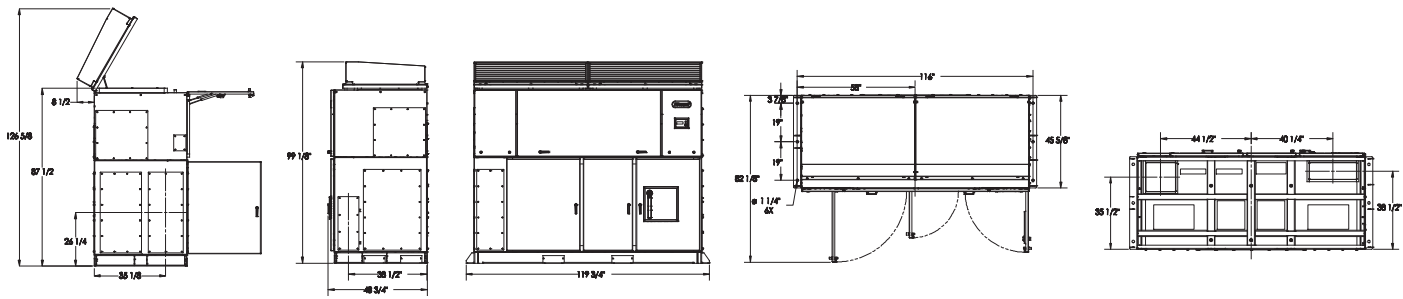
Exceptional Installability

- No external transformer to connect in the field
- Bottom and side entry with bottom side chases, generous bending area and oversized busbar landings
- Large DC sub-combiner compartment with multiple circuit breaker options
- Exterior mounting flanges for fast and easy anchoring with no pre-drilling

Easy to Maintain

- All maintenance and service via front and side access
- Fast change circuit board system shortens service time
- Load-break rated AC and DC service disconnects
- Optional preventative maintenance program





Electrical Specifications

Model	AE 500
Continuous Output Power	500kW
Weighted CEC Efficiency	97.0%
Maximum DC Input Voltage	600 VOC
DC Peak Power Tracking Range ¹	310 - 595 VDC
Maximum Operating Input Current	1600 A
AC Nominal Voltage	480 V
AC Operating Range	423 - 528 V
AC Frequency Range	59.3 - 60.5 Hz
AC Maximum Continuous Current	608 A
Standby Losses	58W
Harmonic Distortion	< 3% THD
Power Factor	> .99

¹ at power factor > 0.99 and 480VAC

Mechanical Specifications

Model	AE 500
Enclosure	NEMA 4
Construction	Powder Coated Steel
Mounting	Pad Mount
Weight	8,750 lbs
Cooling	Forced Convection
Operating Ambient Temperature Range	-30 to 55 °C
Standby/Storage Ambient Temperature Range	-40 to 60 °C
Isolation Transformer	Yes

Performance Monitoring

Increase uptime and reduce maintenance costs with integrated performance monitoring hardware that enables connectivity to a variety of software solutions from industry leading monitoring partners. The tight integration between Advanced Energy and our monitoring partners creates a superior service and support experience while seamlessly delivering meaningful data. Factory integration and testing of our UL listed monitoring solution ensures high reliability and significantly reduces field installation costs.



Advanced power Controls:

- Power factor
- Curtailment
- Controlled ramp rate
- Remote enable/disable

Options

- DC Subcombiner circuit breakers: 8-20 inputs, 80A-400A trips (max. total of 3500A)
- Subcombiner monitoring (up to 16 inputs)
- Integrated AC Disconnect
- Advanced power controls
- Integrated data monitoring
- Integrated revenue grade meter
- Positive ground
- 24V auxiliary power supply
- Preventative maintenance program
- 20-year extended warranty

Agency Approvals (Pending)

UL 1741, IEEE519, IEEE929, IEEE1547, FCC Class A for conducted and radiated, CSA 107.1-1

Specifications are subject to change without notice.



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