



# BENTEK SOLAR BIPOLAR RECOMBINERS FOR USE WITH AE 500NX INVERTERS

The partnership of Bentek Solar and Advanced Energy® brings you a single-source solution for bipolar power plants, combining the AE 500NX inverter with the Bentek bipolar recombiner. This unique product pairing simplifies procurement and is NEC 2011 code compliant. Furthermore, safety and configuration flexibility are designed in, at a cost that drives down levelized cost of energy (LCOE).

### Lower Levelized Cost of Energy (LCOE)

As separate units, AE 500NX inverters and Bentek Solar bipolar recombiners each set a high standard for efficiency and reliability. Combining these two high-performing units into a single bundle provides a cost-effective solution that optimizes LCOE over the entire project lifecycle.

### Optimized Solution for Bipolar Power Plants

Specifically intended for bipolar power plants, this unique product combination eases setup and is configured to deliver the required control and performance.

### Simplified Procurement

The combination of AE 500NX inverters and Bentek Solar bipolar recombiners reduces cost and complexity by decreasing the number of suppliers involved in equipment procurement.

Benefits
• Lower levelized cost of energy (LCOE)
• Optimized solution for bipolar power plants
• Simplified procurement from a single source
Features
• Combined AE 500NX inverter plus Bentek Solar recombiner
• NEC 2011 code compliance



Bentek Bipolar Circuit Breaker Recombiner



AE 500NX Inverter

**AE 500NX Features**

- Peak Efficiency: 98.6% (98.7% HE)
- CEC Efficiency: 97.5% (98.0% HE)
- Power Factor: ±0.95, ±164 kVAR
- Operating Temp.: -20 to +50°C
- NEMA 3R enclosure

## Bentek Solar Recombiners

### Configurations

Recombiners from Bentek Solar offer a comprehensive selection of input, output, and ampacity configurations to meet the needs of the professional solar plant designer. Bentek sales engineers are available to help you specify the optimum product for your application.

### Performance and Reliability

Bentek Solar products meet the rigorous demands of premier commercial and utility scale power plant designers and installers. Strict engineering design rules ensure uncompromised safety and reliability. World-class manufacturing processes guarantee long product life in challenging environments, and wide range of options enables BOS optimization for all system configurations. Bentek stands behind its products with the maintenance, service, and support needed to protect your investment. Bentek products are NEC and UL compliant.

Bentek Solar Bipolar Recombiners	
Standard Features	Optional Features
<ul style="list-style-type: none"> <li>Both positive and negative circuit breakers housed inside one enclosure</li> </ul>	<ul style="list-style-type: none"> <li>Zone monitoring CTs on each source circuit to provide Modbus protocol through Ethernet or RS-485 data output</li> </ul>
<ul style="list-style-type: none"> <li>±600 VDC</li> </ul>	<ul style="list-style-type: none"> <li>Mixed circuit breaker sizes to meet customer requirements</li> </ul>
<ul style="list-style-type: none"> <li>Up to 5, 7, or 14 circuit breakers per polarity, depending on breaker size</li> </ul>	<ul style="list-style-type: none"> <li>Custom lug configurations</li> </ul>
<ul style="list-style-type: none"> <li>600 VDC circuit breakers with ampacities of 60 A, 80 A, 100 A, 125 A, 150 A, 175 A, 200 A, 225 A, 250 A, 300 A, 350 A, 400 A</li> </ul>	
<ul style="list-style-type: none"> <li>Standard internal busing that supports continuous current to 1875 A per polarity</li> </ul>	
<ul style="list-style-type: none"> <li>Lock out/tag out functionality</li> </ul>	
<ul style="list-style-type: none"> <li>Removable sides and bottom in enclosure</li> </ul>	
<ul style="list-style-type: none"> <li>Exterior door supports padlock</li> </ul>	
<ul style="list-style-type: none"> <li>Dead fronts for each isolated polarity section</li> </ul>	
<ul style="list-style-type: none"> <li>Labeling to meet 2011 NEC code requirements</li> </ul>	
<ul style="list-style-type: none"> <li>ETL listed to UL 1741</li> </ul>	
<ul style="list-style-type: none"> <li>ETL listed to CSA22.2 No. 107.1</li> </ul>	
<ul style="list-style-type: none"> <li>ISO 9001:2008 quality certified</li> </ul>	

Bentek Solar Bipolar Recombiner Models	Max. Inputs	Circuit Breaker Amperage (A) (yyy)	Enclosure Size
BTK6-CB-BP-14yyy-CS	14 positive and 14 negative	60-225	79" x 32" x 24"
BTK6-CB-BP-14yyy-CS-Sx	14 positive and 14 negative	60-225	79" x 32" x 24"
BTK6-CB-BP-7yyy-CS	7 positive and 7 negative	250	79" x 32" x 24"
BTK6-CB-BP-7yyy-CS-Sx	7 positive and 7 negative	250	79" x 32" x 24"
BTK6-CB-BP-5yyy-CS	5 positive and 5 negative	300-400	79" x 32" x 24"
BTK6-CB-BP-5yyy-CS-Sx	5 positive and 5 negative	300-400	79" x 32" x 24"

CS= carbon steel enclosure; Sx=Current Monitoring (S1 – Ethernet, S2 – RS-485)



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For additional information on AE 500NX inverters, please visit:  
[www.advanced-energy.com/en/AE500NX.html](http://www.advanced-energy.com/en/AE500NX.html)

Specifications are subject to change without notice.

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