



Picture shown may not reflect actual configuration

Cat® BDP250 Energy Storage Inverter

The Cat® BDP250 energy storage inverter provides reliable control of the Energy Storage System (ESS). Integrated controls provide complete control of the charge and discharge of the ESS. The BDP250 is compatible with a range of storage solutions, including traditional battery systems, lithium-ion batteries, and ultra-capacitors and can be packaged with the ESS for a complete solution.

Features

Microgrid Stabilization

Stabilizes a microgrid against transient events caused by step loads and renewable power sources.

Tractor-grade Reliability

Uses same proven power electronics technology and controller platform as the revolutionary D7E electric drive track-type tractor.

Seamless Mode Transfer

Interruption-free power transfer to the load during power flow reversal from energy storage system.

Flexibility

Designed for a wide range of applications and compatible with virtually any power source.

Lower Fuel Consumption

Integrated control of system components minimizes fuel consumption and emissions.

Islanding Detection

Automatic islanding detection to meet anti-islanding UL 1741 and synchronization back to grid to guarantee continuous power to the load.

Grid Support

- Frequency Ride-through (FRT)
- Low Voltage Ride-through (LVRT)
- High Voltage Ride-through (HVRT)
- Zero Voltage Ride-through (ZVRT)

Parallel Ready

Plug-and-play paralleling with other power sources.

Energy Storage Management

Built-in intelligent controls for charging, discharging, equalization, and state-of-charge estimation for energy storage elements.

STATCOM

Configurable as a static VAR compensator up to system full capacity.

Touch Screen

User friendly touch-screen display offers real-time system information, configurable data logging, remote access, and more.

Technical Specifications

Configuration	
Input Voltage	300 VDC to 650 VDC
Max. DC Input Current	1200A
DC Isolating Switch	Contactors and Manual Isolation Switch with Lockout Feature
Rated Output Power (Continuous)	250 kW @ 0.8 PF
Overload Capacity	125% for 10 mins/200% for 10 sec
Output Voltage Range (L-L)	50 Hz: 400V ($\pm 10\%$) 60 Hz: 480V ($\pm 10\%$)
Output Frequency Range	50 or 60 Hz
Output Power Factor	Full Four-quadrant Controllable from Supervisory Controller
Harmonic Distortion	< 3%
AC Disconnect and Protection	Electrically Operated Breaker with LSIG Trip Unit
Peak Efficiency (excluding transformer)	> 97% (preliminary)
CEC Weighted Efficiency	96.6% (preliminary)
Communication and Control Interface	Modbus TCP, Others Configurable on Request
HMI Interface	Color HMI Touchscreen (password controlled for write access)
Features	Frequency Ride-through (± 5 Hz) Low Voltage Ride-through (20% voltage dip and up to 200 kVar) High Voltage Ride-through (10%) Zero Voltage (fault) Ride-through Output Power Factor is Full Four Quadrant Controllable
Seamless Transfer Between Charging and Discharging	-100 kW to 230 kW within 200 ms
Output Voltage	$\pm 10\%$ Adjustable
AC Voltage Regulation	$\pm 1\%$
Black Start Capability	Yes (built-in UPS module for control power)
Ambient Temperature	-40°C to + 40°C
Protection	NEMA 1
Vibration	3G
Humidity	0-95%
Cooling	Close Loop Liquid Cooling

www.cat.com/electricpower

©2017 Caterpillar
All rights reserved.

Materials and specifications are subject to change without notice.
CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow", the "Power Edge" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.