

# EBD/EBDH Series Battery Pack Charge-discharge Test Power Supply



- Support customized test conditions by editable work steps
- Support work condition simulation test based on data import
- Support DBC file import & communication with all sorts of BMS
- DC internal resistance test
- Data processing & analytics
- Support extended device integration, control, & display

## Summary

Based on the field of power electronics, EBD/EBDH Series Battery Pack Charge-discharge Test Power Supply is a bidirectional DC source integrating software simulation algorithm, measurement, and control technologies. High voltage and current control precision. Low ripple output. Fast current response. Can be used to test battery pack on charge-discharge performance, providing a versatile evaluation result including capacity, DC internal resistance, cycle life test, and battery temperature etc. Vastly applied by battery companies, OEMs, and labs of research institutes etc.

## Advantages

- Wide voltage & current output
- High precision & resolution
- High dynamic response in 2-4ms
- Multi-filter solution. Current ripples  $\leq 0.2\%$  FS
- Available with ripple overlaying function (optional)
- Support energy recovery to the grid at full power range. Power factor  $\geq 0.99$
- Standard communication interfaces including RS485, CAN, & LAN

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## Specifications & Parameters

Model*	Rated Power[kW]	Rated Current[A]	Rated Voltage[V]	Voltage Range[V]*
EBD-80-1000-300	80	300	266	24-1000
EBD-100-1000-350	100	350	285	24-1000
EBD-150-1000-500	150	500	300	24-1000
EBD-200-1000-600	200	600	333	24-1000
EBD-250-1000-600	250	600	416	24-1000
EBD-300-1000-750	300	750	400	24-1000
EBD-400-1000-1000	400	1000	400	24-1000
EBD-500-1000-1200	500	1200	416	24-1000

NOTE: \*Each power level is available with standard machines at 800V and 1200V. In addition, standard machines of dual-channel and high voltage platform at 1500V and 2000V are available as well.  
\*Specifications of EBDH Series including voltage, current, and power levels are identical with EBD.

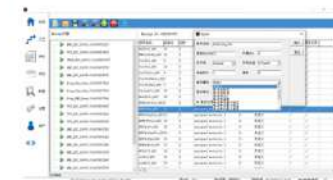
Input Requirements		Feedback Characteristics	
Phase	3 $\phi$ 3W+PE	Energy Recovery	Support energy recovery in full power range
Voltage	380V $\pm$ 15%	iTHD**1	$\leq 3\%$
Frequency	50Hz $\pm$ 5Hz	Power Factor	$\geq 0.99$
Output Characteristics		Communication Interfaces & Control Program	
Voltage Precision	$\pm(0.1\% \cdot FS + 5\text{dgt})$ (EBD Series) $\pm(0.05\% \cdot FS + 5\text{dgt})$ (EBDH Series)	Local Interface	LCD
Current Precision	$\pm(0.1\% \cdot FS + 5\text{dgt})$ (EBD Series) $\pm(0.05\% \cdot FS + 5\text{dgt})$ (EBDH Series)	Remote Comms**2	RS485/LAN/CAN
Response Time	$\leq 10\text{ms}$ (0%-90%) (EBD Series) $\leq 2\text{ms}$ (0%-90%) (EBDH Series)	Others	External Emergency Stop/Fault Signal/Voltage Compensation
Switching Time	$\leq 20\text{ms}$ (-90%-90%) (EBD Series) $\leq 4\text{ms}$ (-90%-90%) (EBDH Series)	Work Steps	$\leq 9999$
Sampling Frequency	10ms	Cycle Index	$\leq 9999$
Current Ripple (rms)	$\leq 0.2\%$ FS	Loop Nesting	$\leq 10$ layers
Load Regulation	0.1% FS	NOTE: **Remote control and operation over the equipment is possible with upper computer software. **Integration of water-cooling system and environmental chamber is possible.	
Voltage Resolution	0.001V	Safety & Ambient Conditions	
Current Resolution	0.001A	Insulation Resistance	$\geq 20\text{M}\Omega$ (500Vdc)
Power Resolution	0.001kW	Voltage Withstand**3	3000Vdc (60s/no arcing/break down)
Protection		Ground Resistance	$\leq 0.1\Omega$
Protection	OVP/OC/OTP/Phase Loss/Emergency Stop etc.	Protection Level**4	IP21 (Indoor)
*1 For those of rated power lower than 40kW, the iTHD: $\leq 5\%$		Cooling	Fan Cooling
*2 Remote control and operation over the equipment is possible with upper computer software; Integration of water-cooling system and environmental chamber is possible as well.		Ambient Temperature**4	-10 ~ 40 $^{\circ}\text{C}$
*3 The withstand voltage listed above applies to 800V/1000V/1200V products only; For those of 1500V, the withstand voltage is designed according to 3200Vdc; For those of 2000V, the withstand voltage is designed according to 3700Vdc.		Relative Humidity	0-90%RH (Non-condensing at 25 $^{\circ}\text{C}$ )
*4. The protection level and ambient temperature listed above can be customized.		Altitude	$\leq 2000\text{m}$

## Software Interfaces

Support work step edition, DBC file import, data recording, processing, and analytics.



Work Step Configuration



DBC File Import