Kewell

EVD Series High Precision Bidirectional DC Power Supply

- Constant DC voltage output
- Step mode/Gradient mode
- Editable overvoltage/overcurrent protection point
- Editable voltage drop/rise slew rate
- Voltage compensation
- External emergency stop

Summary

EVD Series High Precision Bidirectional DC Power Supply is a high precision DC power supply adopting two-stage conversion architecture, featuring high dynamic response, and bidirectional energy flow. Ideal match for E-motor (controller) testing, powertrain system testing etc. For E-motor testing, EVD can be used to simulate the overload capacity, efficiency, locked-rotor current, maximum speed, overspeed, and energy recovery performance of the electric motor and controller.

Advantages

Wide voltage and current output
High precision and resolution
High dynamic response in 3-6ms
Multi-filtering solutions
Superposition of ripple (Optional)
Fast CAN communication: 1ms
Standard communication interfaces: RS485, CAN, LAN, Ether CAT (optional)

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Specifications

Specifications Model						
Models	Rated Power [kW]	Rated Current [A]	Rated Voltage [V]	Peak Power (60s)[kW]	Peak Current (60s)[A]	Voltage Range* [V]
EVD-80-1000	80	300	266	120	450	24-1000
EVD-100-1000	100	350	285	150	525	24-1000
EVD-150-1000	150	500	300	200	666	24-1000
EVD-200-1000	200	600	333	250	750	24-1000
EVD-250-1000	250	600	416	350	840	24-1000
EVD-300-1000	300	750	400	400	1000	24-1000
EVD-400-1000	400	1000	400	500	1250	24-1000
EVD-500-1000	500	1200	416	600	1440	24-1000

*Rated voltage of each model above is also available in 800V and 1200V.
High voltage standard product is also available in 1500V and 2000V, with dual channel.

Input Requirements	
Phase	3φ3W + PE
Voltage	380V±15%
Frequency	50Hz±5Hz

Output Characteristics	
Voltage Precision	± (0.1%-FS+5dgt)
Current Precision	± (0.1%-FS+5dgt)
Response Time	≤3ms(10%-90%)
Switching Time	≤6ms(+ 90%--90%)
Voltage Ripple (rms)	≤0.2%-FS
Load Regulation	0.1%-FS
Protection	Overvoltage/Overcurrent/Overtemp. /Phase Loss/Emergency Stop

Feedback Characteristics	
Energy Recovery	Energy recovery is available in full power range
THD	≤3%
Power Factor	≥0.99

Safety & Ambient Conditions	
Insulation Resistance	≥20MΩ(500Vdc)
Withstand Voltage	2000V DC (60s, no arch/break down)
Ground Resistance	≤0.1Ω
Protection Level	IP21 (Indoor)
Cooling	Fan Cooling
Ambient Temperature	-10 ~ 40℃
Relative Humidity	0-90%RH (Non-condensing at 25℃)
Altitude	≤2000m

Communication Interfaces	
Local Interface	LCD
Remote Comms	RS485/LAN /CAN
Others	External Emergency Stop/ Fault Signal/Voltage Compensation

Software Interface

Available with three output modes: General Mode, Step Mode, Gradient Mode

General Mode

Gradient Mode