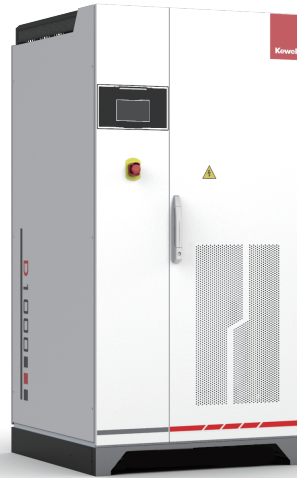


D1000 Series

PV Array IV Simulator



Product Introduction

D1000 Series is a DC power supply based on power conversion technology, software simulation algorithm, and measurement & control technologies, featuring high accuracy and high dynamic response. It provides the turnkey solution to PV inverter testing on MPPT efficiency, especially for those of high-power levels.



DC Source



Parallel Operation



IV Curve Simulation



Static & Dynamic
MPPT Tests



Irradiance variation simulation



Shadow Occlusion Simulation

Product Advantages

- Wide voltage & current output
- High accuracy & resolution
- High dynamic response
- Low ripple
- High conversion efficiency: Max. 94%
- Complete safety protection: OVP/OCP/OTP etc.
- Standard communication interfaces: RS485/LAN



Specifications

Model	Rated Power[kW]	Rated Current[A]	Voltage Range[V]
D1000-G-200-1600-350-IVS	200	350	100-1600
D1000-G-300-1600-500-IVS	300	500	100-1600
D1000-G-400-1600-500-IVS	400	500	100-1600
D1000-G-500-1600-500-IVS	500	500	100-1600
D1000-G-300-2000-500-IVS	300	500	100-2000
D1000-G-400-2000-500-IVS	400	500	100-2000
D1000-G-500-2000-500-IVS	500	500	100-2000

IV Functions	
Voltage Accuracy	I-V mode and CV/ current-limited/ power-limited output mode.
Current Accuracy	Editable IV curves via Voc, Isc, FF, Pm and other parameter points.
Response Time	With IV curve database, number of curves available: ≥ 100.
Current Ripple(rms)	Dynamic/Static mode simulation.
Load Regulation	Simulation of a realistic I-V curve with solar panels shaded.
CC/CV Temperature comp-ensation coefficient	The dynamic operating mode needs to take into account environmental influences such as temperature changes and irradiance in order to continuously output IV curves for different environments.
Protection	Built-in EN50530 dynamic I-V curve test program.

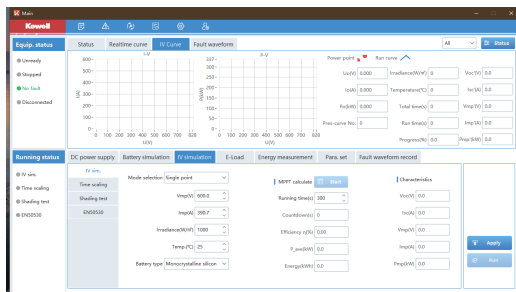
Output Characteristics	
Voltage Accuracy	±0.1%FS
Current Accuracy	±0.1%FS
Response Time	≤10ms
Voltage Ripple (rms)	≤0.5%-FS
Load Regulation	0.1%-FS
CC/CV Temperature comp-ensation coefficient	±0.03% /K
Protection	OVP/OCP/OTP/Emergency stop, etc.
IV Curve	
Voltage Range(OC)	100-1500V/100-2000V
Current Range(SC)	1-Irate
Fill Factor Range	0.5-0.92
Types of Solar Panels	Single crystal, Polycrystalline, Thin film, etc.
IV Curve	Editable
IV Curve Update	≤100ms
Single Curve Points	≤4096

Input Characteristics	
Phase	3φ3W + PE
Voltage	400V ±10%
Frequency	50Hz±5Hz
PF	≥0.99
iTHD*	≤3%
Safety & Ambient Conditions	
Insulation Resistance	≥20MΩ(500Vdc)
Cooling	Air cooling
Ambient Temperature	-10 ~ 40°C
Relative Humidity	0-90%RH (no-condensing at 25°C)
Altitude	≤2000m
Communication & Interfaces	
Touch Screen	LCD
Remote Comms	RS485/LAN
Others	External Emergency Stop/Fault Signal/Voltage Compensation

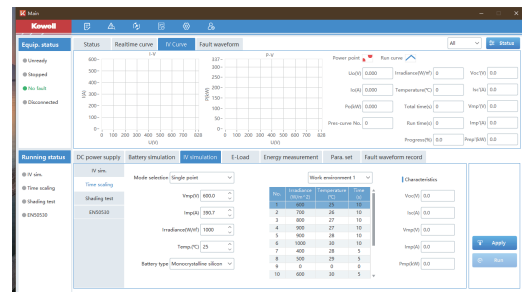
Note: *Protection Level & Ambient Temperature can be customized

Software Interfaces

DC source & IV simulation functions for static and dynamic MPPT testing.



IV Simulation



Time Scaling