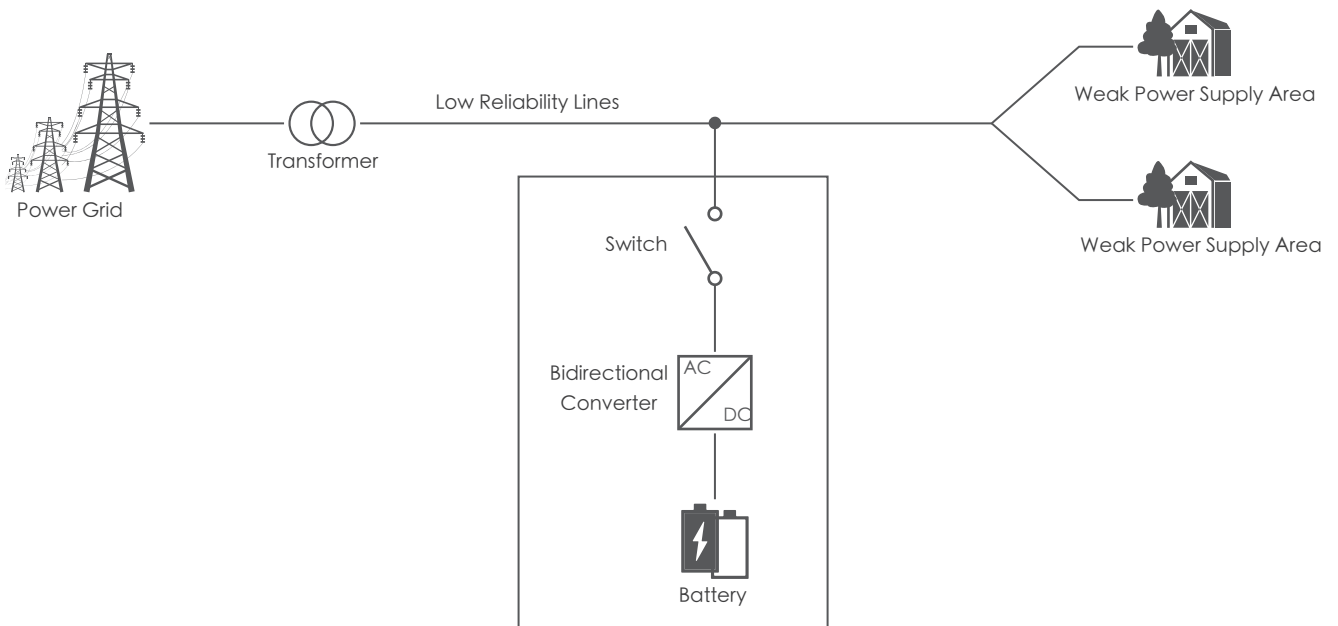


Rural Power Grid Unified Power Flow Controller

Application scenarios

In rural and remote areas, where infrastructure is weak and power supply conditions are complex, the electricity grid capacity is insufficient, leading to issues such as line losses and inadequate voltage at power terminals. To address this problem, technical solutions such as increasing transformer capacity and retrofitting power grid lines can be implemented. However, the use of the Unified Power Flow Controller (UPFC) in rural power networks can enhance the load-bearing capacity of distribution substations, improve the stability of low-voltage distribution networks, optimize voltage distribution along distribution lines, and reduce voltage drops. This approach effectively resolves these challenges and proves to be more economically viable than traditional rural power network upgrades.



Features

- Intelligent Active/Reactive Power Compensation
- Low Power Consumption and Energy Saving Design
- Ultra-low Voltage Start
- Intelligent Remote Monitoring
- Wide Voltage Regulation Range and High Efficiency
- Multiple Intelligent Protection Functions
- IP65 Protection

Model	EVI-5000-BL
Rated Capacity	5kVA
AC Input(Charging)	
Apparent Power(VA)	5000
Input Rated Voltage(V)	220VAC
Input Voltage Range(V)	110VAC~264V AC; load reduction if lower than 176V AC
Input Rated Frequency(Hz)	50
Input Frequency Range(Hz)	45~55
Input Rated Current(A)	25
Battery	
Rated Voltage(V)	48
Voltage Range(V)	42-58.8
Battery Type	Lithium-ion (Ternary Lithium)
Battery Capacity(Ah)	60
Charging Rated Power(W)	4800
Maximum Charging Current(A)	100
Maximum Discharging Current(A)	120
Charging Current Accuracy	3%
AC Output (Discharge)	
Output Rated Power(W)	5500
Rated Voltage(V)	220
Rated Frequency(Hz)	50
Rated Current(A)	25
Online Switch Time(ms)	10
Output Current Distortion Thdi (%)	< 5%@Thdu<1%
Voltage Range(V)	110VAC~264V AC
Frequency Range(Hz)	45~55
Output Current DC Component(A)	<0.5%In
Output Power Factor	±0.1~±1
System Indicators	
Battery Inversion Efficiency(%)	> 95(Bi-directional)
Noise(dB)	<40
Protection	
Electrical Isolation	AC-DC Isolation
Protective Function	The system features protection for overcurrent, overvoltage, short circuit, overtemperature, and inverter-BMS communication fault
Physical	
Protection Level	IP55
Working Temperature Range(°C)	-40-55
Cooling Method	Natural Heat Dissipation
Maximum Working Altitude(M)	2000m
Humidity(%)	93%RH@40°C
Storage Temperature(°C)	-20~+60
Dimensions(LxWxH) (mm)	500mm(L)×370mm(W)×186mm
Weight(kg)	22Kg
Installation	Pole Installaion