

Grid Hybrid Power Solution

PowerCube 1000 G3: Grid hybrid solution



Introduction

G3 solution is an Enhanced fast charging system, which is suitable for the scenarios of not only frequent and short outage grid but also occasionally abnormal long outage grid in the poor and unstable grid areas, it configures hybrid batteries of ESU-A & FCB-A, and shows good performance in replacing the legacy dual D.G. power solution, intelligent alternate working mode of grid and batteries, maximize the using of grid power to realize "Zero" D.G. running time or remove D.G. .

Features

- Leading GridMax technology
- Full charging \leq 3hrs. 4–5 years lifespan
- Advanced lithium & lead-acid battery control technology
- Remote energy management by NetEco (optional)
- Smooth evolution and easy expansion

Scenarios

- Poor grid or unstable grid areas
- Frequent & short & occasionally abnormal long outage grid
- New-building sites in unstable grid areas
- Modernizing legacy sites

Unified controller with advanced GridMax technology

Hybrid energy storage: ESU-A & FCB-A



Configuration



Solution1 (Outdoor)



Solution2 (Indoor)

Specifications

Solution Type		Solution1 (Outdoor)		Solution1 (Indoor)
Condition	Typical Load	<5.0 kW		
	Energy Input	Grid		
	Grid Type	200 – 240/346 – 415 Vac, Three-phase, 50/60 Hz, Max. 54		
	Diesel Generator	Optional (depends on the existing backup D.G.)		
Configuration	Cabinet	ICC500-HA1H-C5	ICC900-HA1H-C4 ICC900-HA1H-C5	ICC200-N1H-C3 + Battery shelf
	Battery Type	ESU-A600Wh/C, Max. 100Ah And FCB-A, Max. 400Ah	ESU-A600Wh/C, Max. 150Ah and FCB-A, Max. 650Ah	ESU-A600Wh/C, Max. 150Ah and FCB-A, Max. 650Ah
	Rectifiers	Max. 8 × R4850G2 Max. 6 × R4850N2		
	Controller	ECC500		
	Installation Mode	Ground installation		
	Cabling Mode	From the bottom		From the top
System	Cooling for Equipment	HEX: 150 W/K	HEX: 200 W/K	Natural cooling
	Cooling for Battery	DC Air-con PC500D	DC Air-con PC1500D	Natural cooling
	Maintenance Mode	From the front and rear		From the front
	Protection Level	Equipment cabin: IP55 Battery cabin: IP55		Equipment cabin: IP20 Battery cabin: IP20
	Noise Level	≤ 65 dB(A) @ 1.5 m, satisfy the GR487 standard		
	Remaining Space ¹	14 U	9-10 U	28 U
	MTBF	> 100,000 hours		
AC Distribution	ACDU Type	ACDU-63A1/ACDU-63A2 (optional ,only for single mains input)		
	ATS Type	ATS-63A1/ATS-63A2 (optional ,only for two AC inputs)		
	SPD	ACDU-63A1/ATS-63A1: 20/40 kA (8/20 μs) ACDU-63A2/ATS-63A2: 30/60 kA (8/20 μs)		
DC Distribution	DCDU Type	DCDU-400AD (work with DCDB-01B)		
	DTS Type	DTS-200A1		
	Output Voltage	-48 Vdc		
	Maximum Capacity	Max. 400 A		
	Battery Branch	2 × 250 A Fuse		
	BLVD Branch	4 × 32 A MCB, 2 × 16 A MCB, 1 × 10 A MCB		
	LLVD Branch	2 × 80 A MCB, 2 × 63 A MCB		
Environment	SPD	10/20 kA (8/20 μs)		
	Operating Temperature	-10°C to +50°C (including solar radiation)		0°C to +45°C
	Storage Temperature	-40°C to +70°C		
	Operating Humidity	5% to 95% (no condensation)		
	Altitude	0 to 4000 m (1°C per 200 m temperature derating from 2000 to 4000 m)		

1. The remaining space for customer use should according to the actual configuration of equipments

Remark:

- DCDU: Direct Current Distribution Unit
- ATS: AC Transfer Switch
- MTBF: Mean Time Between Failures
- SPD: Surge Protective Device

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