

Grid Hybrid Power Solution

PowerCube 1000 G4: Grid hybrid solution



Introduction

G4 solution is a standard fast charging system, which is suitable for the scenarios of occasionally grid outage about 1–2 times /day or 2–6 hours/time in the poor and unstable grid areas, it configures lead-acid batteries of 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 4hrs. 3–4 years lifespan
- Advanced lead-acid battery control technology
- Remote energy management by NetEco (optional)
- Smooth evolution and easy expansion

Scenarios

- Poor grid or unstable grid areas
- occasionally daily outage grid
- New-building sites in unstable grid areas
Modernization legacy sites



Unified controller with advanced GridMax technology

Fast charging storage unit

Configuration



Solution1 (Roof site)



Solution2 (Ground site)



Solution2 (Indoor)

Specifications

Solution Type		Solution1 (Roof site)	Solution2 (Ground site)	Solution2 (Indoor)
Condition	Typical Load	< 5.0 kW		
	Energy Input	Grid		
	Grid Type	200 – 240/346 – 415 Vac, three-phase, Max. 34 A 100 –120/200 – 240 Vac, dual-live wire, 50/60 Hz, Max. 102 A		
	Diesel Generator	Optional (depends on the existing backup D.G.)		
Configuration	Cabinet	ICC330-H1-C2 + ESC330-D2	ICC710-HA1-C1 ICC710-HD1-C1	ICC200-N1-C5 + Battery shelf
	Battery Type	TCB-C, Max. 680 Ah	TCB-A/FCB-A, Max. 650Ah	TCB-A/FCB-A, Max. 650Ah
	Rectifiers	Max. 6 × R4850G2/R4850N2		Max. 8 × R4850G2/R4850N2
	Controller	ECC500S		
	Installation Mode	Ground installation		
	Cabling Mode	From the bottom		From the top
System	Cooling for Equipment	HEX: 150 W/K		Natural cooling
	Cooling for Battery	Direct ventilation	ICC710-HA: PC500D ICC710-HD: Direct ventilation	Natural cooling
	Maintenance Mode	From the front and rear		From the front
	Protection Level	Equipment cabinet: IP55 Battery cabinet: ESC330-D2/ICC710-HD1-C1: IP34 ICC710-HA1-C1: IP55		Equipment cabinet: IP20 Battery cabinet: IP20
	Noise Level	≤ 65 dB(A) @ 1.5 m, satisfy the GR487 standard		
	Remaining Space ¹	21 U	14 U	34 U
	MTBF	> 100,000 hours		
AC Distribution	ACDU Type	ACDU-63A1/ACDU-63A2/ACDU-125B1 (optional ,only for single mains input)		
	ATS Type	ATS-63A1/ATS-63A2/ATS-125C1 (optional ,only for two AC inputs)		
	SPD	ACDU-63A1/ATS-63A1: 20/40 kA (8/20 μs) ACDU-63A2/ACDU-125B1/ATS-63A2/ATS-125C1: 30/60 kA (8/20 μs)		
DC Distribution	DCDU Type	DCDU-400AN2		
	Output Voltage	-48 Vdc		
	Maximum Capacity	Max. 400 A		
	Battery Branch	2 × 250A Fuse		
	BLVD Branch ²	1 × 63 A MCB, 4 × 32 A MCB, 2 × 16 A MCB (LLVD2)		
	LLVD Branch	2 × 80 A MCB, 2 × 63A MCB (LLVD1)		
Environment	SPD	10/20 kA (8/20 μs)		
	Operating Temperature ³	ICC330-H1-C2/ICC710-HA1-C1: 0°C to +45°C + solar radiation ICC710-HD1-C1: -10°C to +40°C + solar radiation ESC330-A2: 0°C to +50°C + solar radiation		-10°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 200m temperature derating from 2000 to 4000 m)			

1. The remaining space for customer use should according to the actual configuration of equipments(including ATO pre-installation)

2. DCDU-400NA2: LLVD load connect to LLVD1 , BLVD load connect to LLVD2

3. ICC710-HA1-C1 & ESC330-A2 can work under the ultra-temperature: -20°C by adding pre-heat device

Remark:

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

Copyright © Huawei Technologies Co., Ltd. 2016. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

General Disclaimer

The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Huawei may change the information at any time without notice.

HUAWEI TECHNOLOGIES CO., LTD.

Huawei Industrial Base
Bantian Longgang
Shenzhen 518129, P.R. China
Tel: +86-755-28780808
www.huawei.com