

Diesel Hybrid Power Solution

PowerCube 1000 D1-Advanced: Diesel hybrid solution



Introduction

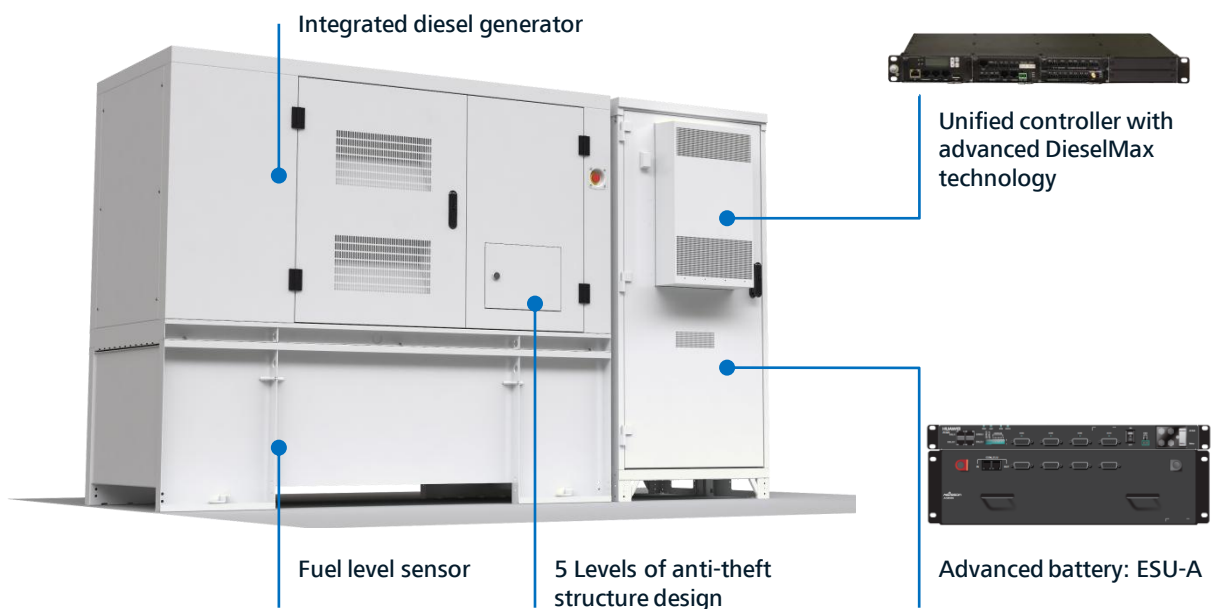
D1-Advanced hybrid solution provides power for medium/large load equipments from 1.0 kW to 5.0 kW in off and unstable grid areas, it configures the lithium battery of ESU-A2400Wh/D or ESU-A2400Wh/N for indoor and outdoor scenarios, the TCO is much lower than legacy dual D.G. solution, it also can smooth evolution to solar solution by adding PV panels.

Features

- Leading DieselMax technology
- Integrated design, 5-level anti-theft structure
- Support the connection of grid & solar, smooth evolution
- Remote energy management by NetEco (optional)

Scenarios

- Off grid or unstable grid areas
- Medium or large load system
- Areas of lacking professional D.G. maintenance engineers



Configuration



D1-Advanced
(Outdoor)



D1-Advanced
(Indoor)

Specifications

Solution Type		D1-Advanced (Outdoor)		D1-Advanced (Indoor)
Condition	Typical Load	< 5.0 kW		
	Energy Input	Diesel		
	Diesel Generator	10/14 kW, 230V/400 Vac three-phase (800 L fuel tank) 11.5/16 kW, 110/220 Vac or 120V/240 Vac dual-live wire (800 L fuel tank)		
Configuration	Integrated Cabinet	ICC710-HA1-C2	ICC710-HA1-C3	ICC200-N1-C2 + ESC200-N1
	Battery Type	ESU-A2400Wh/D; ESU-A2400Wh/N, Max. 400Ah	ESU-A2400Wh/D; ESU-A2400Wh/N, Max. 800Ah	ESU-A2400Wh/D; ESU-A2400Wh/N, Max. 400Ah & 12V AGM(reused), Max. 300Ah
	Rectifiers	Max. 8 × R4850S1		
	Controller	ECC500S		
System	Installation Mode	Ground-mounted		
	Cabling Mode	Bottom		Top
	Cooling for Equipment	HEX 150 W/K	HEX 150 W/K	Natural cooling
	Cooling for Battery	DC Air-con: PC500D	DC Air-con: PC1000D	Natural cooling
	Maintenance Mode	From the front and back		From the front
	Protection Level	Equipment cabinet: IP55 Battery cabinet: IP55 IDG.: IP23		Equipment cabinet: IP20 Battery cabinet: NA IDG: IP23
	Noise Level	Cabinet: ≤ 65 dB(A) @ 1.5 m, satisfy the GR487 standard IDG: ≤ 75 dB(A) @ 1 m, 75% load, satisfy the ISO8528 standard (80 dB(A) only for 16 kW IDG)		
	Remaining Space ¹	14 U		34 U
	MTBF	> 100,000 hours		
AC Distribution	ATS Type	ATS-63A1/ATS-63A2/ATS-125C1		
	SPD	ATS-63A1: 20/40 kA(8/20 μs) 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)		
	SPD	10/20 kA (8/20 μs)		
Environment	Operating Temperature	-10°C to +45°C + solar radiation (can work under the ultra-temperature: -20°C by adding pre-heat device)		ICC200-N1-C2: -10°C to +45°C ICC200-N1H-C3: 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 200m temperature derating from 2000 to 4000 m) IDG: 0 to 3000 m (output derating from 1000 to 3000 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.

Remark:

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

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