

GESS-SW-1096TH-POB

1.096MW/1.096MWh (1C)



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BESS DESIGNED BY SWEDISH ENGINEERS

Global Energy Storage Solutions Battery AB

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Features

- 1.096MW/1.096MWh capacity Forced Air-cooled (1CP)
- Cold start operations from -20°C
- Fully containerized IP54 system
- Specially designed for FFR market with less than 600ms response time
- Can be used for other BESS applications (Reactive power trading, Peak shaving, UPS etc.)
- LiFePO4 Battery technology
- Backup power unit for emergency internal usage
- Directly communicating with IEC60870-5-104 /101, Modbus TCP
- 3 years warranty for PCS
- Cell cycle life: 4000 cycles or 5 years

CELL Standard:

- IEC 62619
- UL 1973
- UL9540A
- UN 38.3

Pack Standard:

- IEC 62619
- UL9540A

System Standards :

- IEC 62619

PCS Standards :

- IEC62477
- EN61000
- EN50549

Technical specification GESS-SW-1096TH-POB

Rated discharge power (kW)	1096
Rated charging power (kW)	1096
Rated capacity (kWh)	1096.7
Max. power (kW)	1540
Max. 2Sec power (kW)	1680
No of Cells	2856
Battery clusters (units)	7
Number of battery stacks	7
Dimensions (L x W x H) mm	6058 *2438 *2896
Weight (T)	<22Ton

Cell parameters

Cell type	LFP
Rated capacity (Ah)	120 (123~125)
Rated voltage (V)	3.2
Rated energy (kWh)	0.384 (+0.3936~+0.4)
Voltage range (V)	2.0-3.65
Charging cut-off voltage (V)	3.6
Discharge cut-off voltage (V)	2.8
Operating humidity	< 85% ROH, no condensation
Power Efficiency	97%
Calendar life	not less than 10 years

Battery pack parameters

Combination	1P24S
Rated capacity (Ah)	120
Rated voltage (V)	76.8
Capacity (kWh)	9.216 (9.446-9.6)

Battery cluster parameters

Battery packs	17
Rated capacity (Ah)	120
Rated voltage (V)	1305
Rated energy (kWh)	156.6
Series-parallel	1P17S

Battery stack parameters

Clusters	1
Rated voltage (V)	1305
Minimum discharge voltage (V)	1142.4
Maximum charging voltage (V)	1468.8
Rated power (kW)	156.6
Rated current (A)	120
Rated capacity (kWh)	156.6

BESS parameters

Stacks	7
Rated voltage (V)	1305
Minimum discharge voltage (V)	1142.4
Maximum charging voltage (V)	1468.8
Rated power (kW)	1096
Rated current (A)	840

Fire Fighting system

Perfluorohexanone fire protection system	1 set
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Cooling system

Forced air cooling system with six air conditioner units

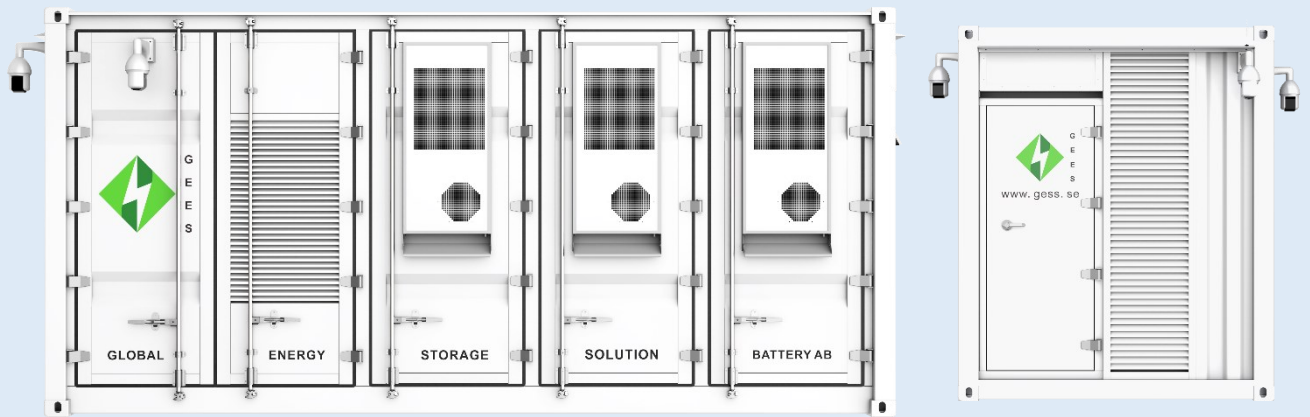
PCS parameters

PCS systems	7
Nominal power	200kVA
AC max power	220kVA
AC frequency	50/60(-2.5~2.5) Hz
AC voltage	690(-15%~15%) Vac
Battery voltage range	1000~1500Vdc
Quantity of battery strings	7
DC max current in each branch	120A
THDi	≤ 3%
	Listed: 0.8~1 leading or lagging (Controllable)
AC PF	Actual: 0.1~1 leading or lagging (Controllable)
Cooling	Forced air cooling
Noise	< 75d B
	NEMA1 IP20
Enclosure	and optional IP54 with outdoor cabinet
	3000m/ 10000feet (> 3000m/ 10000feet derating)
Max elevation	
Operating ambient temperature	(-40°C to +55°C*) to 50°C (Derating over 45°C)
Humidity	0~95% (No condensing)
Size (W × H × D)	1100×2160×800 mm
Weight	Cabinet 280kg + Module 40kg*n (n=1, 2, ..., 8)
Installation	Floor standing
	OTP, AC OVP/ UVP, OFP/ UFP, EPO, AC Phase Reverse, Fan/ Relay Failure, OLP, GFDI, Anti-islanding
Protection	Upper/ Lower AC Voltage/ Frequency limit, Battery EOD voltage
Configurable protection limits	
AC connection	3-Phase 3-Wire
Display	Touch Screen
Communication	RS485, CAN, Ethernet
Isolation	Non-isolation
	CE LVD IEC 62477, CE EMC IEC 61000,
Certification	EN 50549-1:2019 G99, AS4777

*Optional features * Specification can be changed without notice



GESS-SW-1096TH-POB



GESS-SW-1096TH-POB side views