

GESS-SW-2000TL-PO

1.118MW/2.236MWh (0.5C)



GESS



**SPECIALLY DESIGNED
BESS FOR
ARCTIC ENVIRONMENT**

Global Energy Storage Solutions Battery AB

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Features

- 1.118MW/2.236MWh capacity Forced Air-cooled (0.5CP; 1.118MW throughout 10 years guaranteed)
- Cold start operations from -55°C *
- Can operate in extreme environments up to -40°C* or -55°C * (Standard version designed for -20°C)
- Special Auxiliary heating systems to keep the battery & PCS warm for black start *
- Fully containerized IP55 system
- Internal humidity controller to ensure to prevent static discharge in extreme weather conditions *
- Separate remote condition monitoring system to monitor Internal & external CCTV cameras, Fire system, door sensors, humidity & temperature *
- 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
- Clip-on Generator mounting facility and supply socket to facilitate to maintain the BESS temperature during transport *
- Directly communicating with IEC60870-5-104

CELL Standard:

- IEC 62619
- UL 1973
- UL9540A
- UN 38.3

Pack Standard:

- IEC 62619
- UL9540A

System Standards :

- IEC 62619

PCS Standards :

- IEC62477
- EN61000
- EN50549

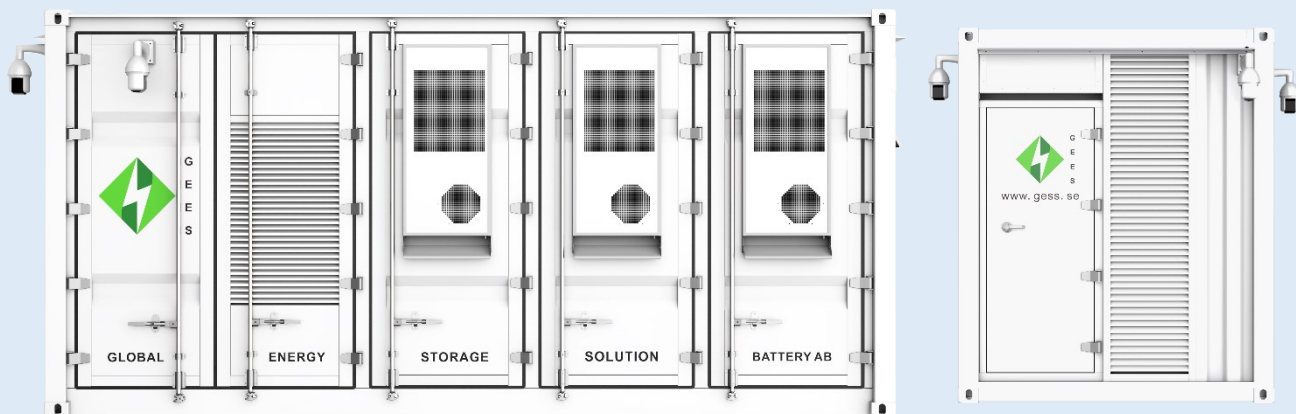
Technical specification	GESS-SW-2000TL-PO
Rated discharge power (kW)	1118
Rated charging power (kW)	1118
Rated capacity (kWh)	2236
Max. power (kW)	1320
Max. 2Sec power (kW)	1440
No of Cells	2496
Battery clusters (units)	6
Number of battery stacks	6
Dimensions (L x W x H) mm	6058 *2438 *2896
Weight (T)	<28Ton
Cell parameters	
Cell type	LFP
Rated capacity (Ah)	280
Rated voltage (V)	3.2
Rated energy (kWh)	0.896
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	1P16S
Rated capacity (Ah)	280
Rated voltage (V)	51.2
Low voltage (V)	46.4
High voltage (V)	56.32
Power (kW)	14.336
Battery cluster parameters	
Battery packs	26
Rated capacity (Ah)	280
Rated voltage (V)	1331.2
Low voltage (V)	1206.4
High voltage (V)	1464.32
Power (kW)	372.736
Rated energy (kWh)	372.736
Series-parallel	1P26S
Battery stack parameters	
Clusters	1
Rated capacity (Ah)	280
Rated voltage (V)	1331.2
Power (kW)	372.736
Rated capacity (kWh)	372.736
BESS parameters	
Stacks	6
Rated voltage (V)	1331.2
Low voltage (V)	1206.4
High voltage (V)	1464.32

Rated power (kW)	2236.416
Rated current (A)	1680
Fire Fighting system	
Perfluorohexanone fire protection system	1 set
Cooling system	
Forced air cooling system with six air conditioner units	
PCS parameters	
PCS systems	6
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
DC max current in each branch	120A
THDi	≤ 3%
AC PF	Listed: 0.8~1 leading or lagging (Controllable) Actual: 0.1~1 leading or lagging (Controllable)
Cooling	Forced air cooling
Noise	< 75d B
Enclosure	NEMA1 IP20 and optional IP54 with outdoor cabinet
Max elevation	3000m/ 10000feet (> 3000m/ 10000feet derating)
Operating ambient temperature	(-40°C to +55°C*) to 50°C (De-rating 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-2000TL-PO



GESS-SW-2000TL-PO side views



GESS-SW-2000TL-PO with Clip-On Genset attached