

Battery Energy Storage System



GESS-SW-76CA1-PO
76kW/92kWh(1CP)/400Vac

**Specially Designed BESS for
Swedish FFR Market**



**Swedish Grid approved PCS
with EN50549 certification**

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Technical Specifications

Features

- 400V AC voltage
- Maximum within 2Sec power 116kW
- Forced air cooling system
- Operating temperature range +40°C to -20°C
- IP54 enclosure
- Climate control system to regulate the internal temperature
- C3 grade Corrosion resistant
- Warranty: 5 years or until the battery cells have completed 4000 life cycles, (Other warranty schemes can be provided upon request).
- After 6000 cycles, the remaining capacity of the battery is above 70%

Item	Parameter
Nominal capacity	92kWh
Rated Output Power	80kW
Output Power for grid support services (ex. FFR)	76kW
Maximum 2 Sec Output Power	116kW
"C" rating	1
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
Calendar life	not less than 10 years
Battery pack parameters	
No of packs	10
Combination	1P24S
Rated capacity (Ah)	120
Rated voltage (V)	76.8
Capacity (kWh)	9.216 (9.446-9.6)
Input insulation resistance	≥10MQ, 1,000 VDC
Communication	Modbus TCP, CAN, Modbus RTU
System cycle life	≥4,000 cycles @ 1C, 25°C
Certification	IEC 62619, CE, UN 38.3
Weight	>1200Kg
Size (W* H* D) (mm)	1100*2100*1400
Protection	IP54

Applications:

Frequency Regulation
Peak Shaving
Capacity Firming
Transmission support
Distribution support
Black Start
PV & wind Integration
Power Factor & Voltage Support
Reactive power trading



PCS Specifications	
DC side	
Full load voltage range (V)	615 to 950 (3W+PE) /680 to 950 (3W+N+PE)
Number of input routes	1
Maximum current (A)	170
AC side (On-grid)	
Rated voltage (V)	230/400
Voltage deviation	- 10% ~ + 15%
AC output types	(3W+PE) three-phase three-wire/(3W+N+PE) three-phase four-wire
Rated output power (kW)	105
Maximum power output (kW)	116
Maximum current (A)	167
Rated grid frequency (Hz)	50/60
Power factor	0.99
Power factor range	1(lead) ~1(lag)
Current distortion rate	< 3% (rated power)
Dc component	0.5%
Overload capacity	110% long term
Maximum discharge efficiency	98.5%
AC side (Off-grid)	
Rated output voltage	230/400
Ac voltage harmonics	< 3% (linear load)
Rated frequency (Hz)	50/60
Rated output power (kW)	105
Maximum apparent power (kVA)	116
Maximum output current (A)	167
Protective Features	
Features	Ac overcurrent, AC overvoltage, AC surge, AC short circuit, antiisland, DC reverse connection, straight surge protection
System Parameters	
Dimensions (mm) Rear wiring	484*703*256.5
Dimensions (mm) Front wiring	484*667*271.5
Dimensions (mm) front wiring - DC aviation terminal	544*717*271.5
Weight (kg)	48
Altitude (m)	4000 (used for derating above 2000)
Operating temperature	-30°C ~ 55°C (derated use above 45°C)
Storage temperature	-45°C to 70°C
Humidity	0%RH to 95% RH, non-condensing
Cooling method	Intelligent forced air cooling
Level of protection	IP20
Communication interface	CAN/RS485
Compliant with standards	GB/T 34120-2017, GB/T 34133-2017, EN 62477, EN IEC 61000
Grid support	L/HVRT, active and reactive power control
Certified	CE\CQC

