

"BIGGER & STRONGER"

Commercial & Industrial Solution Supports Your Business

AlphaESS is a world-leading energy storage solution and service provider covering the full power range.

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YOUR
SMART
ENERGY



STORION-H30/H50-G3

COMMERCIAL & INDUSTRIAL SERIES

POWER

30 / 50 kW Hybrid Inverter

CAPACITY

STORION-H50-G3
120.5 / 241 kWh

STORION-H30-G3
72.3 / 144.6 kWh



KEY FEATURES

- **All-in-One Design**
The cabinet contains batteries, PCS, DC/DC, STS and EMS, but only occupies a small area.
- **Optimal for Multi-Direction Roof**
PV Input: 4*MPPT with 8 Input
- **Multiple System Operation Monitoring**
Web- and app-based cloud application for C&I use
- **Max. 10 systems in on-grid parallel, 4 systems in off-grid parallel**
On- / Off- grid switching time ≤ 20 ms.

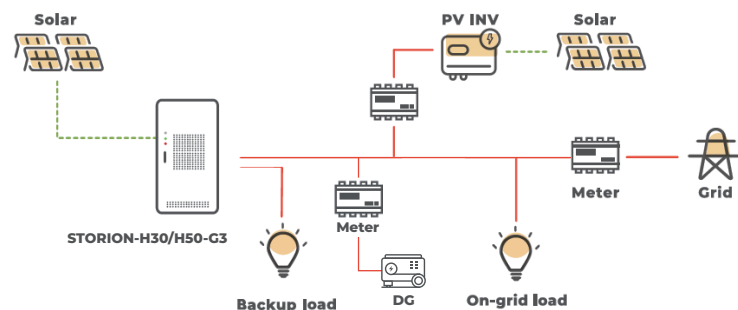
STORION-H30/H50-G3



System Function

- Backup
- Peak Shaving and Load Shifting
- Max 10 Systems in Parallel on Grid
- TOU (Time of Use) Mode

System Diagram



Model	STORION-H30-G3	STORION-H50-G3
System Technical Specification		
System Capacity	72.3 kWh	120.5 kWh
Standard Battery Rack	1*	
Warranty	5 Years Product Warranty, 10 Years Battery Warranty	
PV Side (DC)		
Max. input power	60 kW	75 kW
Start-up voltage	210 V	
MPPT Voltage Range	200 ~ 850 V	330 ~ 850 V
Number of MPPT	4	
Number of Strings per MPPT	2	
Max. Input Current	40 A / 40 A / 40 A / 40 A	
Max. Short-circuit Current	50 A / 50 A / 50 A / 50 A	
AC side (on-grid)		
Nominal Output Power	30 kW	50 kW
Max. Input Apparent Power	60 kVA	80 kVA
Nominal Grid Voltage	3L / N / PE , 220 V / 380 V; 230 V / 400 V; 240 V / 415 V	
Nominal Grid Frequency	50 / 60 Hz (± 5 HZ)	
Max. Output Current	45.5 A	75.8 A
Max.THd of current	< 3%	
AC Power Factor	0.8 leading ... 0.8 lagging	
AC side (off-grid)		
Nominal Output Power	30 kW	50 kW
Max. Output Apparent Power	30 kVA	50 kVA
Nominal Ouput Voltage	3L / N / PE , 220 V / 380 V; 230 V / 400 V; 240 V / 415 V	
Nominal Grid Frequency	50 / 60 Hz (± 5 HZ)	
Max. Output Current	45.5 A	75.8 A
Max.THd of voltage	< 3%	
Overload	150%, 10 s	
Efficiency		
Max. Efficiency & European Efficiency	97.8% & 97.2%	
Round-Trip Efficiency (RTE) DC+AC	92%	
General Parameter		
Dimensions (W x D x H)	1,120 x 1,300 x 2,050 mm	
Battery Module Connection	3 in series	5 in series
Weight	1,700 kg (with 5*M77314-S)	
Corrosion Protection Class	C4	
Ingress Protection	IP55	
Noise Emission	≤ 65 dB @ 1m	
Operating Temperature Range	-30 °C ~ 50 °C(PCS > 45°C derating)	
Operating Humidity Range	0% ~ 90% (No Condensation)	
Max. operating Altitude	3,000 m / 9,842 ft (> 3,000 m derating)	
Fire-fighting System	Aerosol + Smoke / Temperature Detection	
Cooling Method	HVAC	
Communication	RS485, CAN, Ethernet, Modbus TCP	
Dispatching Protocol	Modbus TCP, API	
Compliance	IEC 61000-2/-4, IEC 62109, EN 50549, VDE 4105,VDE 4110, AS4777, NRS 097, IEC 62477, UN38.3	

* Max support 2 battery racks, extra battery cabinet is needed.

STORION-H30/H50-G3



Model

Battery Module



Parameter

Model	M77314-S 0.5C
Battery Chemistry	LiFePO4
Pack Configuration	3.2 V / 314 Ah @ 1P24S
Internal Resistance	≤ 10 mΩ
Nominal Capacity	24.1 kWh
Nominal Voltage	76.8 V
Operating Voltage Range	64.8 V ~ 86.4 V
Max. Charging/Discharging Current	157 A
Cycle Life	8,000@EOL 70% **
Operating Ambient Temperature Range	-20 °C ~ 50 °C***
Ingress Protection	IP 20
Communication	CAN
Dimensions (W x D x H)	526 x 814 x 250 mm
Weight	168 kg
Compliance	IEC 62619, IEC 62477, IEC 61000, UL9540A

Meter (optional)



Model	DTSU666
Rated Voltage	230 V AC / 400 V AC
Accuracy Class	± 1%
Communication	RS485, Modbus RTU
Dimensions (W x D x H)	72 × 80 × 101 mm
CT Model	AKH - 0.66, K-30 × 20
CT Current Ratio	400 / 5 A
CT Perforation Size	32 × 22 mm

Extra Battery Cabinet (optional)



Model	Extra Battery Cabinet
Battery	M77314 - S
Rack Capacity	72.3 kWh / 120.5 kWh
Max. Charging / Discharging Current	157 A
Battery Rack Voltage Range	194.4 ~ 259.2 V / 324 ~ 432 V
Number of Battery Module	3 / 5 in series
Fire-fighting System	Aerosol + Smoke / Temperatur Detection
Dimensions (W x D x H)	1,120 x 1,300 x 2,050 mm
Weight	1,600 kg (with 5 * M77314 - S)

Parallel Back up Box(Optional)



Model	Parallel Back up Box
Max. Connection systems	4
Nominal Power	200 kW
Nominal Current	400 A
Nominal Frequency	50/60 Hz
Switching Time	≤ 20 ms
Ingress Protection	IP54
Operating Ambient Temperature Range	-25 °C ~ 50 °C
Dimensions (W x D x H)	600 × 255 × 800 mm
Weight	40 kg

** Under specific test conditions.

*** Max. charge / discharge current derating may occur with changes in temperature and SoC.

