



• YOUR
• SMART
• ENERGY

STORION-G2-H50

COMMERCIAL &
INDUSTRIAL SERIES

POWER

50 kW Hybrid Inverter

CAPACITY

- 6.9 kWh Battery Module
Expandable from 55.29 to 110.59 kWh
- 8.0 kWh Battery Module
Expandable from 104.83 to 209.66 kWh



KEY FEATURES

- **All in One Design**
The cabinet contains batteries, PCS, DC/DC, STS and EMS, but only occupies a small area.
- **Support Multi-Direction Roof**
PV Input: 4*MPPT with 200V ~ 850V MPPT Voltage
- **Multiple System Operation Monitoring**
Local SCADA Monitoring & Remote Commercial and Industrial Cloud
- **Max 3 Systems in Parallel**
Max power 150 kW by parallel operation

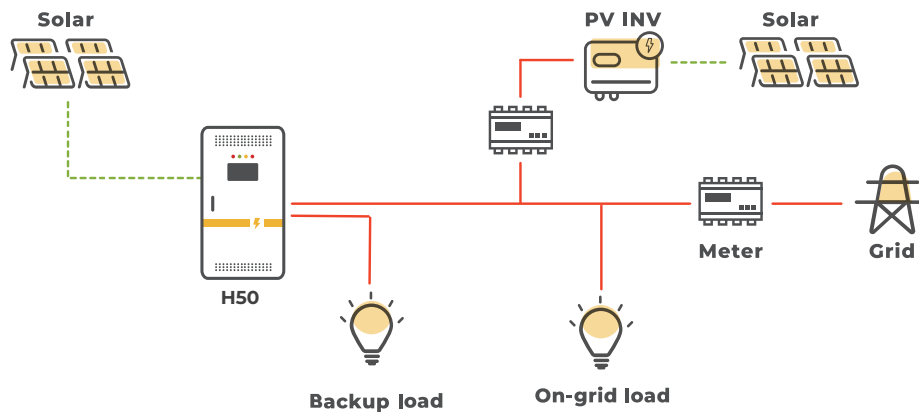
STORION-G2-H50



System Functions

- Backup
- Max 3 Systems in Parallel
- Peak Shaving and Load Shifting
- Timed Charge and Discharge

System Diagram



| Model | STORION-G2-H50 / STORION-G2-H50-O |
|--|--|
| System Technical Specifications | |
| Battery Chemistry | LiFePO4 |
| Battery Energy Range | 55.3 kWh~104.83 kWh |
| Depth of Discharge (DoD) | 90% (On-Grid), 85% (Off-Grid) |
| IP Protection | IP20 / IP55 |
| Standard Battery Cluster | 1* |
| Warranty | 5 Years Product Warranty, 10 Years Battery Performance Warranty |
| PV Side | |
| Max. input power | 75 kW |
| Start-up voltage | 135 V |
| MPPT Voltage Range | 200 ~ 850 V |
| Number of MPPT | 4 |
| Number of Strings for Each MPPT | 2 |
| Max. Input Current | 30 A / 30 A / 30 A / 30 A |
| Max. Short-circuit Current | 40 A / 40 A / 40A / 40 A |
| AC Data (Grid) | |
| Rated Output Power | 50 kW |
| Max. Input Power | 60 kW |
| Rated Grid Voltage | 3L / N / PE 220 V / 380 V; 230 V / 400 V |
| Grid Frequency | 50 / 60 Hz |
| Rated Current | 83 A |
| Output THDi | <3% |
| AC PF | 0.8 leading ... 0.8 lagging |
| AC Data (Backup) | |
| Rated Output Power | 50 kW |
| Max Output Apparent Power | 55 kVA |
| Rated Grid Voltage | 3L / N / PE 220 V / 380 V; 230 V / 400 V |
| Grid Frequency | 50 / 60 Hz |
| Max Current | 83 A |
| General Data | |
| Dimensions (W x D x H) | STORION-H50: 900 x 850 x 2160 mm STORION-H50-O: 1050 x 1200 x 2160 mm |
| Weight | STORION-H50: 850 kg (with M7790-S) / 1170 kg (with M38210-SC) STORION-H50-O: 950 kg (with M7790-S) / 1270 kg (with M38210-SC) |
| Operating Temperature Range | STORION-H50: -10°C ~ 50°C / STORION-H50-O: -20 °C ~ 50 °C(PCS > 45°C derating) |
| Relative Humidity | 0~95% (No Condensation) |
| Max. Working Altitude | 3000 m / 9842 ft (>3000 m derating) |
| Cooling Method | Forced Air-Cooling |
| Communication Interfaces | RS485, CAN, Modbus TCP, Ethernet |
| Display | SCADA |
| Certifications | IEC 62477, IEC 61000, IEC 62109, EN 50549-1, VDE 4105, G99, G100, C10/C11**, TOR Erzeuger**, NC RFG, UNE 217001/2** |

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



**The certification process is ongoing.

STORION-G2-H50



Model: STORION-G2-H50 / STORION-G2-H50-O

Battery Cluster System

| Item | Data |  |  |
|-----------------------------------|---------------------------------|---|---|
| Battery Module | | M7790-S 1C | M38210-SC 0.5C |
| Battery Chemistry | | LiFePO4 | LiFePO4 |
| Pack | | 3.2 V / 90 Ah@1P24S | 3.2 V / 105 Ah@2P12S |
| Internal Resistance | | ≤10 mΩ | ≤10 mΩ |
| Nominal Capacity | | 6.912 kWh | 8.064 kWh |
| Rated Voltage | | 76.8 V | 38.4 V |
| Operating Voltage | | 72 V ~ 84.48 V | 36 V ~ 43.2 V |
| Max. Charging/Discharging Current | | 90 A | 105 A |
| System Cycle Life | | 6000*** | 6000*** |
| Operating Temperature Range | | -10 °C ~ 50 °C**** | -10 °C ~ 50 °C**** |
| IP Protection | | IP21 | IP21 |
| Communication | | CAN | CAN |
| Dimensions (W x D x H) | | 326 x 654 x 250 mm | 325 x 658 x 232 mm |
| String Pack QTY | | 8 | 13 |
| Certifications | IEC 62619, IEC 62477, IEC 61000 | | |

Meter (Optional)



| Model | DTSU666 |
|---------------------|-------------------|
| Rated Voltage | 230V AC / 400V AC |
| Accuracy Class | ±1% |
| Communication | RS485, Modbus RTU |
| Dimensions (W×D×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 |

Expansion Battery Cluster (Optional)



| Model | ALPBC-105 | |
|-----------------------------------|---------------------|-----------------|
| Battery | M7790-S | M38210-SC |
| Cluster Capacity | 55.3 kWh | 104.8 kWh |
| Max. Charging/Discharging Current | 90 A | 105 A |
| Battery Cluster Voltage Range | 576 V ~ 675.8 V | 468 V ~ 549.1 V |
| Battery Rack | 2 x 7 | |
| Fire-Fighting System | Smoke detect | |
| Dimensions (W×D×H) | 700 x 850 x 2160 mm | |
| Weight | 800 kg | 1120 kg |

***Under specific test conditions.

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



"BIGGER & STRONGER"

Commercial & Industrial Solution Supports Your Business

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

 @AlphaEnergyStorageSystem  @AlphaESS  @alpha_ess  @AlphaESS  www.alphaess.com

Alpha ESS Co., Ltd.

Tel: +86 513 8060 6891
Email: info@alpha-ess.com
Website: www.alphaess.com
Add: No. 1086 Bihua Road, Tongzhou District,
Nantong City, Jiangsu Province, China

Alpha ESS International Pte. Ltd.

Tel: +65 6513 1125 / +65 6513 1126
Email: Singapore@alpha-ess.com
Add: 2 Corporation Road #01-06A Corporation Place
618494 Singapore

Alpha ESS Australia Pty. Ltd.

Tel: +61 02 9000 7676
Email: techsupport@alphaess.au
Website: www.alphaess.au
Add: 8/15-21 Gibbes Street, Chatswood,
NSW 2067 Australia

Alpha ESS Europe GmbH

Tel: +49 6103 4591 601
Email: europe@alpha-ess.de
Website: www.alpha-ess.de
Add: Paul-Ehrlich-Straße 1a, Langen, Hessen D-63225
Germany

Alpha ESS UK Ltd.

Tel: +44 330 043 2610
Email: info@alpha-ess.com
Add: Drake house, Long street, Dursley, gl11 4hh UK

Alpha ESS Italy S.r.l.

Tel: +39 339 462 4288
Email: info@alpha-ess.it
Add: Via Del Molinuzzo 83, 59100 Prato (PO), Italy

Alpha ESS USA, Inc.

Tel: +1 408 368 7828
Email: inquiry@alphaess.us
Add: Unit 5 2180 S Ivanhoe St, Denver, CO 80222 USA

Alpha ESS Korea Co., Ltd.

Email: info@alpha-ess.com
Add: 2F, 19-4, Nohyeong 11-gil, Jeju-si, Jeju-do,
Republic of Korea