

• YOUR
• SMART
• ENERGY



STORION-T50/T100 (Indoor)

COMMERCIAL &
INDUSTRIAL SERIES



Self-Sufficient

Time Period Charge and Discharge

Peak Shaving and Load Shifting




Dual Power Supply

Backup




STORION-T50/T100



Battery

Item	Parameters			
		M38180-S	M38210-S	M48112-S
Battery Module		M38180-S	M38210-S	M48112-S
Battery Type		LiFePO ₄	LiFePO ₄	LiFePO ₄
Pack		3.2V / 90Ah@2P12S	3.2V / 105Ah@2P12S	3.2V/56Ah@2P16S
Internal Resistance		≤10 mΩ	≤10 mΩ	≤10 mΩ
Energy Capacity		6.912 kWh	8.064 kWh	5.734 kWh
Usable Capacity		6.22 kWh	7.25 kWh	5.16 kWh
Depth of Discharge (DoD)		90%	90%	90%
Rated Voltage		38.4 V	38.4 V	51.2 V
Operating Voltage Range		36 ~ 43.2 V	36 ~ 43.2 V	48 ~ 57.6 V
Max. Charging / Discharging Current		180 A	105 A	112 A
Cycle Life		80%EOL with ≥6000@1C 25°C	80%EOL with ≥6000@0.5C 25°C	80%EOL with ≥6000@1C 25°C
Operating Temperature Range		-10°C ~ 50°C	-10°C ~ 50°C	-10°C ~ 50°C
Ingress Protection		IP21	IP21	IP21
Relative Humidity		15% ~ 85%	15% ~ 85%	15% ~ 85%
Warranty		3 Years Product Warranty, 10 Years Performance Warranty		
Communication		CAN	CAN	CAN
Dimensions (W×D×H)		326×654×250 mm	326×560×222 mm	450×580×165 mm
Weight		64 kg	62 kg	65 kg
String Pack Quantity		8 ~ 12	8 ~ 12	6 ~ 9
Certifications		IEC62619, UN38.3		CE, UN38.3

High Voltage Box

Item	Parameters			
		HV900180-II	HV900105-III	HV900112-II
Model		HV900180-II	HV900105-III	HV900112-II
Rated Current		180 A	105 A	112 A
Max. Current		220 A	138 A	138 A
Rated Voltage		900 VDC	900 VDC	900 VDC
Ultimate Breaking Capacity		250 kA	250 kA	250 kA
Auxiliary Power Supply		220 VAC	220 VAC	220 VAC
BCMU Power Dissipation		4 W	4 W	4 W
Dimensions (W×D×H)		91.5×440×250.1 mm	91.5×440×250.1 mm	507×518×162 mm
Weight		20 kg	20 kg	20 kg

STORION-T50/T100



Battery Cluster System



Configuration	HV900180-II, M38180-S, Rack	HV900105-III, M38210-S, Rack	HV900112-II, M48112-S, Rack
Dimensions (W×D×H)	710×572×1950mm	743.3×602×2241.5mm	564×667×2006mm
Battery Racks	2×7	2×7	1×10
Overall Weight	667 ~ 913 kg	642 ~ 890 kg	530 ~ 725 kg
Single Cluster Capacity	55.3 ~ 82.9 kWh	64.8 ~ 97.2 kWh	34.4 ~ 51.6 kWh
Max. Charging / Discharging Current	180 A	105 A	112 A
Battery Cluster Voltage Range	288 ~ 506.88 V	288 ~ 506.88 V	288 ~ 518.4 V

Inverter



Model	PWG2-50k	PWG2-100k
PV Voltage Range	650 ~ 900 V (MPPT 520 ~ 800 V)	
MPPT Number	1	
Battery Voltage Range	250 ~ 520 V	
Max. PV Input Current	192 A	384 A
Max. Charging / Discharging Current	150 A	300 A
Nominal Power	50 kVA	100 kVA
Rated Voltage	400 V	
Grid Voltage Range	340 ~ 460 V, 3L / N / PE	
Power Factor Range	0.99 / -1 ~ 1	
Overload Capacity	100%~110% (long-term); 110%~120% (1 min); 120%~150% (200ms)	
Rated AC Current	72 A	144 A
Off-Grid Output Voltage Range	360 ~ 440 V	
Rated Output Frequency	50 / 60 Hz	
Dimensions (W×D×H)	800×800×2160 mm	
Weight	520 kg	750 kg

DC Junction Box



TOP BMU Box	TOP BMU Power	30 W
	Communication	RS-485×6, CAN×3
	SCADA Power	18 W
Junction Box	Max. Voltage	900 V
	Max. Current	400 A
	Operating Temperature Range	-30°C ~ 50°C
	Weight	100 kg
	Dimensions (W×D×H)	600×600×1650 mm

Meter (Optional)



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



STORION-T50/T100

System Technical Specifications		
Item	STORION-T50 (Indoor)	STORION-T100 (Indoor)
DC Data		
Battery Type	LiFePO ₄	
Depth of Discharge (DoD)	90% (On-Grid), 85% (Off-Grid)	
Battery Voltage Range	250 ~ 520 V	
Battery Energy Range	34.2 ~ 387.072 kWh	
Standard Battery Cluster	1 ~ 4	
PV Voltage Range	650 ~ 900 V	
MPPT Voltage Range	520 ~ 800 V	
Number of MPPT	1	
AC Data - Grid		
Rated Power	50 kVA	100 kVA
Max. Output Power	55 kVA	110 kVA
Max. Grid Input Power	100kVA (with STS), 50kVA (without STS)	200kVA (with STS), 100kVA (without STS)
Rated Grid Voltage	3L / N / PE, 340 ~ 460 V	
Grid Frequency	50 / 60 Hz	
Rated Current	72 A	144 A
AC Data - Backup		
Rated Output Power	50 kVA	100 kVA
Rated Output Voltage	360 ~ 440 V	
Rated Frequency	50Hz / 60Hz	
Overload Capacity	100%~110% (long-term); 110%~120% (1min); 120%~150% (200ms)	
General Data		
Ingress Protection	IP20	IP20
Operating Temperature Range	-20°C ~ 50°C	
Relative Humidity	0 ~ 95% (No Condensation)	
Max. Working Altitude	3000m / 9842ft	
Warranty	3 Years Product Warranty	
Cooling Method	Forced Air Cooling / HVAC	
Communication Interfaces	RS485, CAN, Modbus, Ethernet	
Certifications	EN IEC 61000-6-2&4, VDE-AR-N 4105:2018, OVE-Richtlinie R 25:2020, DIN VDE 0126-1-1:2013 (with national deviation of France: DIN VDE 0126-1-1 VFR 2019), EN 50549-1:2019+AC:2019-04, NRS 097-2-1:2017 Edition 2.1, PEA, MEA, IEC62109-1:2010, IEC62109-2:2011, AS/NZS 4777.2:2020, Amd:1:2021, C10/C11	

* The PV power must be less than the smaller value of the rated power of the battery and the PCS, and the load power must also be less than the smaller value of the rated power of the battery and the PCS.



Alpha ESS Co., Ltd.

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

Alpha ESS Europe GmbH

+49 610 3459 1601
 europe@alpha-ess.de
 www.alphaess.de
 Paul-Ehrlich-Straße 1a, Langen, Hessen D-63225 Germany

Alpha ESS Australia Pty. Ltd.

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

Alpha ESS International Pte. Ltd.

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

Alpha ESS Italy S.r.l.

+39 339 462 4288
 info@alphaess.it
 www.alphaess.it
 Firenze & Milano instead Via Don Minzoni, 17, Calenzano Firenze 50041 Italy

Alpha ESS UK Ltd.

+44 330 043 2610
 info@alpha-ess.com
 Drake house, Long street, Dursley, GL11 4HH UK

Alpha ESS USA, Inc.

inquiry@alphaess.us
 www.alphaess.us
 2180 S Ivanhoe St. Unit 5 Denver.CO 80222 USA

Alpha ESS Korea Co., Ltd.

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

Alpha ESS South Africa (Pty.) Ltd.

measervice@alpha-ess.com
 Johannesburg, South Africa