

# ESS Cabinet 399 kWh

Liquid-cooled battery storage system



Preliminary

## Liquid-cooled battery storage system based on Hithium prismatic LFP ESS Cells 300 Ah with highest cyclic lifetime.

Improved safety characteristics and specially optimised for the highest demands on safety, reliability and performance. Suitable e.g. for industrial, utility, and grid serving applications.

- Product certifications:  
IEC 62619, IEC 62477, IEC 63056, IEC 61000, UL 1973, UL 9540A, NFPA 855, UN 38.3
- Company certifications:  
ISO 9001, ISO 14001, ISO 45001
- Environmental Compliance:  
ROHS, REACH

## High safety

- High thermal stability thanks to liquid cooling
- Multi-stage, active fire protection system
- Use of highly safe prismatic HiTHIUM LFP cells
- Ultra-wide operating temperature range

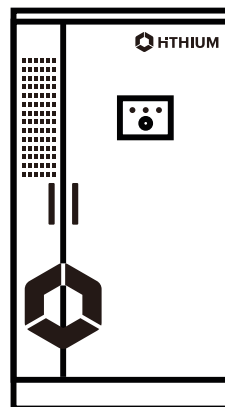
## Low LCOS (Levelised Cost of Storage)

- Excellent thermal management improves energy throughput by creating an optimal operating temperature
- High energy density
- Highly integrated: including thermal management system, fire protection system, BMS, etc.

# ESS Cabinet

## 399 kWh

Liquid-cooled battery storage system based on prismatic LFP cells with very high cyclic lifetime



GENERAL	
Battery Type	Hithium LFP3001P52S
No. of Battery Modules	4 ... 8
Configuration	Serial connection of modules
Cooling Method	Liquid cooling
BMS Communication	CAN
Gravimetric	> 108 Wh/kg <sup>1</sup>
Volumetric	> 100 Wh/l <sup>1</sup>
Application Altitude	≤ 4.000 m

ELECTRICAL	
Nominal Voltage Cabinet	1.331,2 V <sup>1</sup>
Nominal Voltage Module	166,4 V
Operating Voltage Cabinet	T > 0 °C 1.040 ... 1.497,6 V <sup>1</sup>
	T ≤ 0 °C 832 ... 1.497,6 V <sup>1</sup>
Operating Voltage Module	T > 0 °C 130 ... 187,2 V <sup>1</sup>
	T ≤ 0 °C 104 ... 187,2 V <sup>1</sup>
Nominal Energy Cabinet	399,4 kWh <sup>1,2,3</sup>
Nominal Energy Module	49,92 kWh <sup>2,3</sup>
Nominal SOC at delivery	27 % <sup>3</sup>
Nominal Charge/Discharge Rate	0,5 P / 0,5 P
Round Trip Efficiency	> 94 %

<sup>1</sup> 8 modules

<sup>2</sup> 0,5 P / 0,5 P

<sup>3</sup> 25°C +/- 2,0

<sup>4</sup> ambient temperature

MECHANICAL	
Dimensions (L x W x H)	1.300 x 1.300 x 2.350 mm
Weight Cabinet	< 3.700 kg <sup>1</sup>
Weight Battery Module	340 kg
Protection Level	IP 55

TEMPERATURE RANGE	
Operating	-30 °C ... 50 °C <sup>4</sup>
Storing (recommended)	-20 °C ... 35 °C <sup>4</sup>

PRODUCT CERTIFICATIONS	
Certificates and Reports	IEC 62619, IEC 62477, IEC 63056, IEC 61000, UL 1973, UL 9540A, NFPA 855, UN 38.3

ENVIRONMENTAL	
Compliance	ROHS, REACH Cobalt free

COMPANY CERTIFICATIONS	
	ISO 9001, ISO 14001, ISO 45001

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