



Compact Energy Storage System With 300kW converter



- Innovative in energy storage & Power Electronics
- Custom-made solutions
- Complete solution: storage & Power Electronics
- Design and system integration

Features

- Complete welded with covers
- 270kW power in small cubic
- Easy integration
- Combined Power Electronics and ESS in one system

Applications

- Peak shaving
- Stabilizing DC-link
- Energy saving
- Braking energy
- Stabilization power grid

Mechanical Data

Length x Depth x Height
1380 x 910 x 790 mm
Approx. 480 kg

aephybridpower.com
sales@aephybridpower.com
+31 (0)78 692 2100



Technical Data

Symbol	Parameter	Description	Value	Unit
P _{max}	Max. Power		270	kW
P _{nom}	Nominal Power		80	kW
f _{IGBT}	Pulse frequency		4	kHz
DC Input (DC link)				
V _{in_max}	Max. Input voltage		850	V
V _{in_nom}	Nominal Input voltage		700	V
I _{in_max}	Max. Input current		380	A
I _{in_nom}	Nominal Input current		110	A
DC Output (Energy Storage)				
V _{out_max}	Max. Output voltage		720	V
V _{out_nom}	Nominal Output voltage		0...600	V
I _{out_max}	Max Output current		450	A
I _{out_nom}	Nominal Output current		120	A
I _{out,pp}	Output current ripple		< 10	A
Environmental conditions				
T _n	Operating temperature		0...40	°C
T _{storage}	Storage temperature		-25...60	°C
	Degree of protection		IP 00	
	Humidity	No condensation	0...95	%
Energy store				
V _{cap_max}	Max Cap voltage		750	V _{DC}
	Operating Cap voltage		650	V _{DC}
I _{cap_max}	Max Cap current		450	A
	Capacity Module		62,5	F
	Module voltage		125	V
	Number of Modules per String		6	
	Number of Strings		1	
	Store capacity	EoL	> 7	F
	Stored energy	Total energy @ 650 V → 0 V	> 1400	kJ
	Fuse to DC/DC converter	Ultra-fast (FF)		
	Estimated losses Cap store		300	W



Symbol	Parameter	Description	Value	Unit
Discharge				
	Discharge time	V < 48 V	< 20	Min
	Discharge resistor	With thermocontact (recommended)	25	Ohm
	Max loss resistor	@ 650 V	16	kW
	Discharge fuse		30	A
	Control	By manual button or customer PLC (24 V signal)		
	Feedback cap voltage	Analogue voltmeter		
Pre-charge				
	Main switch	Relays		
	Pre-charge switch	Relays		
	Pre-charge time		< 10	s
	Switch off under load	NO		
Auxiliary voltage				
	Control power supply		24	V
	Current	Per system	> 15	A
	Fusing	Per system	> 20	A

Mechanical Dimensions

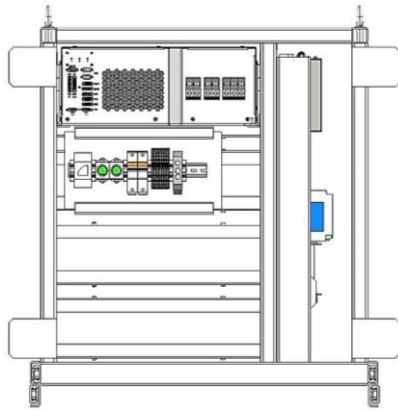


Figure 1: Left side view

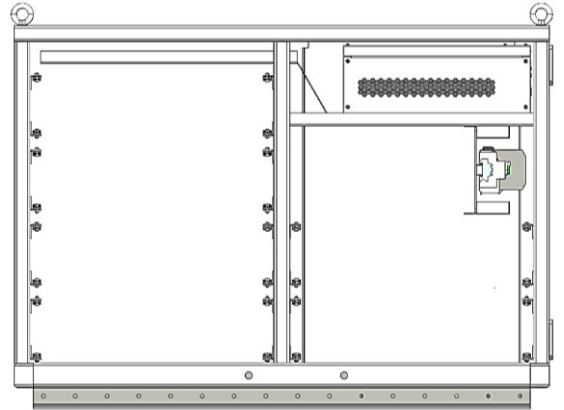


Figure 2: Front view

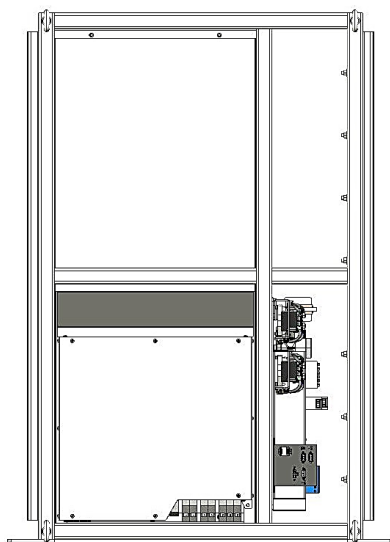


Figure 3: Right side view

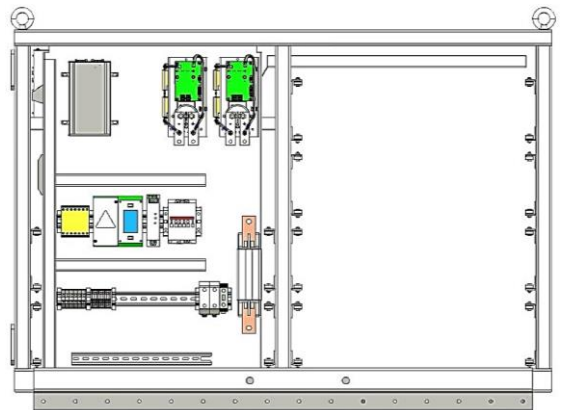


Figure 4: Top view

