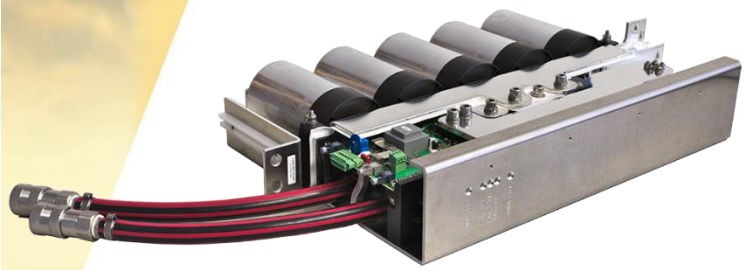
Hybrid Power

AEP 1000

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



Features

- IGBT-half bridge
- One power stack module for use as DC/DC-converter
- Three power stack modules for use as AC/DC- and DC/AC converter
- Internal current-, temperature and DC-voltage measurement
- Water cooling
- Optical interface
- Hardware overcurrent monitoring

Applications

A selection of potential applications are:

- Versatile converter in charging stations for electric vehicles (truck, busses and trams)
- Interface between energy grid and renewable energies
- Connection of energy storage systems for industrial applications with Peak-Shaving (e.g. crane, servo drives)
- Applications in industrial networks with 690V mains voltage

Mechanical Data

Depth x Width x Height
370 x 100 x 640 mm
Approx. 21 kg

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Technical Characteristics

Symbol	Parameter	Description	Value	Unit
	General			
V_{DC}	DC-Link voltage		≤1200	V
f_{sw}	Switching frequency		≤8	kHz
I_{DC}	DC current	power terminal limited	875	A
I_{AC}	AC current	power terminal limited	1200	A_{rms}
I_N	IGBT nominal current		1400	A
	Current transducer			
I_P	Measurement range		±2000	A
	Accuracy		0,6	%
	Environmental conditions			
	Ambient temperature		0 till 40	°C
	Storage temperature		-20 till +60	°C
	Installation height		2000	m
	Protection degree		IP00	
	Mechanical data			
	Weight		21	kg
	Width		100	mm
	Height	without coolant hose	640	mm
	Depth		370	mm
	Cooling			
	Coolant		60% water / 40% glycol deionized water	
	Maximum inlet temperature		60	°C
	Water flow		5-12	l/min
	Pressure drop		≤1	bar
	Power losses		≤4000	W

Benefits

The variety of input and output capabilities as well as configurable operation modes account for a multifunctional power stack that is suitable for a wide range of applications.

AEP1000 series converters are the right solution for integrated systems which combine charging and discharging of different types of energy storages with monitoring and control functionality. Self-protection is covered through short circuit detection and overcurrent or overload shutdown. The available user interface PowerPanel assists in the adaption to customer needs and allows a detailed view of the device state.

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Design Features

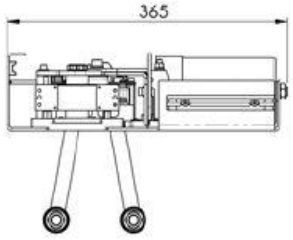
- Rugged
- High power density
- Compact design

Options

- Optimized and versatile control unit with proven software for:
  - DC/DC-converters
  - AC/DC-converters with PFC and harmonic reduction
  - DC/AC-converters for stand-alone networks and AC machines
  - Monitoring and diagnostics
- Pre-charging unit
- AC-voltage measurement

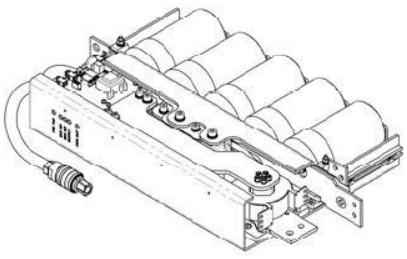
Mechanical Data

Depth x Width x Height:	370 x 100 x 640 mm
Weight:	Approx. 21 kg
Enclosure:	IP00

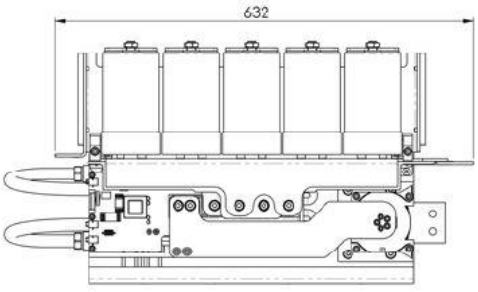


side view with water hoses

front view



perspective view



top view