Hybrid Power

AEP 300

Bidirectional AC/DC converter

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

Features

- 76 kW converter, U_n 400VAC
- Bidirectional half bridge 3-phase topology
- Load-dependent PWM fan control
- Low output current ripple for DC/DC application
- Short-circuit-proved output
- Integrated current and temperature sensors
- CAN-Bus communication

Applications

- Drive of AC- or DC-motors (including regenerative energy)
- Active filter
- Active Front End

Mechanical Data

Width x Depth x Height
502 x 477 x 203 mm
Approx. 22 kg

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

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Technical Characteristics

Symbol	Parameter	Description	Value	Unit
	General			
P_R	Rated power	@Uout 400VAC, cos (ϕ)=1	76	kW
P_{MAX}	Max. power	@Uout 400VAC, fr 2kHz 1min/10min	118	kW
F_r	Switching frequency		≤16	kHz
η_r	Efficiency	@P_r	>95	%
	Input			
U_{in}	Input voltage range		400 – 690	VAC
$U_{in,\ max}$	Nominal frequency	±10%	50/60	Hz
	Nominal phase current		110	A
	Max. phase current	1 min / 10 min	170	A
	Output			
U_{out}	Output voltage range	Depending on AC input voltage	500 - 1100	VDC
$U_{out,max}$	Max. operating voltage		1200	VDC
	Supply power			
	Control voltage	Rated Value between	24	VDC
			18 till 30	VDC
	Control current		2	A
	Environment			
T_o	Operating temperature		0 till 50	°C
T_{m_max}	Advisable temperature		20 till 40	°C
T_S	Storage temperature		-20 till 60	°C
	Protection degree		IP20	
	Cooling			
	Kind		Forced air cooling	
	Power losses		≤1500	W
	Airflow		600	m^3/h
	Communication			
	Data	CAN (CAN open) / RS232		
	Binary signal	On/Off, Enable, Error, Reset, Emergency stop		
	Additionally	Conventional error, Temperature output		

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Options

- IP20 & IP65
- Water cooling
- Profibus / Profinet
- Main contactor + Pre-charge

Mechanical Data

Width x Depth x Height:	502 x 477 x 203 mm
Weight converter:	Approx. 22 kg
Enclosure:	IP-20

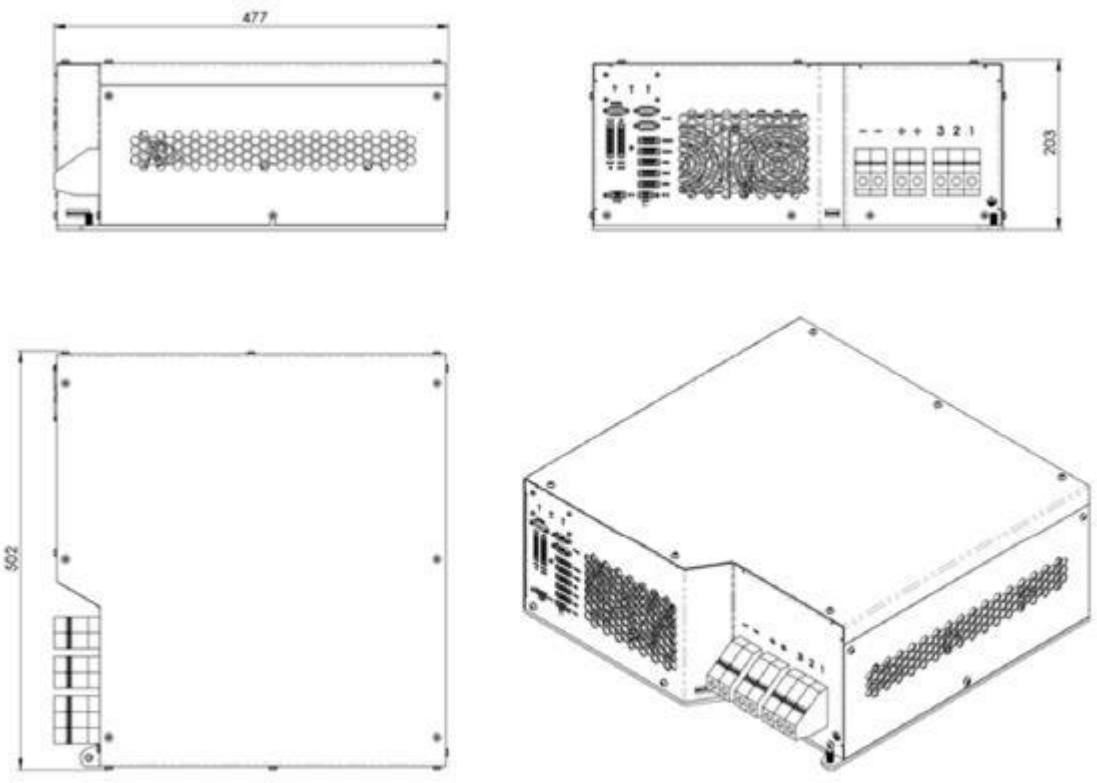

Figure 1: Dimensions

Hybrid Power

Accessories

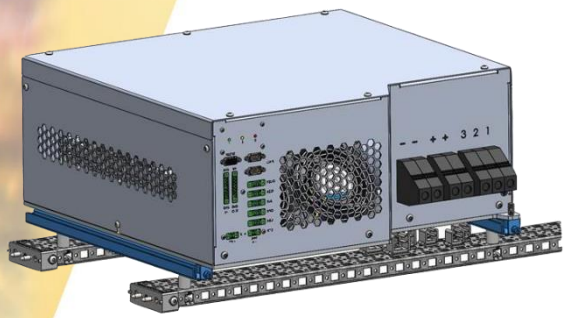

Figure 2: Mounting rails

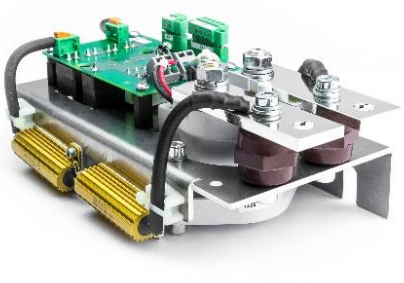

Figure 3: Pre-charge

Figure 4: EMC filter

Figure 5: Voltage measurement

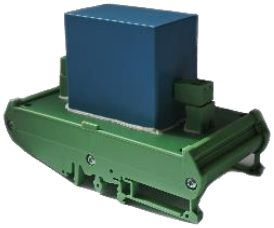

Figure 6: Output cap