



AEP 150 – 1200 – IP20

Bidirectional DC/DC converter

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

Features

- 150 kW converter, U_{pri} 1000V
- Bidirectional
- One way step up and step down mode
- Ethernet / Profinet
- 24 Vdc Supply
- Air-Cooling or liquid cooling
- Integrated Pre-charge circuit



Applications

A selection of potential applications are:

- Heavy transport
 - Fast energy storage hybrid driveline
 - Combination diesel-electric, fuel cell & batteries
- Maritime & offshore
 - Dynamic energy storage vessels
 - Heavy lifting, cranes etc.
- Industrial & UPS back-up
 - Peak power supply
 - Short term bridge power

Mechanical Data

Depth x Width x Height
225 x 353 x 176 mm
Approx. 10 kg

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



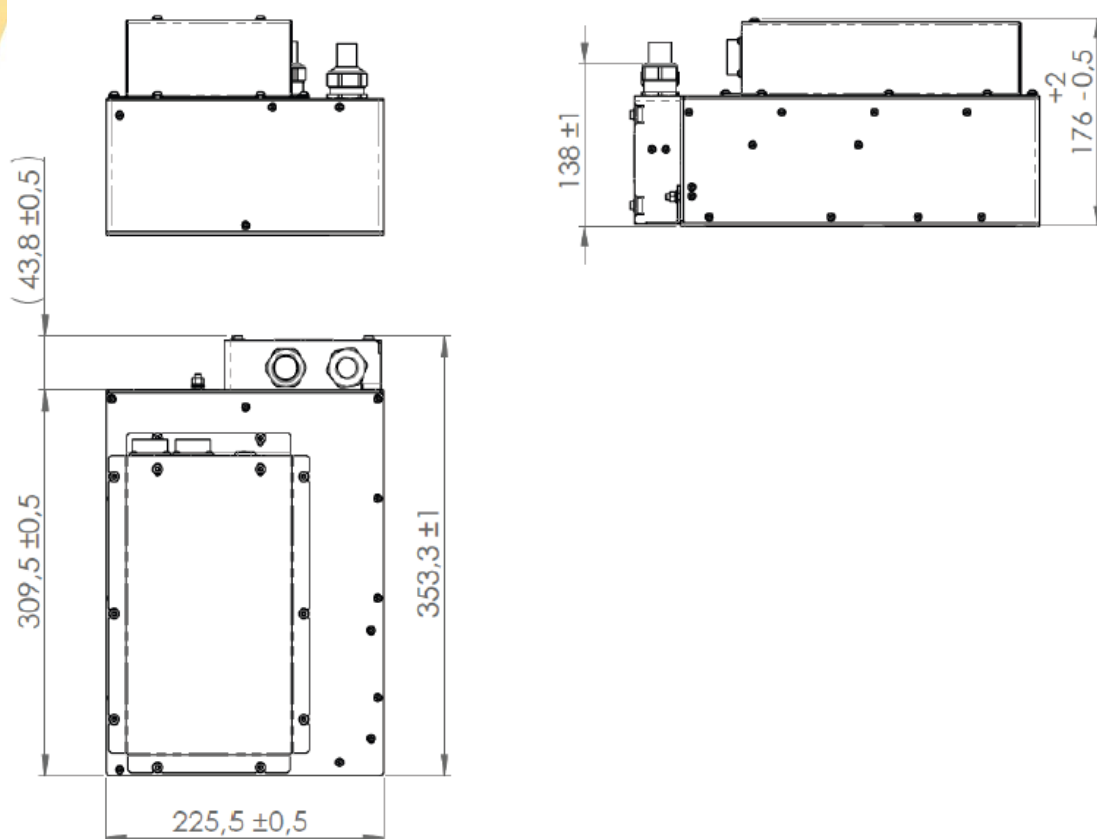
Technical Characteristics

Symbol	Parameter	Description	Value	Unit
General				
P_R	Rated power	@ U_{sec} 1000V	150	kW
F_r	Switching frequency		<10	kHz
Primary				
U_{pri}	DC voltage range		0-1200	VDC
$U_{pri, max}$	Max. operating voltage	Without switching: 0,4 ms	1660	VDC
$T_{precharge}$	Precharge time		<5	Sec
$T_{discharge}$	Discharge time DC cap	To <60V	300	Sec
Secondary				
U_{sec}	Rated voltage		0 – 1100	VDC
$U_{sec, max}$	Max. operating voltage		1150	VDC
I_{cont}	Max. cont. current		150	A
I_{max}	Peak current	< 5 seconds	225	A
Supply power				
	Control voltage	Rated Value between	24	VDC
			18 till 30	VDC
	Control power		60	W
Environment				
T_o	Operating temperature		0 till 60	°C
$T_{m, max}$	Advisable temperature		20 till 30	°C
T_s	Storage temperature		-30 till +70	°C
	Protection degree		IP20	
Cooling				
	Kind		Forced air cooling or liquid cooling	
	Power losses		≤1300	W
Communication				
	Data	Ethernet / Profinet		

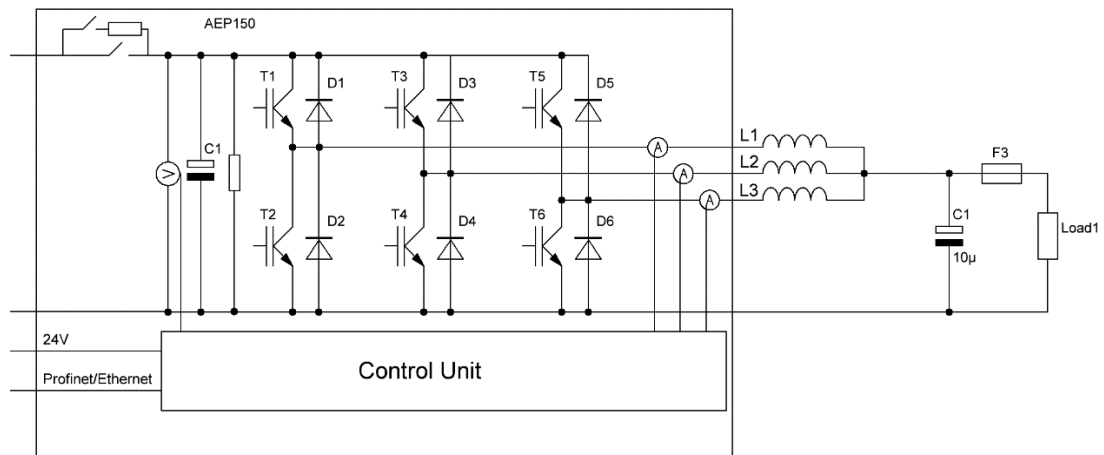


Mechanical Data

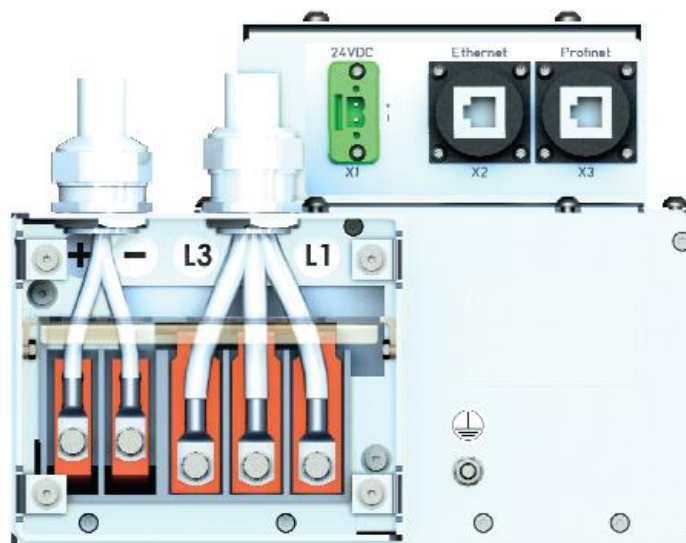
Length x Width x Height: 502 x 477 x 203 mm
Weight converter: Approx. 10 kg
Enclosure: IP-20
Fastenings: From behind through the heatsink with 12x M8 screw



Block Diagram



Connection Layout



Communication

Connector	Pin	Signal	Description
X1	1	24V	Phoenix Contact, IC 2,5/2-STGF-5,08
X2	1	Ethernet	RJ45
X3	1	Profinet	RJ45

Power terminals

Connector	Pin	Signal	Description
+	1	Power + DC Link	M5, Max 3Nm
-	2	Power – DC Link	M5, Max 3Nm
L1	3	DC Phase 1	M5, Max 3Nm
L2	4	DC Phase 2	M5, Max 3Nm
L3	5	DC Phase 3	M5, Max 3Nm
PE	6		M5, Max 3Nm
		Screws from cover connection box	M4, max 1Nm