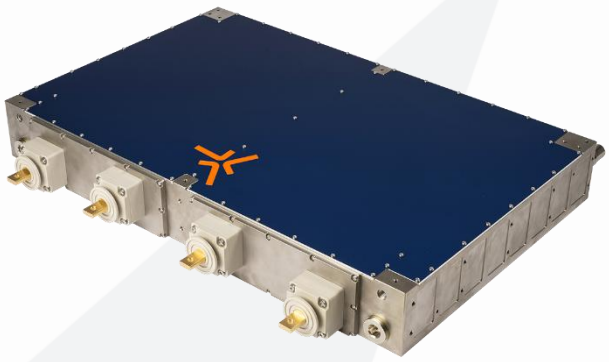
HEAVY DUTY APPLICATIONS

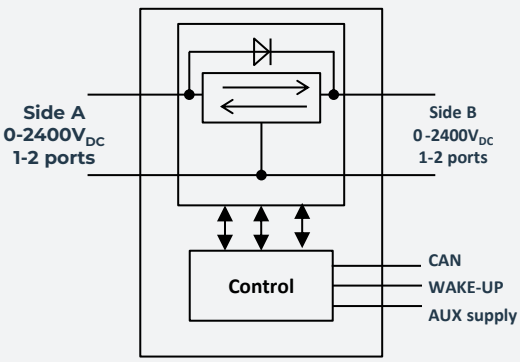
DCUHV LP

HV-HV reversible Buck or Boost Converter
Voltage up to 2400V_{DC}, current 400A
Power 500kW at 1250V Side A
Multi inputs / outputs capability
Cutting-edge power density



KEY FEATURES

- **Built-in magnetics, inductors and transformers included**
- **Input and output range : 0 to 2400V_{DC}**
- **Non-overlapping topology : $V_{SideB} > V_{sideA}$**
- **Bi-directional current capability**
- **Max current : 400A**
- **Current and voltage control**
- **CAN remote communication and monitoring**
- **Weight: < 45kg**
- **Can be paralleled for increased power**
- **Up to 4 ports possible for multiple inputs-outputs configurations**
- **Connectors and Busbars options for electrical interface**



TECHNICAL SPECIFICATION

Power	
Max number of ports	4 side A, 4 side B
Side A and side B voltage range	0V to 2400V_{DC}
Voltage settings possibilities	Max boost ratio : V_B = 20 x V_A max Short-circuit operation : V_A = 0V
Voltage accuracy	+/-1% of full scale
Current capability	+/-50A per channel, +/-400A total
Current accuracy	<3% of full scale
Efficiency	98.9% at nominal current with 2:1voltage conversion ratio
Short circuit protection	Current regulation at setpoint value down to 0V (in case the side A is regulated in voltage mode)
X Capacitance	11µF per side A & B No inrush current limitation
Y Capacitance	<0.2µF
Safety discharge time	<5sec to reach 60V
Control	
Auxiliary supply	9V_{DC} – 60V_{DC} <100µA disable mode current consumption <100W in Power_ON
$\overline{\text{Enable}}$ function	ON/OFF signal. Tie to ground for start-up. Internal pull up
Inrush current limitation	Not included
Environment	
Environmental protection	IP67
Altitude	Up to 4000m
Max cooling temperature	65°C outlet
Operating temperature range	From -40°C to 70°C ambiant
Storage temperature range	From -40°C to 100°C
Dielectric withstand	
HV - case isolation	4300 V_{DC} Basic isolation
HV - LV isolation	5300 V_{DC} Reinforced isolation

BrightLoop Converters

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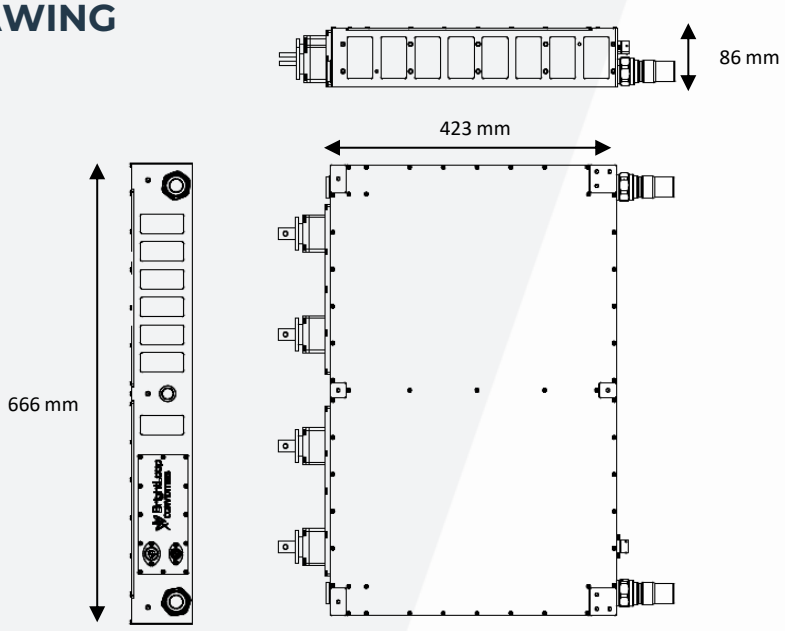
DCUHV LP

TECHNICAL SPECIFICATION

CAN Interface	
Bus speed	125Kbps to1Mbps (set by CAN)
Controls	Side A Current limit +/-400A , 2A resolution
	Side A Voltage set point 0V to 2400V 1V resolution
	Side B Current limit +/-400A, 2A resolution
	Side B Voltage set point 0V to 2400V, 1V resolution
	Power ON/OFF
	Discharge request
Monitoring	DC/DC Status
	Voltages and currents
	Internal auxiliary power supplies voltage
	Internal temperatures
	Internal protections
Identification	Software & Hardware revision
Software Update	CAN Bootloader
Liquid cooling	
Pressure loss	<300mBar TBC
Maximum recommended operating pressure	1.3bar TBC
Maximum testing pressure	2.6 bar TBC
Hydraulic connector	STAUBLI RME/CBI or CEJN UltraFlow
Mechanical	
Dimensions	666 x 423x 86mm + connectors
Weight	<45 Kg
Interface	M8 fixations on each sides
Housing	Aluminum with conductive anti-corrosion treatment
Power connectors options	Bus bar connections or High Voltage connectors
Signals connector	8STA family (SOURIAU)

OUTLINE DRAWING



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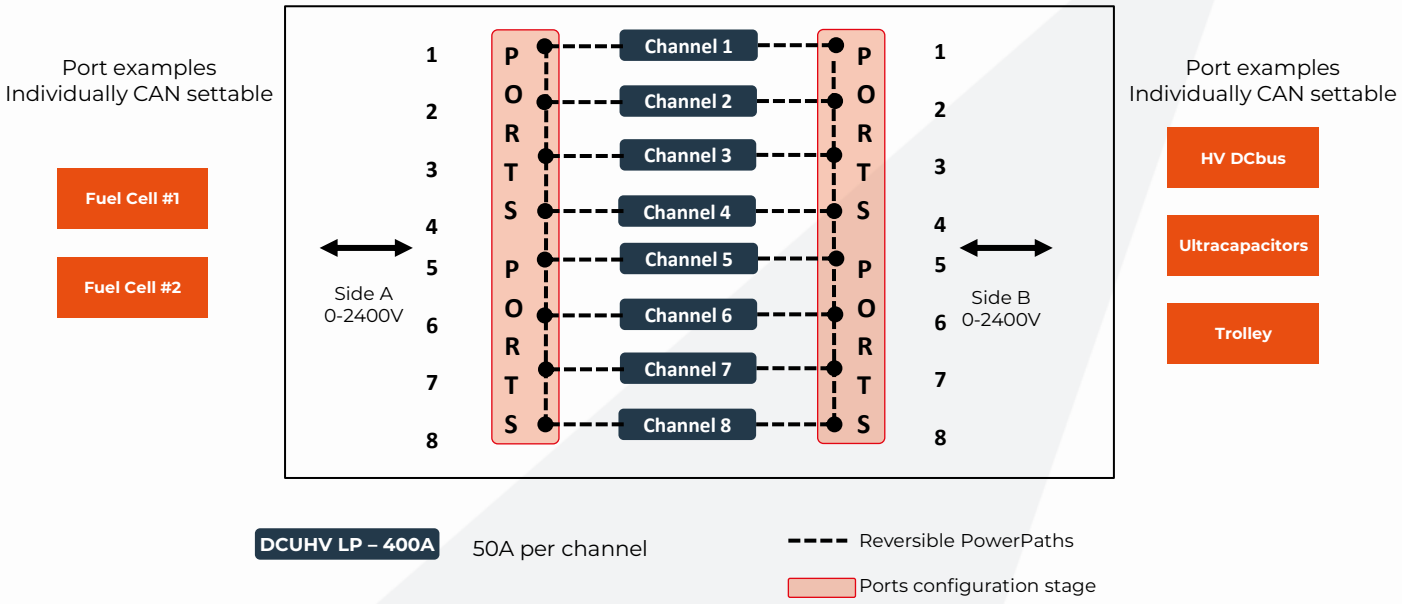
Ordering code logic



DCUHV LP – 400A 50A per channel

Reversible PowerPaths

Ports configuration stage

Part number example :

DC	UHV	L	P	D	S	LC
1	2	3	4	5	6	7

1 – Product family		2 – Voltage	
DC	HV-HV non-isolated DCDC converter	**UHV**	2400V_{DC} max
3 – Package size		**4 – Product line**	
L	Large	P	Performance
5 – Number of ports on side A		**6 – Number of ports on side B**	
S	Single	S	Single
D	Dual	D	Dual
7 – Cooling option			
LC	Liquid cooling		

V26.02

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