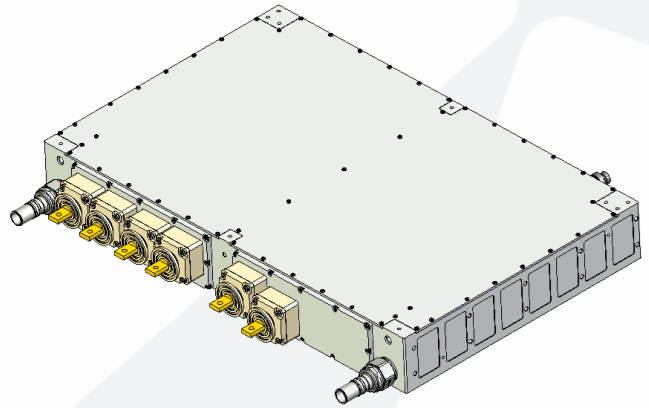


ACUHV LP

Ultra-versatile reversible 3Ph + N inverter
 100A_{RMS} / phase
 Ideally suited for 1 000V_{AC} grid
 Perfect for grid and island configurations,
 or High Power On-board Charger

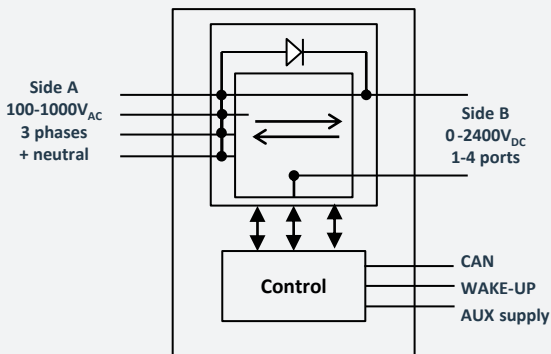


KEY FEATURES

- > Built-in inductors
- > Non-isolated topology, to be used with LF transformers or BrightLoop's DCHVIMP for grid connection
- > DC range 0-2400V_{DC}, AC range 100-1000V_{AC}
- > 100A_{RMS} max phase current in non-overlapping configuration ($V_{DC} > \hat{V}_{ph-ph}$)
- > Buck-boost configuration possible for wide DC voltage range
- > Seamless transition between grid-tied (CSI) and grid-forming (VSI) inverter and PFC rectifier
- > On-the-fly adjustment of harmonics corrections
- > PLL synchronization on external grid
- > Flexible controls allow inverter operation as independent single-phase, balanced three-phase, or unbalanced with neutral connection
- > AC compliant load sharing algorithm for easy parallelization
- > Cutting-edge power density, weight < 35kg

TECHNICAL SPECIFICATION

Power	
AC ports	3 phases + neutral
DC port	0V to 2250V _{DC}
AC Frequency range	0-1000Hz
Power factor	> 0.95 @ 50Hz
Harmonic distortion	<1% @ 50Hz
Phase unbalance	0-100% with neutral connection
Control modes	Grid forming inverter
	Grid tied inverter
	PFC rectifier
	Active harmonics correction
Current capability	100A _{RMS} per phase
Current accuracy	<3% of full scale
Efficiency	>98% at full load
Control	
Auxiliary supply	9V _{DC} - 75V _{DC} <100µA disable mode current consumption
Enable function	ON/OFF signal. Tie to ground for start-up. Internal pull up
Parallelization	Active current sharing
Switching synchronization	Internal, between paralleled converters
	External, with a synchronization signal CAN-settable phase shift
Safety discharge	<5sec to reach 60V
Environment	
Environmental protection	IP67
Altitude	Up to 4000m
Max cooling temperature	65°C outlet
Operating temperature range	From -40°C to 70°C ambient
Storage temperature range	From -40°C to 100°C



BrightLoop Converters

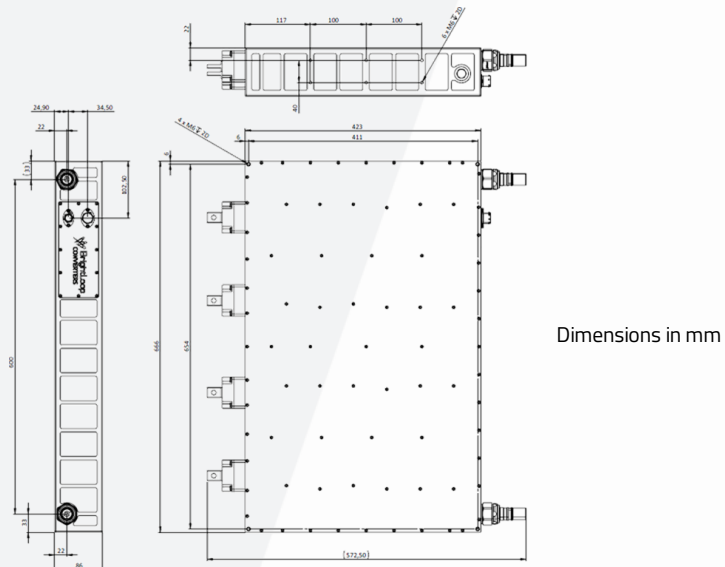
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Dielectric withstand	
HV - case	Basic isolation, tested at 4300 V _{DC}
HV - LV	Reinforced isolation, tested at 5300 V _{DC}
LV - case	Functional isolation, tested at 500 V _{DC}
CAN Interface	
Bus speed	125Kbps to 1Mbps (set by CAN)
Controls	Current limit
	Voltage setpoint
	Frequency setpoint
	Mode of operation
	Power ON/OFF
Monitoring	Discharge request
	Status
	Voltages, currents, frequency
	Internal auxiliary power supplies voltage
	Internal temperatures
Identification	Software & Hardware revision
Software Update	CAN Bootloader
Liquid cooling	
Pressure loss	<200mBar TBC
Operating pressure	1.3bar _{max} recommended
Hydraulic connector	Stäubli RME 16.7622 Socket and Plug
Mechanical	
Dimensions	666 mm x 86 mm x 423 mm+ connectors
Weight	< 35kg
Interface	M8 fixations on each sides
Housing	Aluminum with conductive anti-corrosion treatment
Power connectors options	Busbars 22 pins for control
Signal connector	13 pins for paralleling and switching synchronization 8STA family (SOURIAU)

OUTLINE DRAWING



BrightLoop Converters

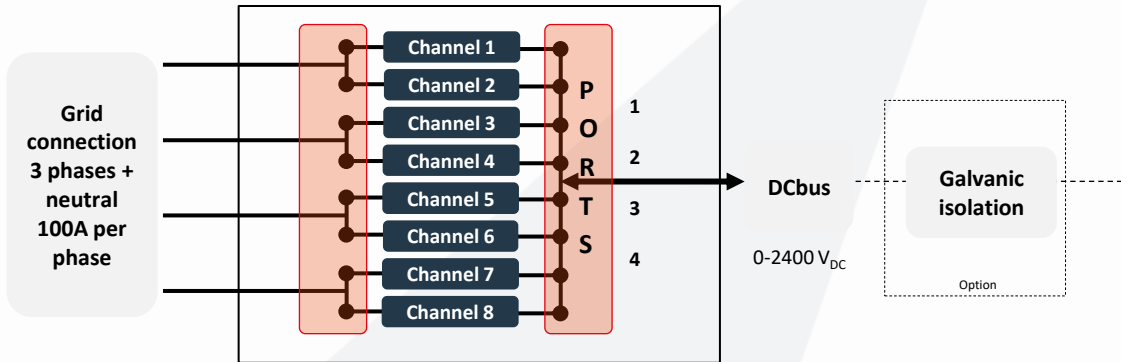
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Ordering code logic

Port examples
Individually CAN Settable



ACUHV MP – 400A 50A per channel

Ports configuration stage

Part number example :

AC	UHV	L	P	S	∅	S	LC
1	2	3	4	5	6	7	8
1 - Product family				2 - Voltage			
AC	HV-HV ACDC conv. inv.			UH	2400V _{DC} max		
3 - Package size				4 - Product line			
L	Large			P	Performance		
6 - Number of ports on side A				7 - Number of ports on side B			
S	Single			∅	None		
D	Dual			S	Single		
T	Triple			D	Dual		
Q	Quadruple			T	Triple		
P	Penta			Q	Quadruple		
H	Six			P	Penta		
O	Octo (eight)			H	Six		
8 - Number of ports on side C				9 - Cooling option			
S	Single			LC	Liquid cooling		

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