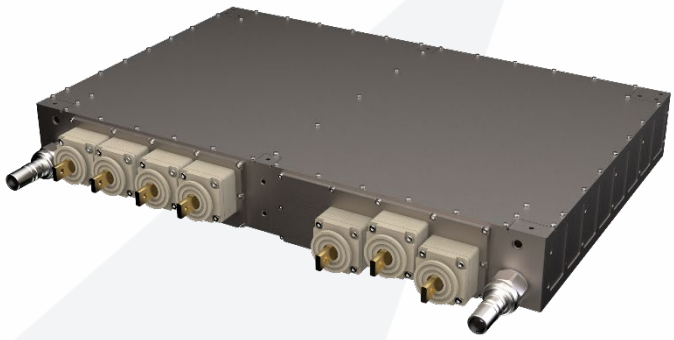
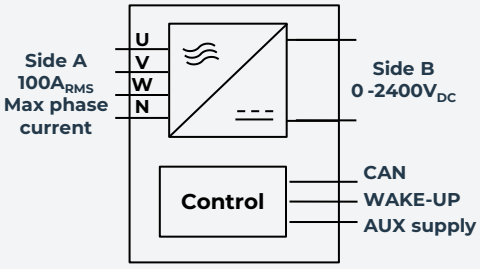
ACUHV LP

Ultra-versatile bidirectional 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 capacitors & inductors**
- **Non-isolated topology, to be used with LF transformers or BrightLoop's DCHVIMP for grid connection**
- **DC range 0-2400V_{DC}, AC range 0-1000V_{AC}**
- **Non-overlapping topology: $V_{DC} > \hat{V}_{ph\text{-}ph}$**
- **100A_{RMS} max phase current**
- **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, $1000V_{AC}$ / 2400 V_{DC} max
DC port	$0V_{DC}$ to $2400V_{DC}$
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
$\overline{\text{Enable}}$ 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	<5 sec 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

221 Boulevard Davout
75020 Paris – France
Tel +33 1 83 62 63 59

www.brightloop.fr

BrightLoop
A member of the ABB Group

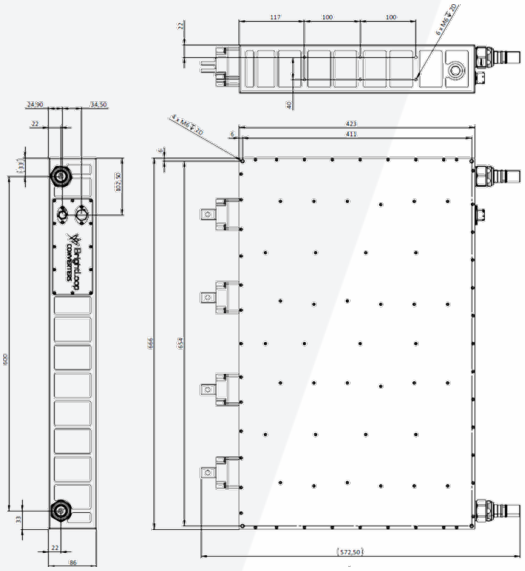
ACHUV LP

TECHNICAL SPECIFICATION

Dielectric withstand	
HV - case	Basic isolation, tested at 4300V_{DC}
HV - LV	Reinforced isolation, tested at 5300V_{DC}
LV - case	Functional isolation, tested at 500V_{DC}
CAN Interface	
Bus speed	125Kbps to 1Mbps (set by CAN)
Controls	Current limit
	Voltage setpoint
	Frequency setpoint
	Mode of operation
	Power ON/OFF
	Discharge request
Monitoring	Status
	Voltages, currents, frequency
	Internal auxiliary power supplies voltage
	Internal temperatures
	Internal protections
Identification	Software & Hardware revision
Software Update	CAN Bootloader
Liquid cooling	
Pressure loss	<300mBar
Maximum operating pressure*	3 barg
Maximum testing pressure	6 barg
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	Bus bar connection
Signal connector	22 pins for control 13 pins for paralleling and switching synchronization 8STA family (SOURIAU)

**: for higher pressure application, please contact us*

OUTLINE DRAWING



Dimensions in mm

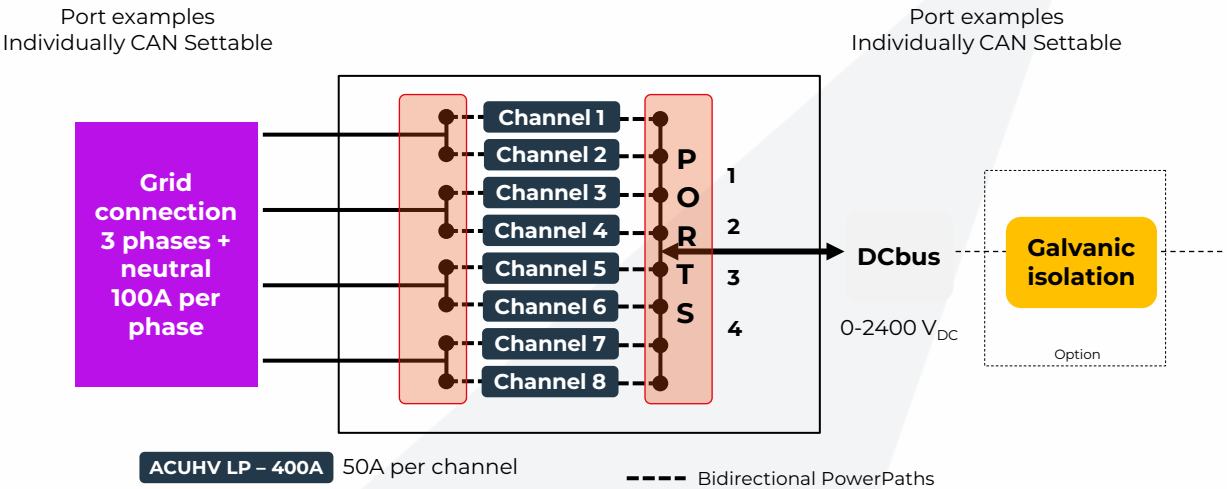
BrightLoop Converters

221 Boulevard Davout
75020 Paris – France
Tel +33 1 83 62 63 59

www.brightloop.fr

BrightLoop
A member of the ABB Group

Ordering code logic



Part number example :

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

1 – Product family		**2 – Voltage**	
AC	HV-HV ACDC conv. inv.	UHV	$1000V_{AC}$ / $2400V_{DC}$ 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
T	Triple	T	Triple
Q	Quadruple	Q	Quadruple
P	Penta	P	Penta
Sx	Six	Sx	Six
H	Hepta (seven)	H	Hepta (seven)
O	Octo (eight)	O	Octo (eight)
7 – Cooling			
LC	Liquid cooling		

BrightLoop Converters

221 Boulevard Davout
75020 Paris – France
Tel +33 1 83 62 63 59

www.brightloop.fr

BrightLoop
A member of the ABB Group