

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

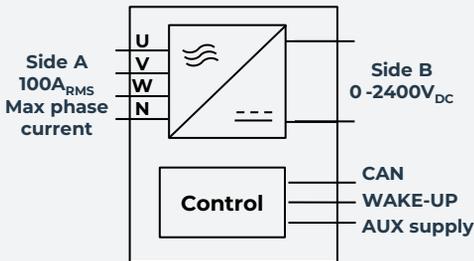


KEY FEATURES

- > 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: $V_{DC} > \hat{V}_{ph-ph}$
- > 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
Enable function	ON/OFF signal. Tie to ground for start-up. Internal pull up
Parallelization	Active current sharing Internal, between paralleled converters
Switching synchronization	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

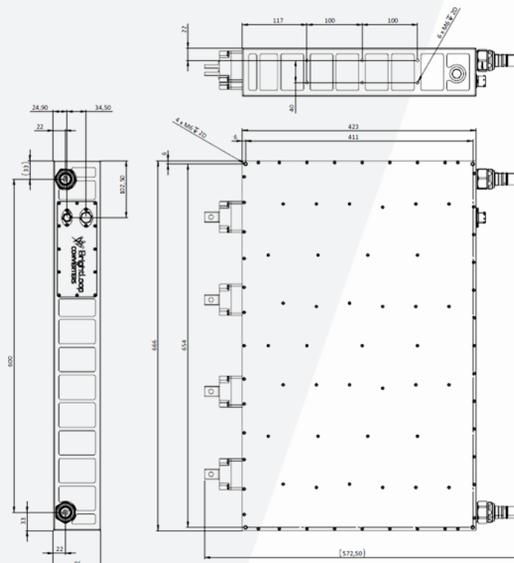
ACHUV LP

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
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 22 pins for control
Signal connector	13 pins for paralleling and switching synchronization BSTA family (SOURIAU)

*: for higher pressure application, please contact us

OUTLINE DRAWING



Dimensions in mm

BrightLoop Converters

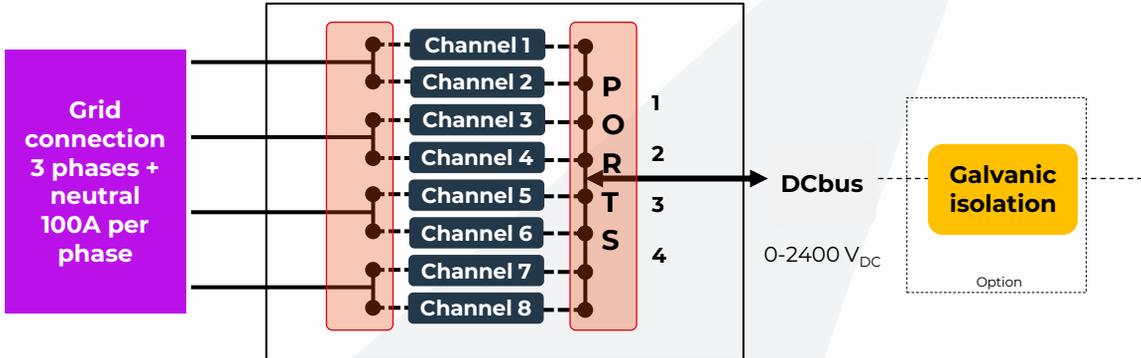
221 Boulevard Davout
75020 Paris – France
Tel +33 1 83 62 63 59

www.brightloop.fr

Ordering code logic

Port examples
Individually CAN Settable

Port examples
Individually CAN Settable



ACUHV LP - 400A 50A per channel

----- Bidirectional PowerPaths
 Ports configuration stage

Part number example :



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		

V26.02

BrightLoop Converters

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

www.brightloop.fr