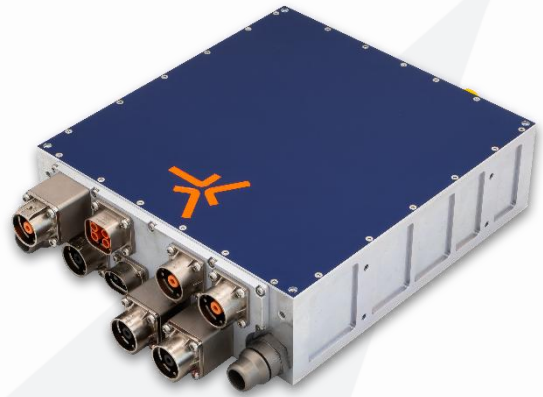


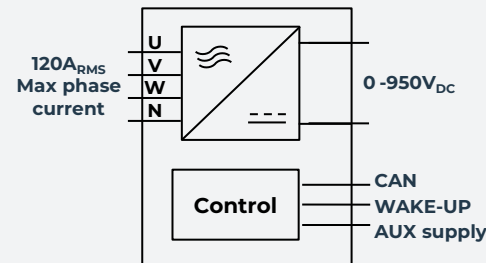
ACHV MP

Ultra-versatile bidirectional 3Ph+N inverter
120A_{RMS} / phase
Max power 80kW @400V_{AC}
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 DCHVI MP for grid connection
- > DC range 0-950V_{DC}, AC range 0-400V_{AC}
- > Non-overlapping topology: $V_{DC} > \hat{V}_{ph-ph}$
- > 120A_{RMS} max apparent current
- > Output power of 80kW at 400V_{AC}
- > Buck-boost configuration possible for wide DC voltage range
- > Seamless transition between grid-following and grid-forming inverter and PFC rectifier
- > Active harmonic filter capable
- > 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: < 25kg



TECHNICAL SPECIFICATION

Power

AC ports	3 phases + neutral, 400V _{AC} / 950V _{DC} max
DC port	0V _{DC} to 950V _{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	120A _{RMS} per phase
Current accuracy	<3% of full scale
Efficiency	>96% 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	<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

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75020 Paris – France
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TECHNICAL SPECIFICATION

*: for higher pressure application, please contact us

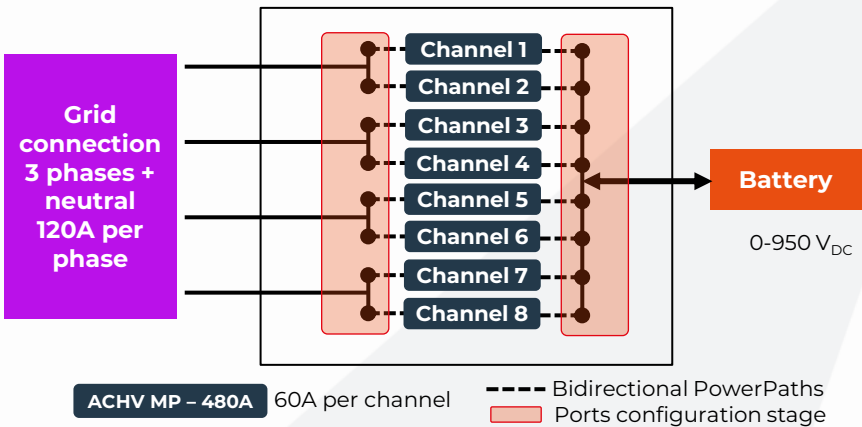
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Dimensions in mm

Ordering code logic

Port examples
Individually CAN Settable

Port examples
Individually CAN Settable



ACHV MP - 480A 60A per channel

--- Bidirectional PowerPaths
Ports configuration stage

Part number example :

AC	HV	Ø	M	P	S	Ø	LC
1	2	3	4	5	6	7	8

1 – Product family		2 – Voltage	
AC	HV-HV isolated ACDC conv. inv.	HV	400V _{AC} / 950V _{DC} max
3 – Galvanic isolation			
Ø	Isolated		
4 – Package size		5 – Product line	
M	Medium	P	Performance
6 – Number of ports on side A		7 – 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)
8 – Cooling			
LC	Liquid cooling		

V22.06

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