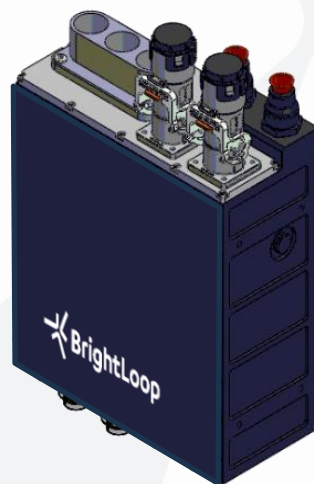


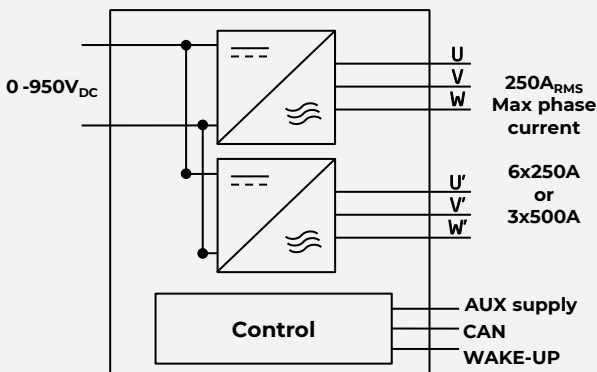
ACHVMOT LP

Ultra-versatile 3ph motor drive inverter
 $500A_{RMS}/ph$, max power $500kW@600V_{AC-PP}$
 Cutting-edge power density
 Suitable for all types of e-motor and sensors



KEY FEATURES

- > DC range $0-950V_{DC}$, AC range $0-600V_{AC-PP}$
- > $500A_{RMS}$ max phase current
- > Max output power of $500kW$ at $500VAC$
- > Option to drive 6ph x $250A$, or 2 separated motors
- > $3\ 000Hz$ max electrical frequency
- > Parallelization with other identical units for increased power
- > Ultra-versatile sensor interface : resolver, hall effect, potentiometer...
- > Sensorless drive mode
- > Speed, torque and position control options
- > Compatible with synchronous and induction motors
- > Pending aerospace qualifications : DO160, DO254, ABD100, MIL-STD 461
- > Cutting-edge power density, weight < $10kg$
- > Connectors and Busbars options for electrical interface



TECHNICAL SPECIFICATION

Power	
AC ports	$600V_{AC}$ phase-phase / $950V_{DC}$ max
DC port	0V to $950V_{DC}$
AC Frequency range	0 - 3 000 Hz
Current capability	$3x500A_{RMS}$ or $6x250A_{RMS}$
Current accuracy	<3% of full scale
Efficiency	>98% at full load
EMC filters	Optional
Control	
Control modes	Speed Torque Position
Features	3 rd harmonics injection Flux weakening
Auxiliary supply	$9V_{DC}$ – $75V_{DC}$ <100μA disable mode
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	
Ingress protection	IP67
Altitude	Up to 10 000m
Max cooling temperature	$65^{\circ}C$ outlet
Operating temperature range	From $-40^{\circ}C$ to $70^{\circ}C$ ambient
Storage temperature range	From $-40^{\circ}C$ to $100^{\circ}C$

BrightLoop Converters

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TECHNICAL SPECIFICATION

Dielectric withstand	
HV - case	Basic insulation, tested at 2500 V _{DC}
HV - LV	Reinforced insulation, tested at 5000 V _{DC}
LV - case	Functional insulation, tested at 500 V _{DC}
CAN Interface	
Bus speed	125Kbps to 1Mbps (set by CAN)
Controls	Current limit
	Power 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
Liquid cooling	
Pressure loss	<200mBar TBC
Operating pressure	1.3bar max recommended
Hydraulic connector	NORMAQUICK PS3 VDA (Mounted on NORMAQUICK PS3 NW 16-xx)
Mechanical	
Dimensions	TBD
Weight	< 10kg
Interface	M8 fixations on each sides
Housing	Aluminum with conductive anti-corrosion treatment
Power connectors options	Amphenol PL300 with HVIL
	Amphenol PL082 with HVIL Busbars
Control connector	22 pins for control
	13 pins for paralleling and switching synchronization
	8STA family (SOURIAU)
Sensor interface connector	TBD
	PT100 interface for motor temperature sensing

OUTLINE DRAWING

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