

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

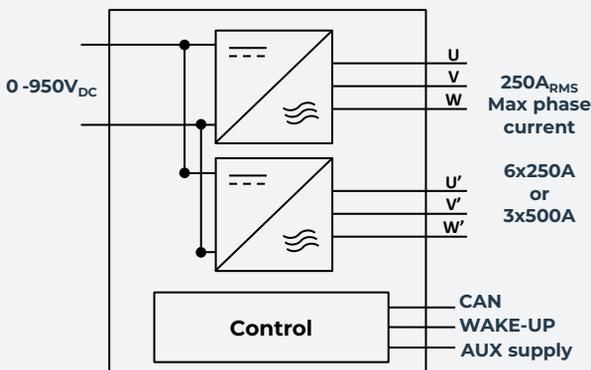


KEY FEATURES

- > DC range 0-950V_{DC}, AC range 0-600V_{AC-PP}
- > 500A_{RMS} max phase current
- > Max output power of 500kW at 500V_{AC}
- > Option to drive 6ph x 250A, or 2 separated motors
- > 3 000Hz max electrical frequency
- > Can be paralleled 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 _{DC} to 950V _{DC}
AC Frequency range	0 - 3 000Hz
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	<5 sec to reach 60V
Environment	
Ingress protection	IP67
Altitude	Up to 10 000m
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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www.brightloop.fr

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Dielectric withstand	
HV - case	Basic insulation, tested at 2500V _{DC}
HV - LV	Reinforced insulation, tested at 5000V _{DC}
LV - case	Functional insulation, tested at 500V _{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
	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	<200mBar TBC
Maximum operating pressure*	3 barg TBC
Maximum testing pressure	6 barg TBC
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 PL500 & PL300 with HVIL Amphenol PL082 & PL084 with HVIL Bus bar connection
Control connector	22 pins for control 13 pins for paralleling and switching synchronization 8STA family (SOURIAU)
Sensor interface connector	TBD PTI00 interface for motor temperature sensing

*: for higher pressure application, please contact us

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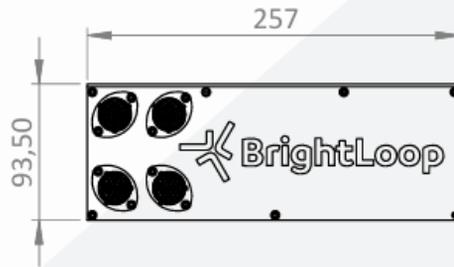
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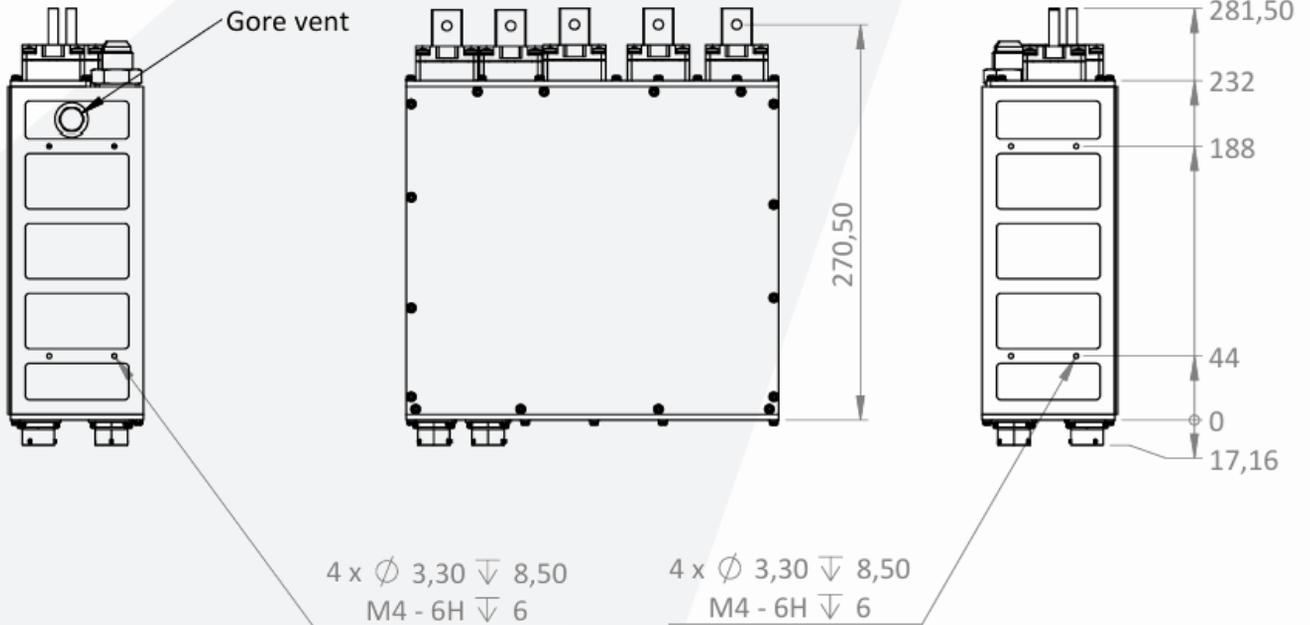
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TECHNICAL SPECIFICATION

OUTLINE DRAWING



Dimensions in mm



V26.02

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