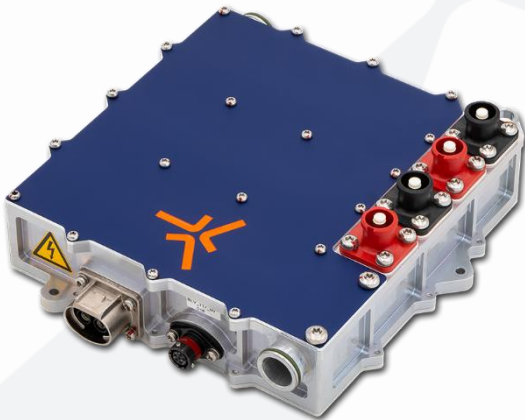


DCDC MP

Bidirectional isolated DCDC converter
Motorsport & extreme vehicle applications
800V battery compliant
Battery charger / LV network supply
Total continuous power 4.8kW/240A

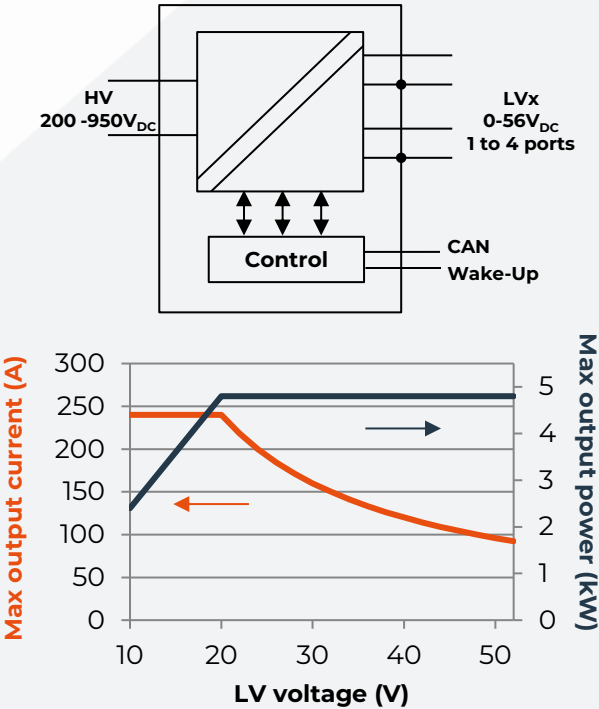


KEY FEATURES

- > **Isolated HV voltage:** 200 to 950V_{DC}
- > **LV side voltage range:** 0 to 56V_{DC} (CAN settable)
- > **Single or Multiple LV ports configuration**
- > **CAN Bootloader & Remote Communication**
- > **Liquid-Cooling (LC) or Forced-Air (FA)**
- > **Harsh environment**
- > **High efficiency:** >94%
- > **Weight:** 1770g (LC) / 2065g (FA)

TECHNICAL SPECIFICATION

HV side	
Voltage	200V _{DC} to 950V _{DC}
ON/OFF	Internal pull-up. Tie to ground for start-up
HV X capacitance	~100nF (no built-in precharge)
HV parallel resistance	1.2MΩ
IDLE mode consumption	2.2W
LV side	
Voltage	0V _{DC} to 56V _{DC} (set by CAN)
Overvoltage protection	58V _{DC}
Absolute maximum rating	60V _{DC}
Static precision	1%
Current limit	0 to 240A (set by CAN) 60A per channel
Current limit accuracy	<3% at full scale
Short-circuit protection	Current regulation at setpoint value down to 0V
Continuous power	4800W 1200W per channel
Line + load regulation	15% for 0-100% step load without battery
Efficiency	
Global efficiency	> 94%
Environment	
Environmental protection	IP67
Altitude	Up to 4000m
Cooling	Liquid temperature 60°C max (inlet)
Operating temperature range	From -40°C to 80°C ambient
Storage temperature range	From -40°C to 100°C
Weight	1770g (LC) 2065g (FA)



BrightLoop Converters

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

www.brightloop.fr

DCDC MP

TECHNICAL SPECIFICATION

CAN Interface

Bus speed	125Kbps to 1Mbps (set by CAN)
Control modes	HV -> LV
	LV -> HV
	LV <-> LV
LV management	HV -> LV @10sec (Discharge mode)
	LV current limit 0A to 240A, 1A resolution
	Voltage LV setpoint 10V to 56V, 0.1V resolution
Power limitation / Remaining	Power ON/OFF for each LV port
LV side power configuration	Minimum between 240A and 4.8kW depending on selected LV voltage
Monitoring	LV ports defined by 4 internal channels of 60A/1200W each Configurable from 1 to 4 LV ports
Identification	DC/DC status and errors
	Voltages, currents, temperatures measurements
Identification	Software & Hardware revision
	Bootloader for CAN software update

Safety

HV/LV insulation	3000V _{DC} Reinforced insulation
	EN 62368-1 compliant

Liquid-Cooling (LC)

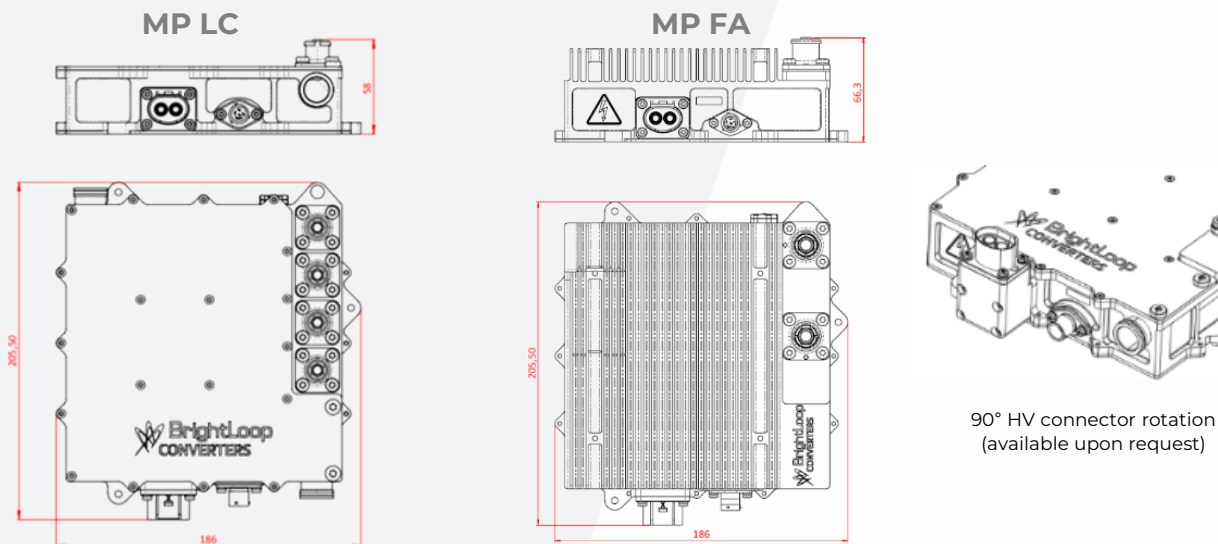
Power loss	300W max at full power
Pressure loss	55 mbar @10L/min
	120 mbar @15L/min
	200 mbar @20L/min
Maximum operating pressure	1.3barg
Maximum testing pressure	2.6barg
Cooling liquid volume	140cm ³
Cooling connector (LC)	Wiggins (W994-10D) size 5/8"

Mechanical

Dimensions	205,5x186x58mm (LC) / 205,5x186x66,3mm (FA)
Housing	Aluminum with conductive anti-corrosion treatment
HV connector	IP67 with security loop (Amphenol PL082X-61-2.5)
LV connectors	Option available to rotate HV connector at 90°
LV connectors	IP67 (Amphenol SurLok Plus 5.7 or 8mm)
Signals connector	IP67 (Souriau 8TA 008 35 SN)

Supplied with electrical mating connectors

OUTLINE DRAWING



Dimensions in mm

(May vary depending on number of outputs)

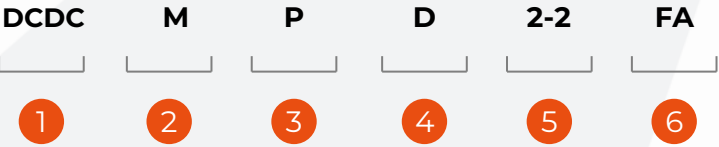
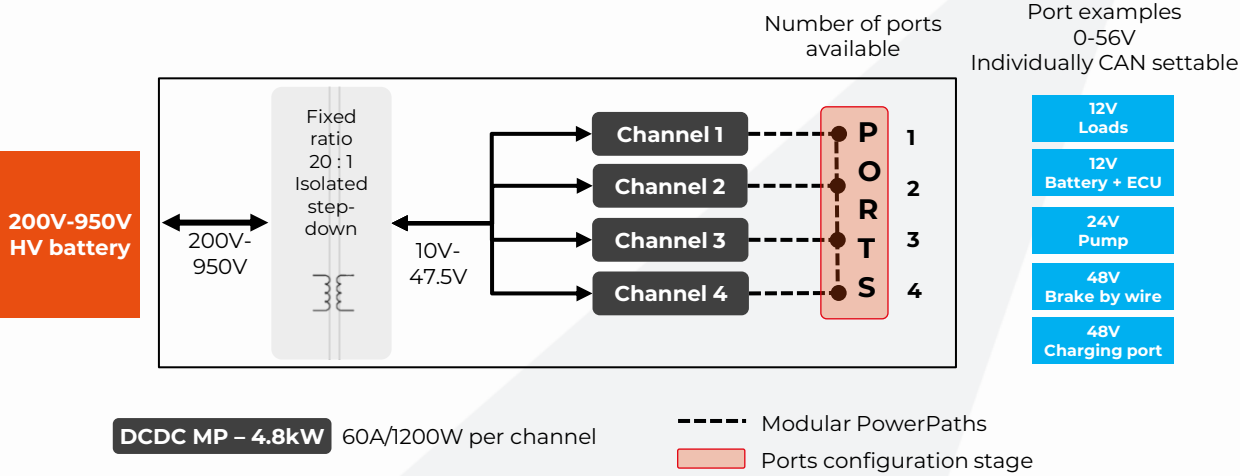
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 **BrightLoop**
A member of the ABB Group

Ordering code logic



1 – Product family		2 – Package size	
DCDC	Isolated DCDC converter	M	Medium
3 – Product line		4 – Number of ports on LV side	
P	Performance	S	Single
		D	Dual
		T	Triple
		Q	Quadruple
5 – Number of channels* per PowerPath		6 – Cooling option	
Separated by –		LC	Liquid-Cooling
		FA	Forced-Air

*Refer to scheme for number of channels available to build PowerPath

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