

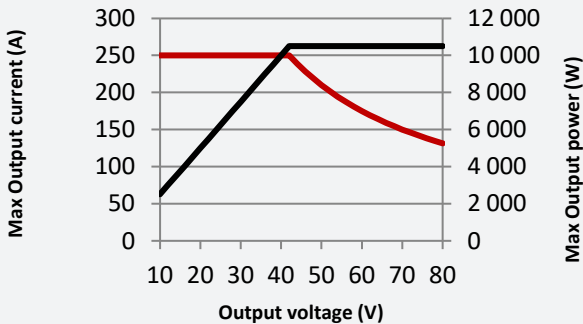
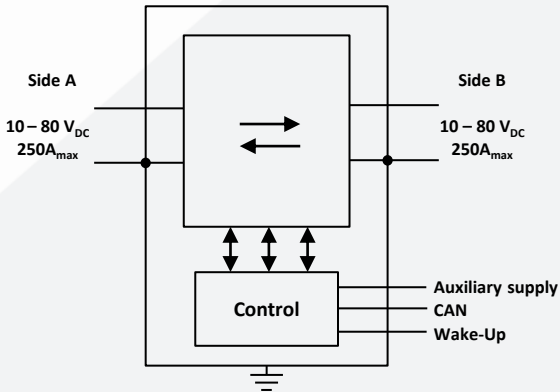
# BB MP

Reversible DCDC Buck Boost converter  
 Total output power 10.5 kW/ 250A  
 80V max working voltage  
 Highly robust and flexible design  
 Best-in-class power density  
 Ideal for 48V power bank and fuel cell



## KEY FEATURES

- > Overlapping input and output voltage, with seamless buck to boost transition
- > CAN remote communication and monitoring
- > No aluminum capacitor
- > Force Air or Liquid cool version option for improved continuous power
- > Harsh environment
- > Weight: <1070g



## TECHNICAL SPECIFICATION

### Auxiliary power supply

Voltage 10V to 56V<sub>DC</sub> nominal  
 (precharge circuit may be required)

IDLE mode consumption <300mW

### Side A

Voltage 10V to 80V<sub>DC</sub> (set by CAN)

Voltage accuracy ±0.5%

Current 250A max

Current accuracy 3%

Short circuit Current regulation at setpoint, value down to 0V

### Side B

Voltage 10V to 80V<sub>DC</sub> (set by CAN)

Voltage accuracy ±0.5%

Current 250A max

Current accuracy 3%

Short circuit Current regulation at setpoint, value down to 0V

### Efficiency

Global efficiency > 97% for 48V -> 48V  
 > 91% for 48V -> 12V

### Environment

Environmental protection IP67, IP6K9K

Cooling Natural or forced convection (Fan 120x120mm)  
 Liquid cooling

Operating temperature range From -20°C to 40°C, depending on output power

Over temperature protection 105°C internal threshold

Storage temperature range From -40°C to 100°C

Weight 1070g

BrightLoop Converters

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

[www.brightloop.fr](http://www.brightloop.fr)

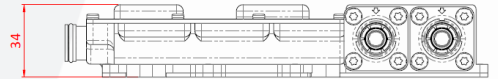


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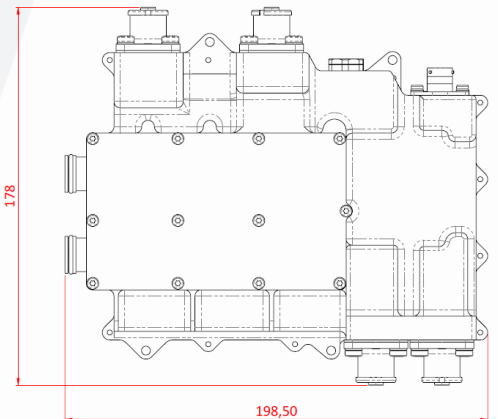
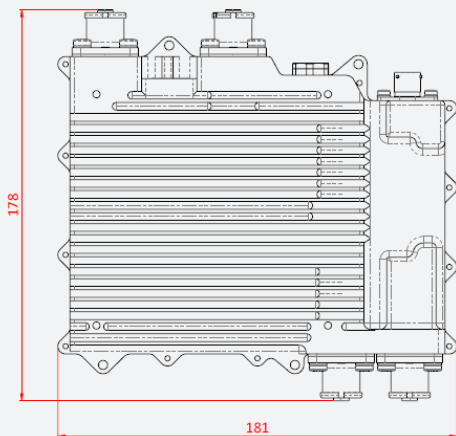
TECHNICAL SPECIFICATION

<b>Logic Interface</b>	
ON/OFF	Tie to ground for start-up
<b>CAN Interface</b>	
Bus speed	User settable : 125, 250, 500 or 1000 Kbps
	Current limit -240A to 240A
Controls	Voltage output setpoint 10V to 80V
	Power ON/OFF
	DC/DC Status
	Voltage and current
Feedback	Internal auxiliary power supplies voltage
	Internal temperatures
	Internal protections
Identification	Software & Hardware revision
	Bootloader for CAN software update
<b>Mechanical</b>	
Dimensions	181x178x34mm Forced air version
	198,50x178x34mm Liquid cooling version
Housing	Aluminum with conductive SurTec
Side A positive connector	SLPIRBBPSR1 (Amphenol)
Side A GND connector	SLPIRBBPSB0 (Amphenol)
Side B positive connector	SLPIRBBPSR2 (Amphenol)
Side B GND Connector	SLPIRBBPSB0 (Amphenol)
Signals connector	8TA 008 35 SN (Souriau)
Mechanical fastening	4 holes, diameter 4,2mm
Fan fastening	4 holes, diameter M4
<b>Supplied with electrical mating connectors</b>	

## OUTLINE and FASTENING DRAWING



Dimensions in mm



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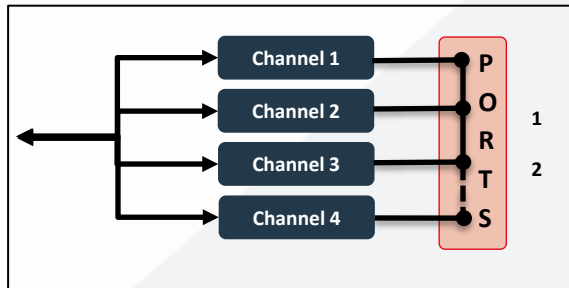
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# Ordering code logic

Port examples  
0-80V  
Individually CAN settable

- 12V Loads
- 12V Battery + ECU
- 48V Battery
- Fuel Cell
- 48V Charging port



Port examples  
0-80V  
Individually CAN settable

- 12V Loads
- 12V Battery + ECU
- 48V Battery
- 48V Brake by wire
- 48V Charging port

**BBMP MP – 10kW**

62,5A/2500W per channel



1 - Product family		2 - Package size	
BB	Buck-Boost	M	Medium
3 - Product line		4 - Number of ports on LV side	
P	Performance	S	Single
		D	Dual
5 - Cooling option			
FA	Forced air		
LC	Liquid cooling		

V22.01

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