

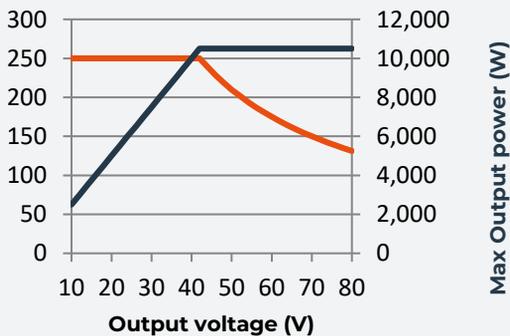
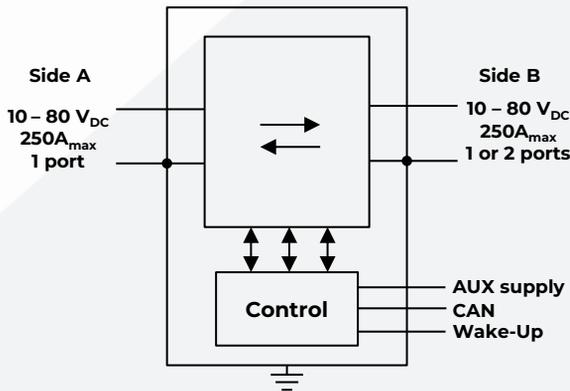
# BB MP

Bidirectional 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

- > **Wide LV range: 0 to 80V<sub>DC</sub> (CLASS B1 ISO6469-3)**
- > **Overlapping input and output voltage, with seamless buck to boost transition**
- > **CAN Bootloader & Remote communication**
- > **No aluminum capacitor**
- > **Forced-Air or Liquid-cooled for improved continuous power**
- > **Weight: <1070g**



## TECHNICAL SPECIFICATION

### Auxiliary power supply

Voltage	10V <sub>DC</sub> to 56V <sub>DC</sub> nominal (precharge circuit may be required)
IDLE mode consumption	<300mW

### Side A

Voltage	10V <sub>DC</sub> to 80V <sub>DC</sub> (set by CAN)
Voltage accuracy	±0.5% at full scale
Current	250A max
Current accuracy	<3% at full scale
Short circuit	Current regulation at setpoint, value down to 0V

### Side B

Voltage	10V <sub>DC</sub> to 80V <sub>DC</sub> (set by CAN)
Voltage accuracy	±0.5% at full scale
Current	250A max
Current accuracy	<3% at full scale
Short circuit	Current regulation at setpoint, value down to 0V

### Efficiency

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

Environmental protection	IP67, IP6K9K
Cooling	Natural or forced convection (fan 120x120mm) Liquid-cooled
Operating temperature range	From -20°C to 40°C (air-cooled version) From -20°C to 80°C (liquid-cooled version)
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)

# BB MP

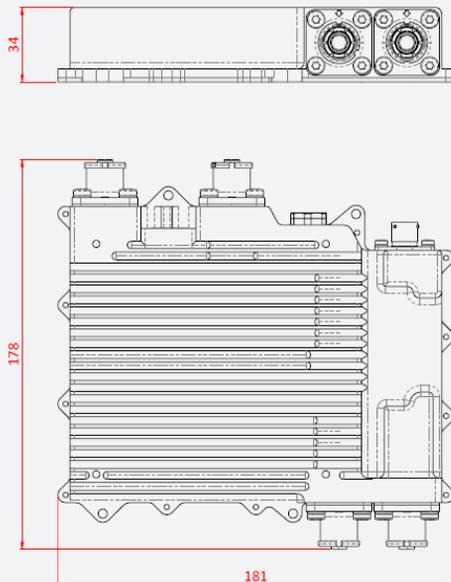
## TECHNICAL SPECIFICATION

<b>Logic Interface</b>	
ON/OFF	Tie to ground for start-up
<b>CAN Interface</b>	
Bus speed	125Kbps to 1Mbps (set by CAN)
	Current limit -250A to 250A, 0.5A resolution
Controls	Voltage setpoint 10V to 80V, 0.1V resolution
	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 anti-corrosion treatment
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

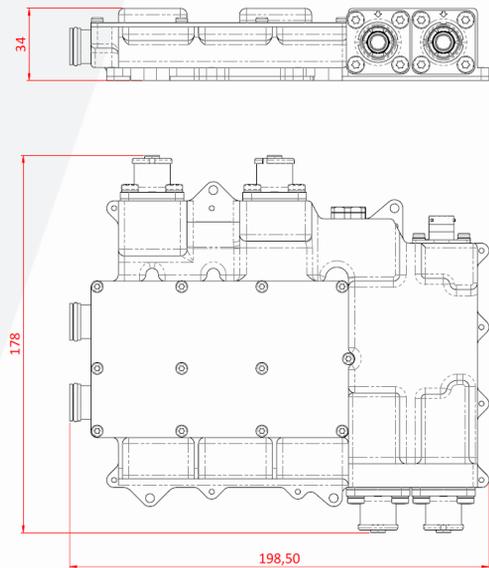
**Supplied with electrical mating connectors**

## OUTLINE and FASTENING DRAWING

BBMP FA



BBMP LC



Dimensions in mm

### BrightLoop Converters

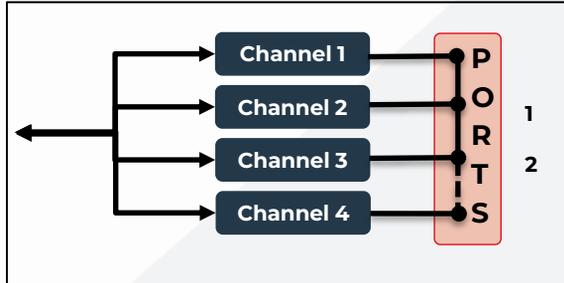
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# Ordering code logic

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 – 10.5kW** 62,5A/2625W 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		

V26.02

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