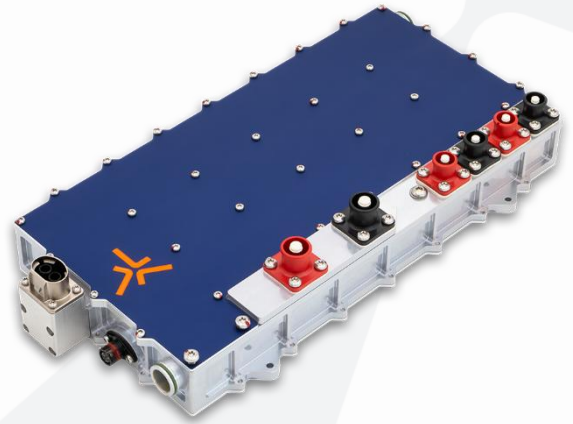


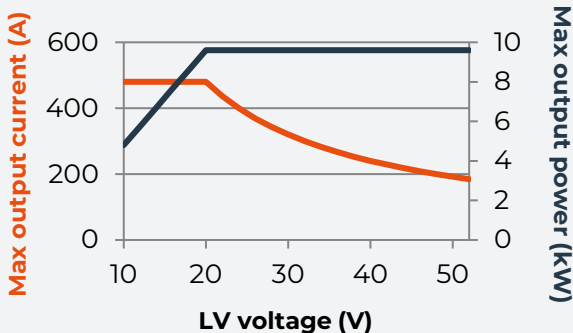
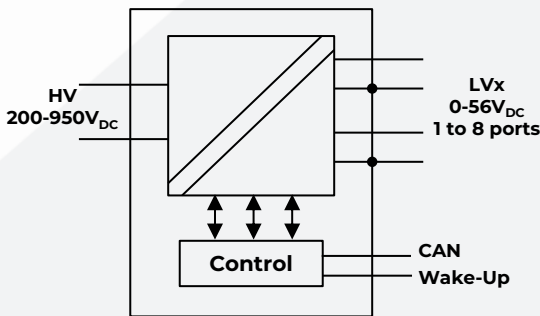
DCDC LP

Bidirectional isolated DCDC converter
Motorsport & extreme vehicle applications
800V battery compliant
Battery charger / LV network supply
Total continuous power 9.6kW/480A



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: 3500g**



TECHNICAL SPECIFICATION

HV side

Voltage	200V _{DC} to 950V _{DC}
ON/OFF	Internal pull-up. Tie to ground for start-up
HV X capacitance	~200nF (no built-in precharge)
HV parallel resistance	600kΩ
IDLE mode consumption	4.4W

LV side

Voltage setpoint	0V _{DC} to 56V _{DC} (set by CAN)
Overvoltage protection	58V _{DC}
Absolute maximum rating	60V _{DC}
Static precision	1%

Current limit	0 to 480A (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	9600W 1200W per channel
Line + load regulation	15% for 0-100% step load without battery

Efficiency

Global efficiency	> 94%
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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	3500g

BrightLoop Converters

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

www.brightloop.fr

DCDC LP

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 side current limit 0A to 480A, 0.5A resolution
	Voltage LV side setpoint 10V to 56V, 0.015V resolution
Power limitation / Remaining	Power ON/OFF for each LV port
	Minimum between 480A and 9.6kW depending on selected LV voltage
	LV ports defined by 8 internal channels of 60A/1200W each
LV side power configuration	Configurable from 1 to 8 LV ports
Monitoring	DC/DC status and errors
	Voltages, currents, temperatures measurements
Identification	Software & Hardware revision
	Bootloader for CAN software update

Safety

HV/LV isolation	3000V _{DC} Reinforced isolation
Capacitance to chassis	<180nF
	EN 62368-1 compliant

Liquid-Cooling (LC)

Power loss	600W max at full power
Pressure loss	70 mbar @10L/min
	150 mbar @15L/min
	250 mbar @20L/min
Maximum operating pressure	1.6barg
Maximum testing pressure	3.2barg
Cooling liquid volume	263cm ³
Cooling connectors	Wiggins (W994-10D) size 5/8"

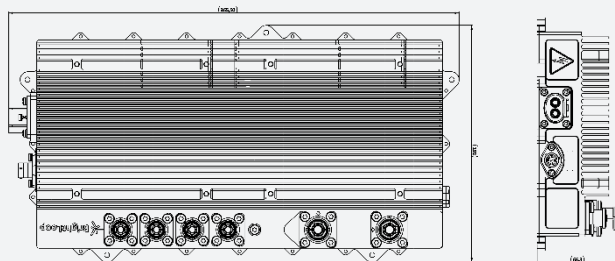
Mechanical

Dimensions	366.10x192x66.31mm
Housing	Aluminum with conductive anti-corrosion treatment
HV connector	IP67 with security loop (Amphenol PL082X-61-2.5)
	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

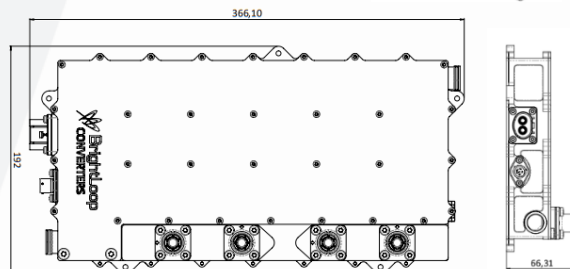
OUTLINE DRAWING

LP FA



90° HV connector rotation
(available upon request)

LP LC



Dimensions in mm

(May vary depending on number of outputs)

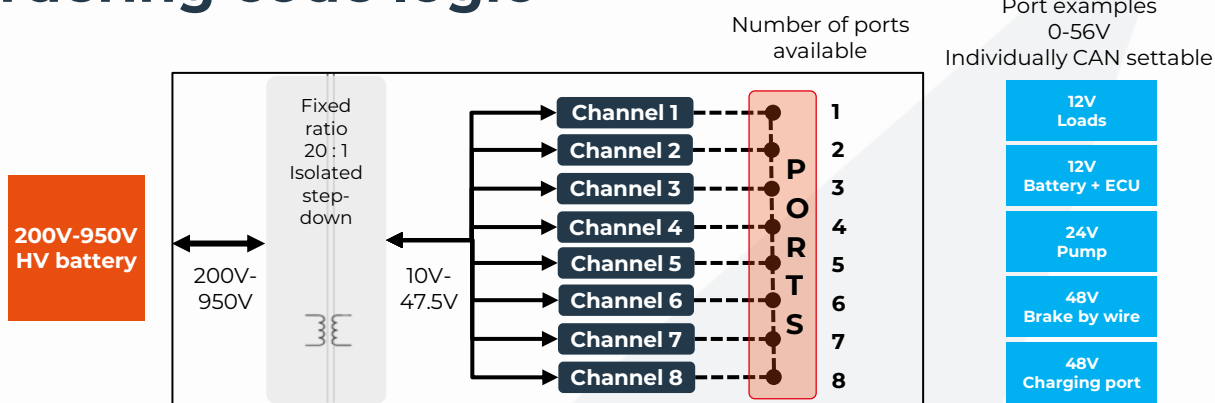
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A member of the ABB Group

Ordering code logic



DCDC LP – 9.6kW 60A/1200W per channel

---- Modular PowerPaths
 Ports configuration stage

DCDC

L

P

D

2-6

LC

1

2

3

4

5

6

1 – Product family		2 – Package size	
DCDC	Isolated DCDC converter	L	Large
3 – Product line		4 – Number of ports on LV side	
P	Performance	S	Single
		D	Dual
		T	Triple
		Q	Quadruple
		P	Penta
		Sx	Six
		He	Hepta (seven)
		O	Octo (eight)
5 – Number of channels* per PowerPath		6 – Cooling option	
Separated by –		LC	Liquid-Cooling
		FA	Forced-Air (Information on demand)

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

V26.06

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