PERFORMANCE PRODUCT LINE

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%
Environment	
Environmental protection	IP67
Altitude	Up to 4000m
Cooling	Liquid temperature 65°C max
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

BrightLoop
A member of the ABB Group

DCDC LP

TECHNICAL SPECIFICATION

CAN Interface	
Bus speed	125Kbps to 1Mbps (set by CAN)
Control modes	HV -> LV
	LV -> HV
	LV <-> LV
	HV -> LV @10sec (Discharge mode)
LV management	LV side current limit 0A to 480A, 0.5A resolution
	Voltage LV side setpoint 10V to 56V, 0.015V resolution
	Power ON/OFF for each LV port
Power limitation / Remaining	Minimum between 480A and 9.6kW depending on selected LV voltage
LV side power configuration	LV ports defined by 8 internal channels of 60A/1200W each 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 (tested 60 sec.)
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	263cm³
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

Dimensions in mm
(May vary depending on number of outputs)

90° HV connector rotation
(available upon request)

BrightLoop Converters

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

www.brightloop.fr

BrightLoop
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*

V26.02

BrightLoop Converters

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

www.brightloop.fr

BrightLoop
A member of the ABB Group