

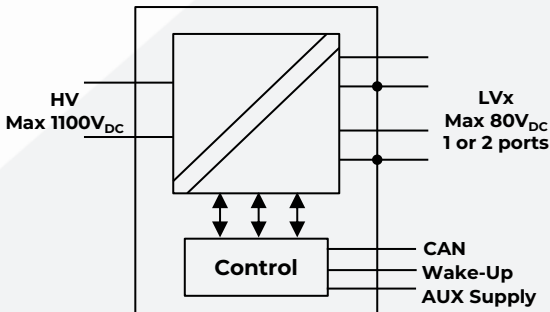
DCDC LO

Bidirectional isolated DCDC converter
 Design for series production
 800V battery compliant
 Battery charger / LV network supply
 Total continuous power 12kW/600A



KEY FEATURES

- > Wide HV range: 200 to 1000*V_{DC}
- > Wide LV range: 0 to 80V_{DC} (CLASS B1 ISO6469-3)
- > Single or Dual LV ports configuration
- > CAN Bootloader & Remote Communication
- > Liquid-Cooling (LC)
- > HV bus pre-charge
- > Best-in-class power density
- > Weight: <5kg



TECHNICAL SPECIFICATION

HV side

Voltage	Up to 1100*V _{DC}
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LV side

LV ports configuration	Single or Dual
Voltage setpoint	Up to 75V _{DC} (set by CAN)
Static precision	1%
Current limit	0 to 600A (set by CAN)
Current limit accuracy	<3%
Short circuit protection	Current regulation at setpoint value down to 0V
Continuous power	12000W
Line + load regulation	10% for 0-100% step load (without battery)

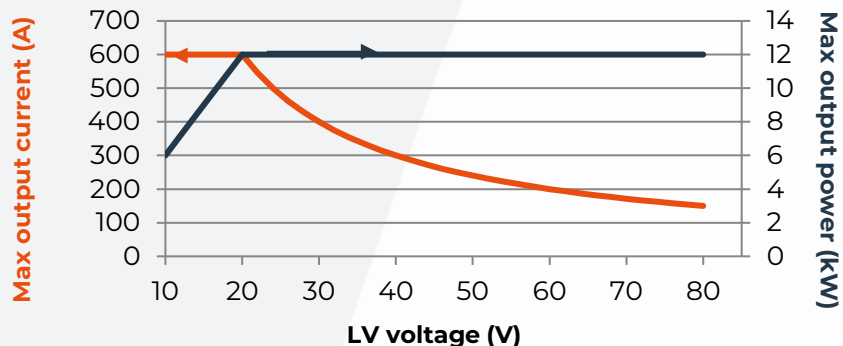
Efficiency

Global efficiency	> 96%
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Environment

Environmental protection	IP68 IP6K9K
Altitude	Up to 4000m (12000ft)
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	TBC

*For higher voltage, please refer to BrightLoop



BrightLoop Converters

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TECHNICAL SPECIFICATION

CAN Interface

Bus speed	125Kbps to 1Mbps (set by CAN)
Conversion modes	HV -> LV LV -> HV LV <-> LV (in dual LV configuration)
Controls	LV current limit (1A resolution) HV current limit (0.1A resolution) LV voltage setpoint (0.015V resolution) HV voltage setpoint (1V resolution) Power ON/OFF for each LV port
Monitoring	DC/DC Status and errors Voltages, currents, temperatures measurements
Identification	Software & Hardware revision Bootloader for CAN software update

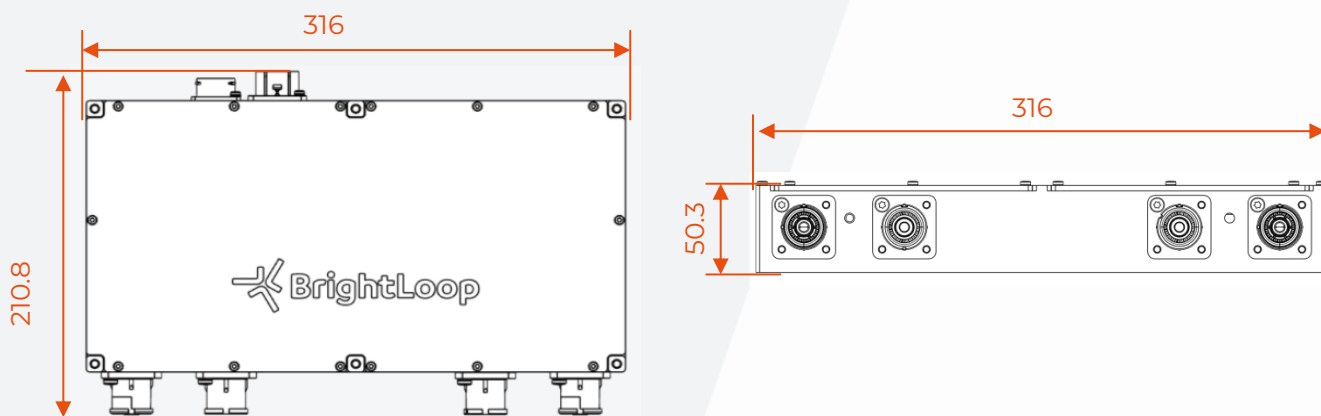
Conformity & approval

HV/LV insulation	3000V _{DC} Reinforced isolation EN 62368-1
Safety	ECE R100 ISO26262 (ASIL B)
Approvals	ECE R10 LV124

Mechanical

Dimensions	316x210.8x50.3mm (TBC)
Housing	Aluminum with conductive anti-corrosion treatment
HV connector	Amphenol PL082X-61-6 (with security loop)
LV connectors	Amphenol SurLok Plus 10mm
Signals connector	Souriau UTS 6JC 12E 14S
Cooling Connector	12mm nominal diameter (customizable)

OUTLINE DRAWING



Dimensions in mm

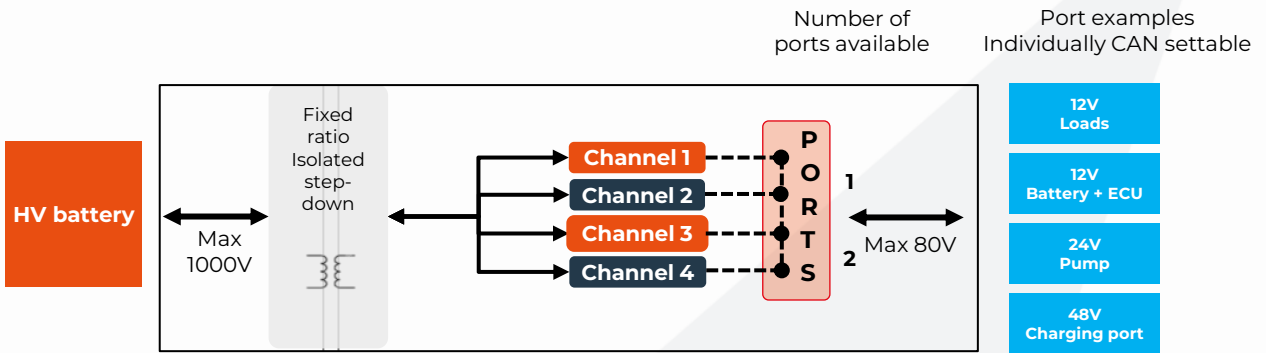
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Ordering code logic



- 180A/3600W per channel
- 120A/2400W per channel
- Modular Power Paths
- Ports configuration stage



1 – Product family		2 – Package size	
DCDC	Isolated DCDC converter	L	Large
3 – Product line		4 – Number of ports on LV side	
O	Optimum	S	Single
		D	Dual
5 – Number of channels per PowerPath		6 – Cooling option	
See table below		LC	Liquid-Cooling

Configuration name	Number of ports	Channels connected to LV1	Channels connected to LV2	LV1 capacity	LV2 capacity
0	S	1 & 2	3 & 4	300A/6000W	300A/6000W
1	D	1 & 2	3 & 4	300A/6000W	300A/6000W
2	D	1, 2 & 3	4	380*A/9600W	120A/2400W
3	D	1	2,3 & 4	180A/3600W	380*A/8400W

*For higher current requirements, please contact us.

V26.04b

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