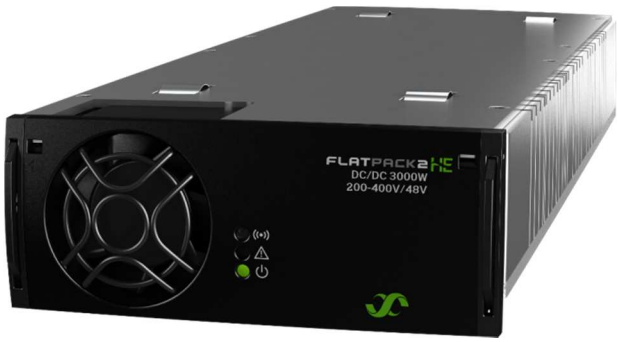
High efficiency converter for data centers

The Flatpack2 DC/DC 200-400V/48V 3000W enables a high efficiency end to end DC power solution for data centers. It converts the 380VDC bus voltage down to 48VDC with an efficiency of 98.2%.

With this Flatpack2 380V to 48V converter, central 380VDC-UPS becomes a competitive alternative for a wider range of data centers.
The advantages of DC power systems as reliability, modularity, redundancy and high end to end efficiency, can be fully utilized to ensure optimal power availability.



FLATPACK2 HVDC/DC CONVERTER

200-400V/48V 3000W

Doc 241119.907.DS3 – v0A

PRELIMINARY

APPLICATIONS

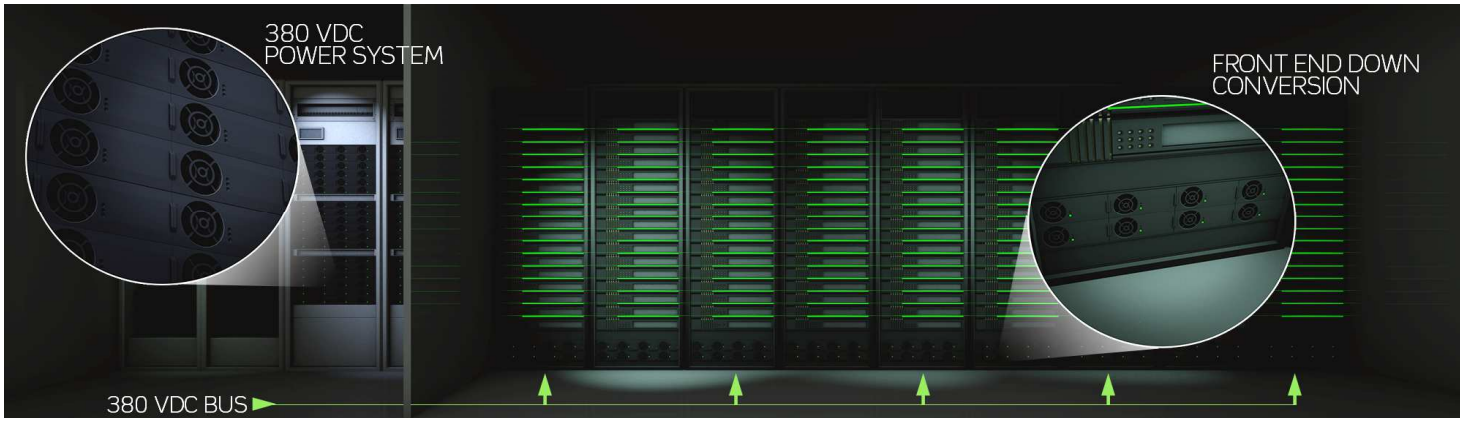
DATACENTERS

- FRONT END CONVERSION FROM HVDC (200-400VDC) TO 48VDC

2U 24kW Power shelf

KEY FEATURES

- HIGH POWER DENSITY - 33 W/INCH^3
- **SUPER EFFICIENCY UP TO 98.2%**
- MODULAR – BUILD AS YOUR LOAD GROWS
- WIDE INPUT RANGE
- PATENTED HE TECHNOLOGY
- OR-ING PROTECTION ON OUTPUT



FLATPACK2 HVDC/DC CONVERTER

200-400V/48V 3000W

Model	200-400V/48V 3000W
Part number	241119.907
INPUT DATA	
Voltage range	85 - 400 V_{DC}
Voltage range (nominal)	200 - 400 V_{DC}
Frequency	0 Hz
Maximum current	16 A_{DC}
Protection	Fuse in both lines, shutdown when V_{IN} is out of range
OUTPUT DATA	
Default voltage	53.5 V_{DC}
Max power, nominal input	3000 W
Max current, @V_{OUT} = 48 V_{DC}	62.5 A (71.5A (3000 W) for 5 minutes, 15 minutes recovery)
Max power, 85V input	TBD
Current sharing	±5% of maximum current from 10 to 100% load
Static voltage regulation	±2% from 0 - 100% load and nominal input
Dynamic voltage regulation	±2V for 4-50% or 50-4% load variation, regulation time < 2ms
Protection	Overvoltage shutdown, short circuit proof, high temperature, hot plug-in inrush current limiting, OR-ing FET
OTHER SPECIFICATIONS	
Peak Efficiency	98.2 %
Isolation	3.0 kV_{AC} – input and output, 1.5 kV_{AC} – input earth, 0.5 kV_{DC} – output earth
Alarms (Red LED)	Low mains shutdown, High and low temperature shutdown, Converter Failure, Overvoltage shutdown on output, Fan failure, Low voltage alarm, CAN bus failure
Warnings (Yellow LED)	Converter in power derate mode, Remote battery current limit activated, Input voltage out of range, flashing at overvoltage
Normal (Green LED)	Input and output ok
MTBF (Telcordia SR-332 Issue I method III (a))	>TBD h (@$T_{AMBIENT}$= 25°C)
Operating temperature (5 - 95% RH non-cond.)	0 – 70°C
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 95% RH non-condensing
Dimensions[WxHxD] / Weight	109 x 41.0 x 327mm (WxHxD) [4.25 x 1.6 x 12.8"] / 1.950 kg [4.3lbs]
DESIGN STANDARDS	
Electrical safety	UL 60950-1, EN 60950-1
EMC	EN 55022 Cl.A[1)], EN 55024
Mains Harmonics / flicker	EN 61000-3-2, EN 61000-3-3
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) & 2-3 (Class 3.2) 2011/65/EU (RoHS) & 2008/98/EC (WEEE)

1) Conducted mains port only

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