Datasheet

Non-isolated air-cooled DC DC converters

SMART NON-ISOLATED REVERSIBLE DC/DC CONVERTER

Air cooling

FEATURES

- Programmable smart DC/DC converter allowing regulation according to voltage, current or power, input or output
- Buck/boost transition controlled by CAN command
- Operations controlled through insulated CAN 2.0B
- Parallelization of DC/DC modules for higher power delivery (in current source mode only)
- Air cooling

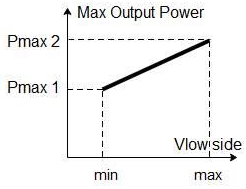
APPLICATIONS

- Fuel cell power
- Battery systems
- Super capacitors
- Chargers
- Loads
- Motors

PERMANENT MAXIMUM OUTPUT POWER

		Vhigh side range					Eff.	Reference
		200 ... 400V	300 ... 500V	500 ... 700V	600 ... 700V	550 ... 950V	@Pmax	
Vlow side range	35 ... 120V	3 - 5kW (*)					98%	CONV-DCDC-05KW-ACDH-xx-H
	50 ... 220V		3 - 20kW (1)				98%	CONV-DCDC-20KW-AEFJ-xx-H
	50 ... 220V			4 - 11kW			98%	CONV-DCDC-11KW-AEJN-xx-H
	150 ... 400V			12 - 25kW			98%	CONV-DCDC-25KW-CHJN-xx-H
	300 ... 400V				28 - 32kW		97%	CONV-DCDC-32KW-FHLN-xx-H
	100 ... 450V					5.5 - 17kW	98%	CONV-DCDC-17KW-BIKS-xx-H

** Boost only*



The maximum power the DCDC converter can provide is related to Vlow side range according to the chart beside.

See example (1) : Pmax1 = 4 kW @ Vlow side min = 50V
Pmax2 = 26 kW @ Vlow side max = 220V
For any value of Vhigh side range

COMMUNICATION AND MONITORING

	MIN	TYP.	MAX	UNITS
CAN 2.0B bus speed	125		500	Kb/s
CAN periodicity		100		ms
Measured voltages accuracy		±0.7	±2	% of full scale
Measured Low Side current accuracy		±1.9	±3	% of full scale
Measured High Side current accuracy		±1.7	±2.5	% of full scale
Measured internal temperature accuracy		±1	±3	°C
Service Power Supply – Voltage (12V option)	9	12	13.5	V
Service Power Supply – Voltage (24V option)	18	24	28	V
Service Power Suppy – Power consumption (fans included)	1		30	W

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CONNECTORS

V Low side	Copper Bus bar 5 x 16 mm section
V High side	
CAN + Service voltage	Female DB15

COOLING PARAMETERS

	MIN	TYP.	MAX	UNITS
Air flow rate (permanent)			268	m³/h
Inlet air temperature			55	°C

REGULATION MODES

	CURRENT	VOLTAGE	POWER
According to Low side	✓	✓	✓
According to High side	✓	✓	✓

ENVIRONMENT DATA

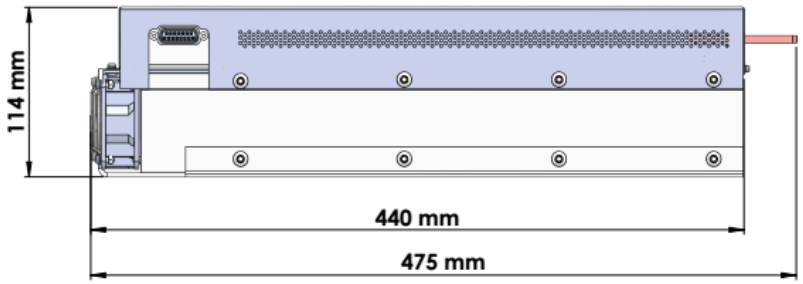
	MIN	TYP.	MAX	UNITS
Galvanic insulation between power circuit and chassis-control interface (1min test)			3.0	kV
Insulation resistance	2			MΩ
Ambient temperature (operating)	-40		55	°C
Ingress Protection			IP20	-

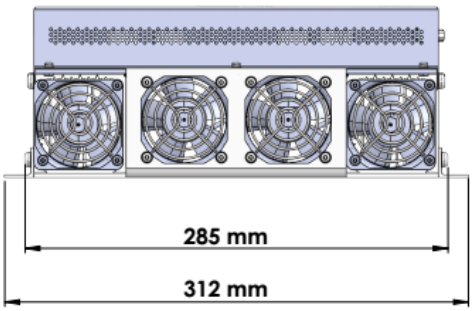
STANDARDS USED FOR DESIGN

EMC	R10
Control circuit supply voltage	ISO 16750-2 mode D
Mechanical loads	ISO 16750-3
Climatic loads	ISO 16750-4 code G

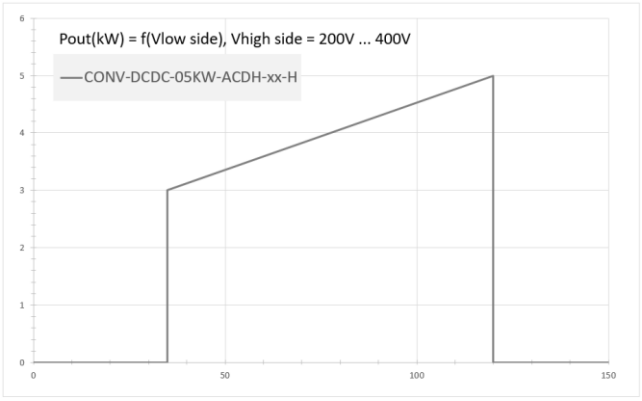
MECHANICAL DATA

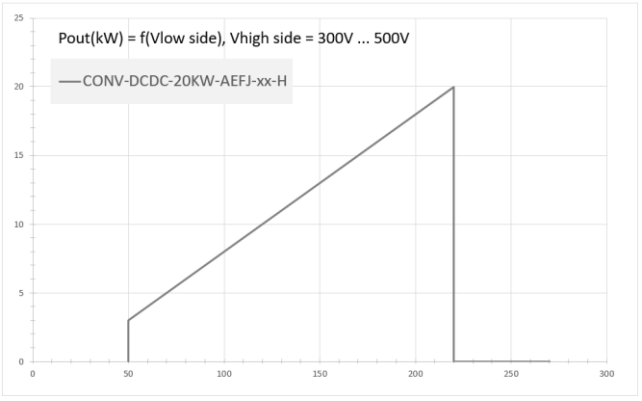
- Single unit - weight: 11 kg

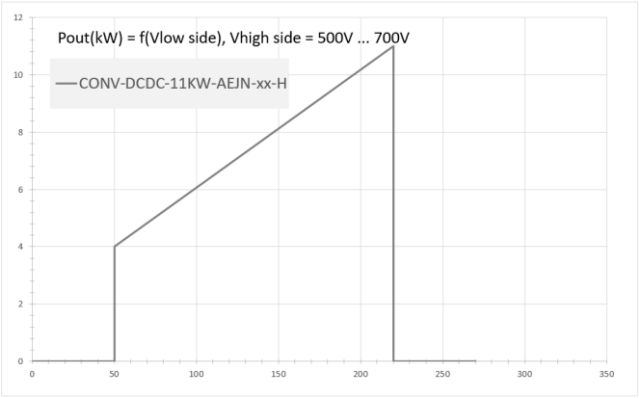


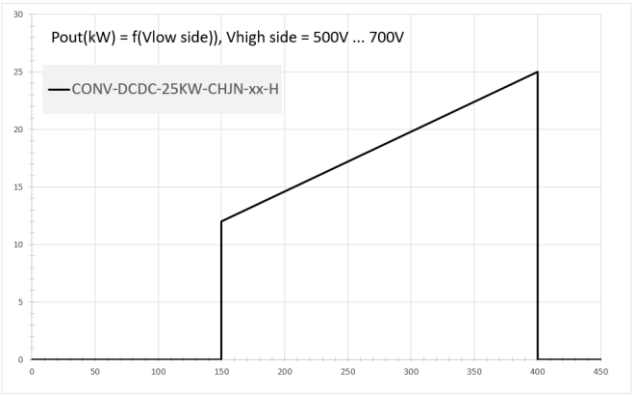


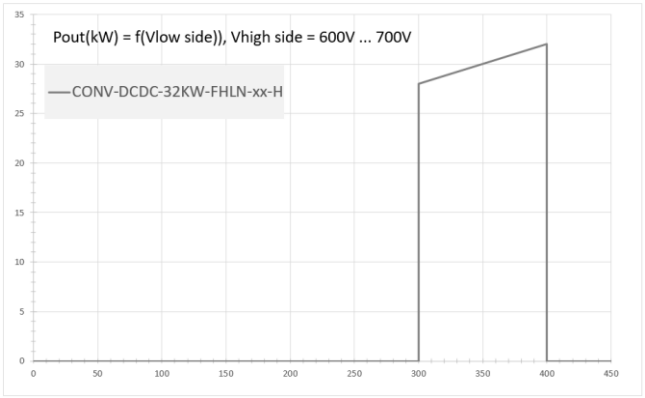
POWER CHARTS FOR CONVERTERS REFERENCES

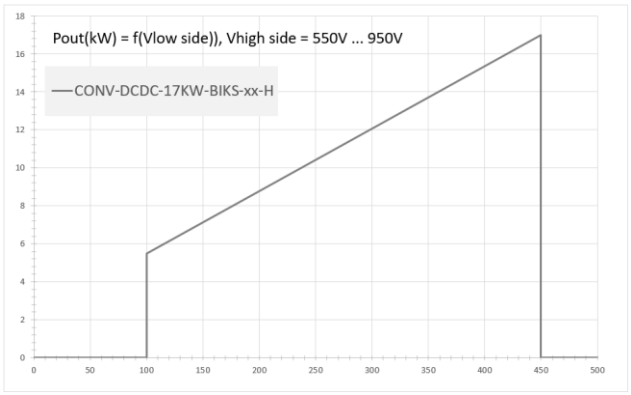












MOUNTING CONFIGURATION IN 19” CABINET

- Quadruple unit, 19” rack mounting
- Single unit 3U, 19” rack mounting