

NON ISOLATED BUCK DC DC CONVERTER

Air cooling CONV-DCDC-40KW-IMMQ-06-F

TAME-POWER DC/DC converters allow to transfer up to 1 megawatt on 35V to 950V input and output voltage ranges.

TAME-POWER high voltage DC/DC converters perfectly adapt to applications of the on-road, off-road, stationary, aero-nautics and marine markets and easily embed architectures integrating: fuel cells, batteries, supercaps and auxiliary power supplies.

As a specialist in high-reliability power conversion solutions, TAME-POWER brings over 50 years of expertise in electronic systems to the table. Our commitment lies in providing tailored products that blend efficiency, performance, and power density to address diverse mobile and fixed application needs. At TAME-POWER, we understand that every customer comes with unique requirements. Therefore, our philosophy revolves around partnering with clients throughout the product development process to ensure we deliver solutions that precisely match their specifications.

FEATURES

- Air cooling DC/DC HVHV converter module
- Increase power density and ensures power optimization up to 40kW
- 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



USE CASES

Boost - Fuel Cell to Battery: The converter can be used with Fuel cell application in Boost mode to battery and other component as a driver for electrical engine. This typical application is for a truck or bus. The converter must transfer the power from the Fuel Cell (Low side) to the Battery and driver (High side).



Buck - Battery to Battery: The converter can be used with Battery application in buck mode to battery. This typical application is for a car charger. The converter must transfer the power from the Battery (High side) to the Battery and load (Low side).



Buck and Boost - Super Capacitors to Battery: The converter can be used with Super Caps application in reversible mode to battery. This typical application is for a car. The converter must transfer the power from the Battery (High side) to the Super Caps (Low side).



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SPECIFICATIONS	CONV-DCDC-40KW-IMMQ-06-F
ELECTRICAL	
High voltage range	630 V – 820 V
Low voltage range	430 V – 630 V
Rated output current	150A
Maximum power	40 kW
Efficiency	>98%
Supply voltage	9V - 13.5V for (12V option) and 18V - 28V for (24V option)
Supply consumption	30W max
Regulation modes	Current/ Voltage/ Power (Special regulation for batteries application is available)
Safety features	HVIL, OTP, OCP, OVP, UVP
Galvanic insulation	3.0 kV (Insulation resistance 2 MΩ)
COMMUNICATION	
Protocole	CAN 2.0B / 500 kbits/s
Frames period	100 ms
COOLING	
Cooling type	Air cooling
Flow rate	268 m³/h
ENVIRONMENTAL	
Operating temp.	-20 °C to +55 °C
Storage temperature	-40 °C to +70 °C
Relative humidity	10% to 85%
Ingress Protection	IP20
MECHANICAL	
Housing material	Aluminum
Weight	11 kg
Dimensions (LxWxH)	475 mm x 312 mm x 114 mm
PRODUCT MATURITY	
C sample	In production

SPECIFICATIONS	CONV-DCDC-40KW-IMMQ-06-F
STANDARDS	
Electrical	ISO 16750-2 Road vehicles - Environmental conditions and testing - Electrical loads
Environnemental	ISO 16750-4 Road vehicles - Environmental conditions and testing - Climatic loads
	ISO 16750-3 Road vehicles - Environmental conditions and testing - Mechanical loads
	IEC 60529 Ingress Protection (IP) ratings
Safety	EN 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use
	UN ECE R100 European requirement for the approval of road electric vehicles
EMC	EN 55016-2-3 Specification for radio disturbance and immunity measuring apparatus and methods
	EN 61000-4-2/4-3/4-8 Electromagnetic compatibility - Testing and measurement techniques - Immunity
	EN 62311: Assessment of electronic and electrical equipment related to human exposure restrictions
	ECE R10 Automotive EMC Testing
CONNECTORS	
V_{LOW} side	Copper Bus bar 5 × 16 mm section
V_{HIGH} side	Copper Bus bar 5 × 16 mm section
Service	Female DB15



APPLICATIONS

- Fuel cell systems
- Battery systems
- Supercap systems
- DC Charging
- Smart Grids



TRUCK



AIRCRAFT



COMMERCIAL VEHICLE



OFF-ROAD VEHICLE



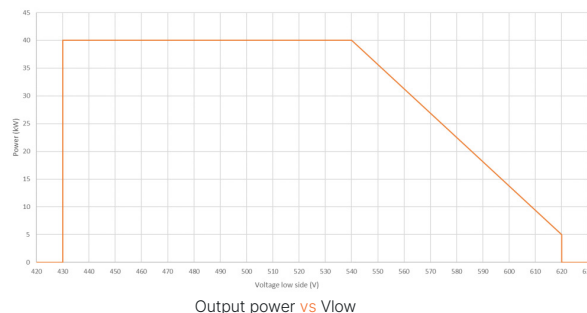
BUS



SPECIAL VEHICLE

Challenge us with your application through our [contact form](#) !

DERATING CURVE



Output power vs Vlow

OTHER PRODUCTS AND ACCESSORIES

Below you can find the other product families created by TAME-POWER. Each product can be fully customized to meet specific requirements.

STARTER KIT

- This kit for liquid or air cooled DC/DC converters allows controlling a DC/DC converter unit by direct connection to a power supply and a PC or a laptop.
- Include CAN communication probe and service power cables.
- The provided HMI software propose a user-friendly access to the main functions of the converter.



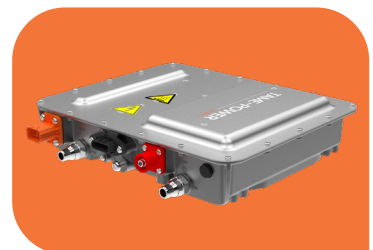
POWER CABLES

- High side and low side power connection cables to transfer energy between the converter and your systems.
- The choice of cables will depend on the type of converter - single or double.
- Cables have open end on one side to allow custom connectors application.



CISO: New HVLV isolated converter

- Isolated Buck DC DC converter in a liquid cooled version.
- Allow regulation according to input voltage.
- Applicable to battery systems and electric vehicles.



COMET V2.4 : HVHV non-isolated converter

- Non-isolated reversible DC DC converter in a liquid cooled version.
- Allows regulation according to voltage, current or power, input or output.
- Applicable to fuel cell power, battery systems, super capacitors, chargers, loads and motors.



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