

ISOLATED BUCK HVLV DC DC CONVERTER up to 12 kW

Liquid cooling

The new TAME-POWER isolated liquid-cooled HVLV DC DC converters allow to transfer up to 12 kW per power conversion module. The optimal distributed power level depends on system parameters and on voltage input and output ranges.

TAME-POWER products easily integrate embedded applications across various sectors, including agricultural machinery, buses, trucks, and military vehicles. They are designed to transfer several kilowatts to specific low voltage for automotive and aeronautics market.

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.

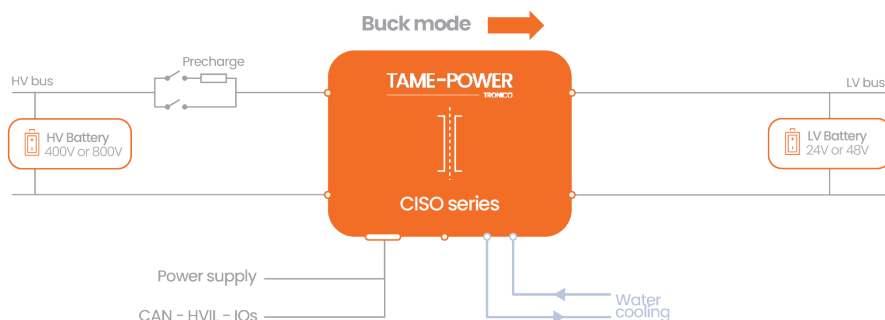
KEY FEATURES

- Smart DC DC converter, programmable as voltage source
- Operate between 200V and 900V in high voltage
- Up to 12 kW output power
- Integrate several control modes in input or output: current, voltage and power
- Parallelization of DC DC modules for higher power delivery
- 3000V galvanic isolation between high voltage and low voltage ranges
- Operations controlled through isolated CAN 2.0B
- HVIL on input voltage
- Full quick connect on liquid cooling connection
- ISO 26262 - ASIL B ready



USE CASES

Battery to Battery: The CISO converter can be used for applications involving high-voltage (HV) batteries and low-voltage (LV) batteries, making it ideal for electric vehicles. The CISO converter transfers the power from the HV bus (400V or 800V) to LV bus (24V or 48V).

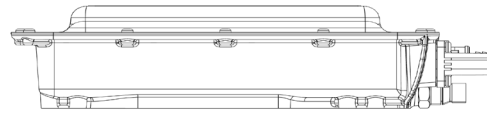
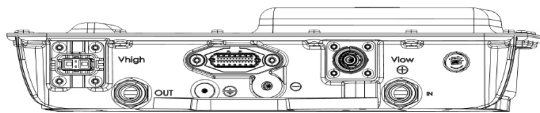


ISOLATED DC DC CONVERTER

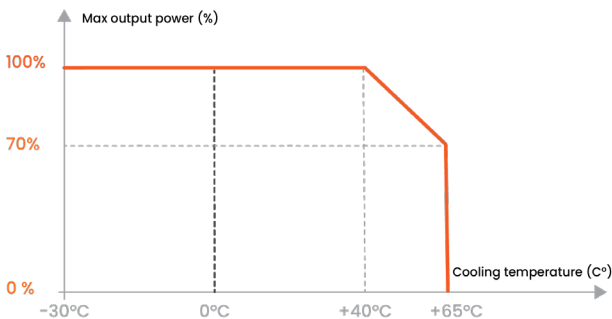
Liquid cooling

SPECIFICATIONS	CISO-DCDC-800V-24V-6KW-00	CISO-DCDC-800V-48V-12KW-00
ELECTRICAL		
High voltage range	200 V – 900 V	
Low voltage range	18 V - 36 V	36 V - 56 V
Rated output current	250 A	
Maximum power	6 kW	12 kW
Efficiency	>90%	
Supply voltage	6.5 V – 60 V	
Supply consumption	24 W (Max)	
Regulation modes	Current/ Voltage	
Safety features	HVIL, OTP, OCP, OVP, UVP	
Main insulation	3.0 kV	
COMMUNICATION		
Protocole	CAN 2.0B (1 Mbits/s)	
Frames period	50 ms	
COOLING		
Liquid cooling	WEG (Water 50% / Glycol 50%)	
Liquid temperature	-30 °C to +65 °C	
Flow rate	3 to 15 L/min	
Maximum Pressure	2.5 Bar	
Pressure drops	100 mBar (at 15 L/min flow)	
Tank capacity	300 cm ³	
ENVIRONMENTAL		
Operating temp.	-40 °C to +85 °C	
Storage temperature	-40 °C to +105 °C	
Relative humidity	10% to 85%	
Ingress Protection	IP67 and IP6K9K	
MECHANICAL		
Housing material	Aluminum	
Weight	10 kg	
Dimensions (LxWxH)	306 mm x 376 mm x 85 mm	
PRODUCT MATURITY		
B sample	Pre-series	Coming soon

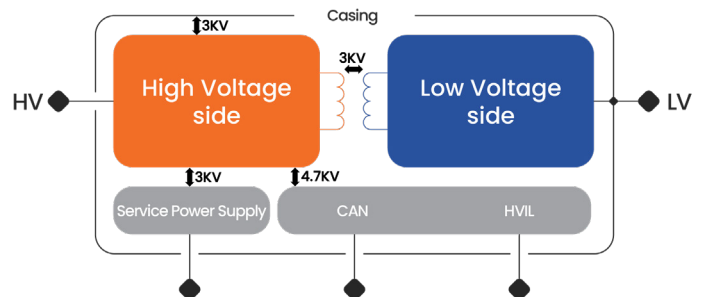
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STANDARDS (Qualification in progress)		
Electrical	ISO 16750-2 Road vehicles - Environmental conditions and testing - Electrical loads	
Environnemental	ISO 16750-4 Road vehicles - Environmental conditions and testing - Climatic loads	
	ISO 16750-3 Road vehicles - Environmental conditions and testing - Mechanical loads	
Safety	IEC 60529 Ingress Protection (IP) ratings	
	EN 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use	
EMC	UN ECE R100 European requirement for the approval of road electric vehicles	
	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		
Input HV	APTIV Shield-Pack HV 280 SI - Index 101	
Output LV (+)	AMPHENOL SURLOK PLUS - Size 10.3 mm	
Output LV (-)	STANDARD SCREW M8	
Service	HIROSE ZE064W-24DP-HU/R(A)	
Cooling	NORMAQUICK PS3 NW12	
Grounding	Threaded stud M4x10	



OUTPUT POWER DERATING



INSULATION ARCHITECTURE



APPLICATIONS

- Battery systems
- Fuel cell systems
- Supercap systems



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

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.



CONVY 2.4 : HVHV non-isolated converter

- The new non-isolated reversible HVHV 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.



COMET AIR : HVHV air cooled converter

- Non-isolated Buck DC DC converter in air 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.

