

## Smart isolated DC/DC Buck Converter

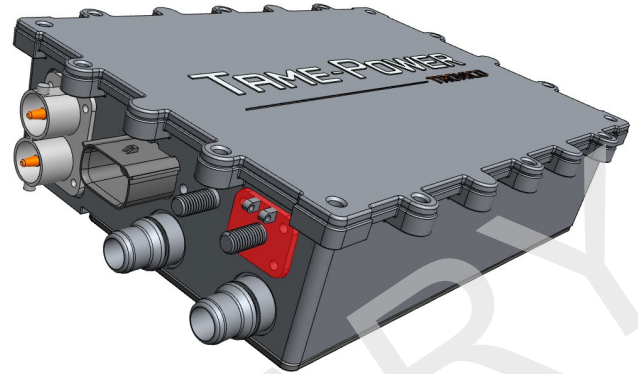
CISO productline - Liquid cooled version

### FEATURES

- Programmable DC/DC Smart Converter as current or voltage source
- Buck operations
- Liquid cooled
- 3 kV DC isolation between HV and 48V
- HVIL on input Voltage
- Insulated CAN 2.0B connectivity

### APPLICATIONS

- Battery systems
- Chargers
- Electric vehicles



### KEY FEATURES

Input Voltage (V)		Adjustable Output Voltage Range (*) (V)			Output Power @Vout Typ (kW)	Output Current (A)	Efficiency @ Pmax (%)	Main reference
Min	Max	Min	Typ	Max	Max	Max		
250	500	9	12	18	3	250	90	CISO-DCDC-500V-12V-03KW-00
		18	24	36	6			CISO-DCDC-500V-24V-06KW-00
			28	60	12			CISO-DCDC-500V-48V-12KW-00
500	950	8	12	18	3			CISO-DCDC-950V-12V-03KW-00
		18	24	36	6			CISO-DCDC-950V-24V-06KW-00
			28	60	12			CISO-DCDC-950V-48V-12KW-00

\* : General accuracy of output voltage = +/-0.5 V @ 12V to 28V, +/- 1V @ 48V

### ISOLATION TABLE (test 1mn)

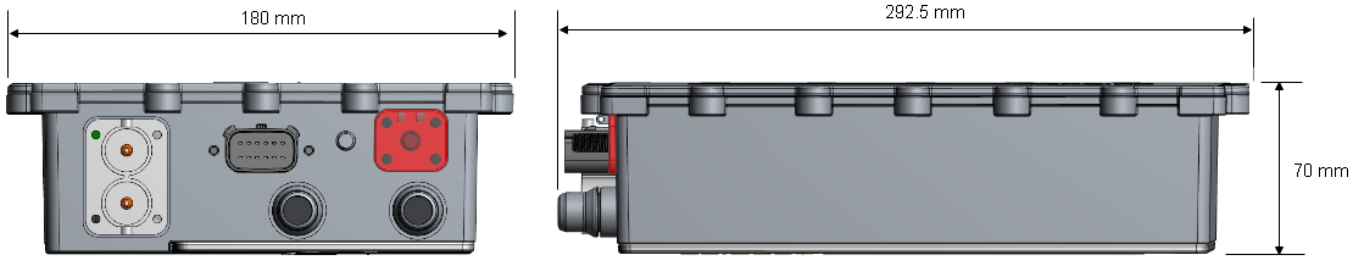
(kV DC)	Input Voltage	Output Voltage	Service	CAN	HVIL	Stop	Casing
Input Voltage		3	3	3	3	3	3
Output Voltage			1	1	1	1	1
Service V				1	1	1	1
CAN					1	1	1
HVIL						1	1
Stop							1
Casing							

### 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	10.5		32	V
Service Power Supply - Power consumption	2		6	W

## MECHANICAL DATA

Weight : 5 kg

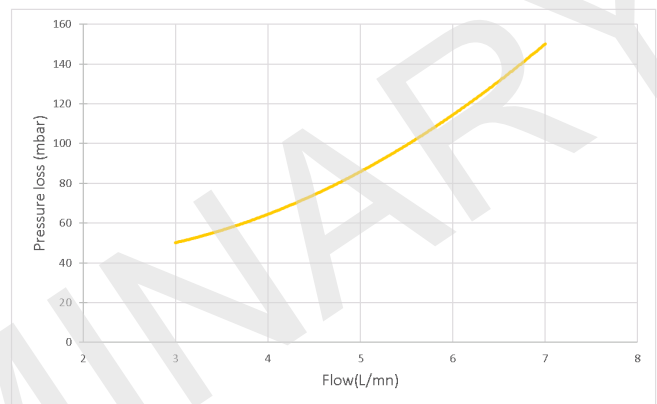


## CONNECTORS

	SUPPLIER	SINGLE unit
Input Voltage	AMPHENOL	PL082X-120
Output Voltage positive	-	M8 x ~20 mm Threaded rod
Output Voltage negative (casing)	-	M8 x ~20 mm Threaded rod
CAN + Service voltage + HVIL	MOLEX	Automotive type
Cooling connectors	-	SAEJ2044

## COOLING PARAMETERS

	MIN	TYP.	MAX	UNITS
Flow rate	3	5	7	L/mn
Pressure			5	Bar
Inlet liquid temperature	0		+65	°C



## ENVIRONMENT DATA

	MIN	TYP.	MAX	UNITS
Ambient temperature (operating)	-40		85	°C
Ingress Protection		IP65		-

## 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
Chemical loads	ISO 16750-5 mounting location A
Electrical vehicle safety	R100

## TYPICAL APPLICATION

