

CC-400-12000

Converter for driving ultra-high-speed turbo compressors in fuel cells systems.

- Operation of turbo compressor from wide output voltage range of the fuel cell or battery (200 – 420 VDC)
- Rated output power: 12 kW
- Sensorless speed control up to 180,000 rpm



Specifications converter

Nominal high voltage input U_{HV}^1	200 – 420 VDC
Maximum output power	12 kW
Maximum high voltage input current	60 ADC
Low voltage power input U_{LV}	9 – 16 VDC (Auxiliary supply)
Maximum frequency / speed (PWM-operation)	3 kHz / 180,000 rpm
Output voltage (peak value phase-phase)	0 – $0.95 \cdot U_{HV}$, max. 400 V
Maximum phase current	85 Arms
Communication interface	CAN 2.0A, SAE J1939, RS422-USB (Service Interface)
Ambient temperature	-30 – 65 °C
Weight	12 kg
Dimensions	335 (382) x 214.5 x 90 mm

Low voltage input

3 x CAN interface	CanH, CanL, CanGND
5 x RS422 interface (Service Interface)	TX-, RX+, TX+, RX-, RS GND
2 x Low voltage input U_{LV}	1 x LV+, 1 x LV-
1 x PE	Protective earth, connected to the casing
2 x Interlock	IL1, IL2
Connector type	TE Connectivity / AMPSEAL 14 Pos.

Cooling

Liquid	50% / 50% water glycol mixture
Coolant temperature	-30 – 55 °C
In-/Outlet connector type	According to SAE J1231 430192
Tube ID	10 mm

Converter grounding

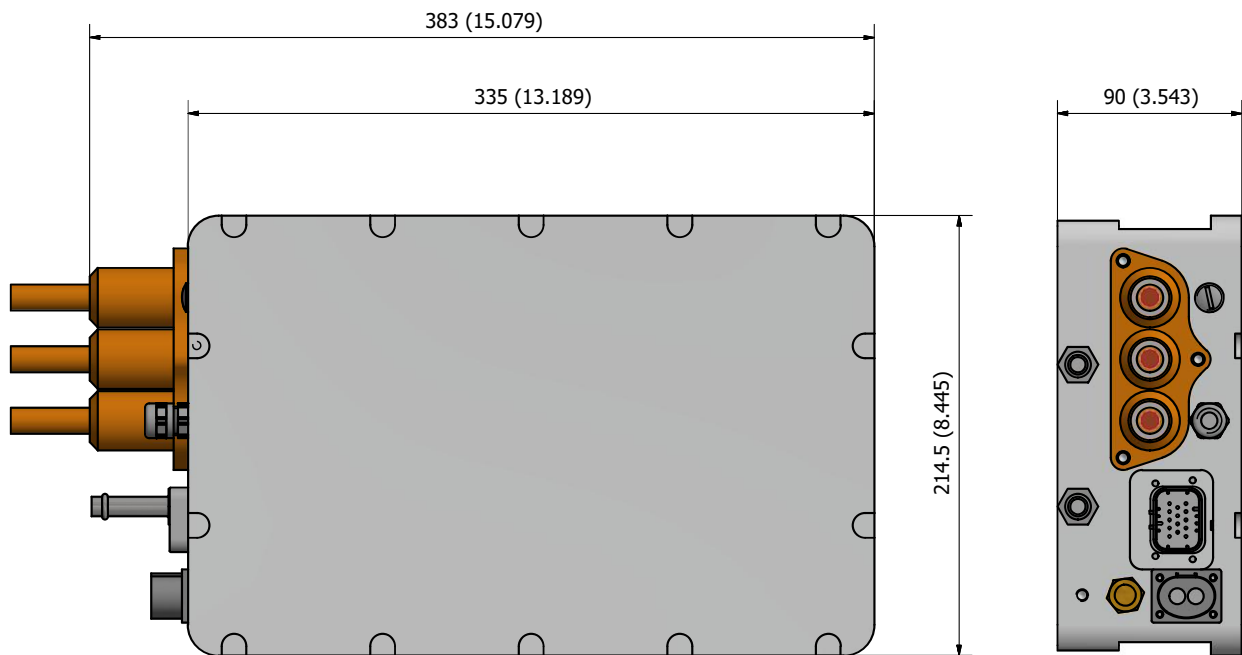
Grounding thread	M6 x 5
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¹ Other voltage ranges available upon request

Order codes: CC-400-12000.ST1.MC1.SCx

Supply type	
ST1	HV DC connector
2 x High voltage input U _{HV}	HV+, HV-
Shield	Integrated
Connector type	Amphenol / PowerLok 4.0
Interlock	Passive Interlock
Motor cable	
MC1	Motor cable
3 x Motor phases	U, V, W
Shield	Cable shield connected to the casing
Cable type	Huber&Suner Radox screened cable 155/REMS OG 3x35mm ²
Cable length	1 m (open end)
Sensor cable	
SC1	Sensor cable for temperature measurement
2 x Temperature sensor	PT100+, PT100-
Shield	Cable shield connected to the casing
Cable type	LAPP Ölflex Heat 125 C MC 2G0.5
Cable length	1 m (open end)
Accessories	
Supply cable CC-400-12000 (Connector X1)	Low voltage input cable with CAN and Interlock 1 m (open ends)
Service cable CC-400-12000 (Connector X1)	Low voltage input cable with CAN, Interlock and RS422-USB converter 1 m (open ends)

Drawing in mm (inch)



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