DCC2

High-efficiency DC/DC Converter for electric and hybrid vehicle applications

DCC2 is the ideal choice for most hybrid and electric vehicles with input voltages from 350 V to 650 V and an adjustable secondary voltage. All models are available with CAN bus communcation. With Inmotion's custommizable proprietary PLASMA software platform, the DCC2 offers compliance to demanding functional safety requirements. The DCC2 is encased in a rugged, compact design which adds to its flexibility and scope.

Inmotion is a long-term, global supplier of electric motors, motor controllers and auxiliary equipment for commercial vehicles. Our "In-region, for-region" manufacturing strategy brings our production facilities closer to yours. This gives you higher quality at a lower cost and shorter lead time. We work in close cooperation with you to integrate and configure our flexible standard products to your specific needs. We help you to realize reliable and efficient vehicles for emission-free transport solutions.

DCC2 is a flexible standard platform

- **High efficiency (up to 95 %)** using Silicon Carbide (SiC) technology
- Documentation in accordance with **AIAG PPAP** standard
- **Liquid (WEG) cooling** for minimized physical size
- **Adjustable output voltage** and **current output limitation** for best adaptability to different uses
- Possible to **parallel** multiple **units** to achieve **higher delivered power** at secondary voltage

Safe operation for personnel and equipment

- **Insulation** between primary and secondary voltage for **personal safety**
- Extensive and powerful **event handling** and **data logging** simplify troubleshooting and **minimize vehicle down time**

Maximize operating time by minimizing service time

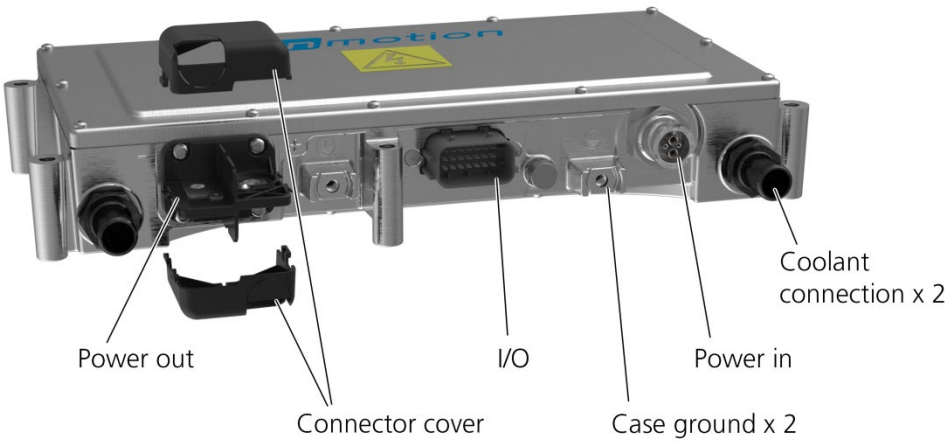
- **Field proven control software platform** used for both industrial and on-road vehicles
- **Best in class quality and reliability**, achieved through **superior design**, **world class manufacturing** processes and **field experience**
- **Rugged IP6K9K design** suitable for the demanding environment of electric vehicles

GENERAL

Communication	CAN (CANOpen, J1939)
Control mode	Voltage or current
Shock and Vibration	ISO16750-3
Electrical safety	ISO 6469-3
Logic supply	8-36 V

CONNECTIONS

I/O logic connector	MCP connector (21 pins)
Low side connection (power out)	Cable lugs (M8 and M10)
High side connection (power in)	Amphenol C91-665343-AFS



MATING CONNECTOR COMPATIBILITY

Mating connector shape	Power in connection	Power out connection
Straight	✓	✓
Angled	✓	✓

TEMPERATURE AND COOLING

Required WEG coolant temperature/flow	65 °C @ 6-18 l/min
Pressure drop	< 20 kPa at 65 °C and 6 l/min
Ambient operating temperature	-40 °C to +85 °C
Storage temperature	-40 °C to + 85 °C Ambient humidity < 85 %

SAFETY AND PROTECTION

Protection class	IP6K9K (increased pressure to 140 bar) IP67 2X (connector cover) Test ISO20653 (with mating connectors installed)
Safety feature	Hazardous Voltage Interlock Loop (HVIL)
EMC	UN ECE R10

I/O SUMMARY

	Interface [No.]
UNIT_ENABLE	2
HVIL loop	1
Address pins	3 selectable inputs
CAN	1
Logic supply	1
Battery voltage sensor analog input	1

RATINGS

Model	**Nominal input Voltage [V]**	**Nominal output voltage [1] [V]**	**Max output current [2] [A]**	**Output power [kW]**	**Voltage range [V]**
DCC35M24	350	14.1	160	1.90	270-450
		28.3	135	3.75	
DCC65M24	350	14.1	270	3.75	270-750
	650	14.1	270	3.75	
		28.3		7.50	450-750

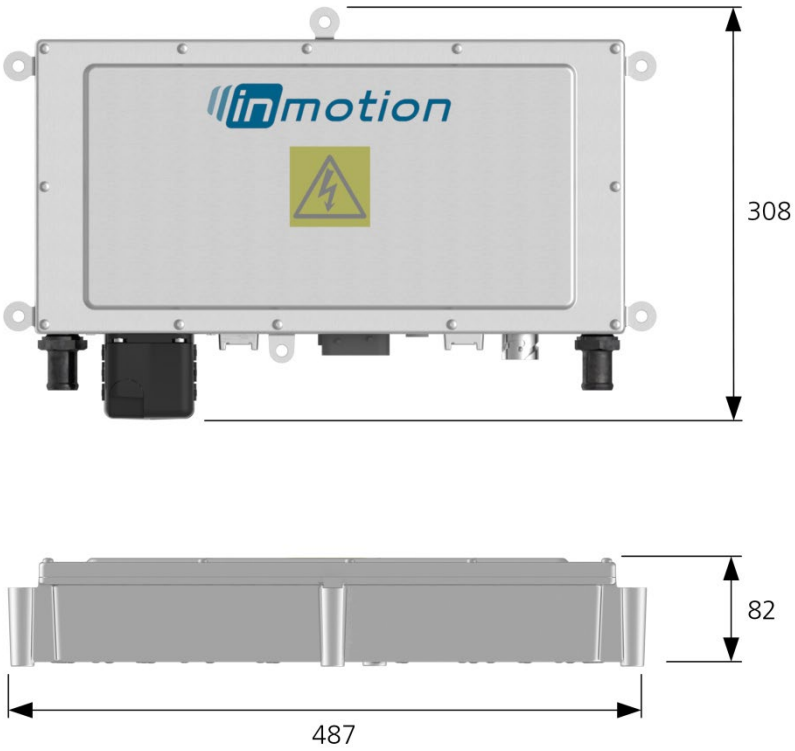
[1] Output voltage is adjustable via CAN or parameter. Typical output voltage for 12/24V battery shown in table

[2] Continuous rating

WEIGHT AND DIMENSIONS

Weight [kg]	11

Dimensions [mm]



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