

DCC2

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

Inmotion is a premier global supplier of power electronics to the vehicle industry. With our comprehensive product lineup for both high and low voltage hybrid/electric vehicles, Inmotion sets a benchmark for quality and reliability, ease of adaptation, and cost of ownership.

The DC/DC converter is designed for a wide range of input voltages and, with an adjustable secondary voltage for 12 and 24 V systems, it is ideal for most hybrid/electric vehicle applications. All models are available with CAN bus communication in order to seamlessly integrate into the vehicle control system.



PRODUCT FEATURES

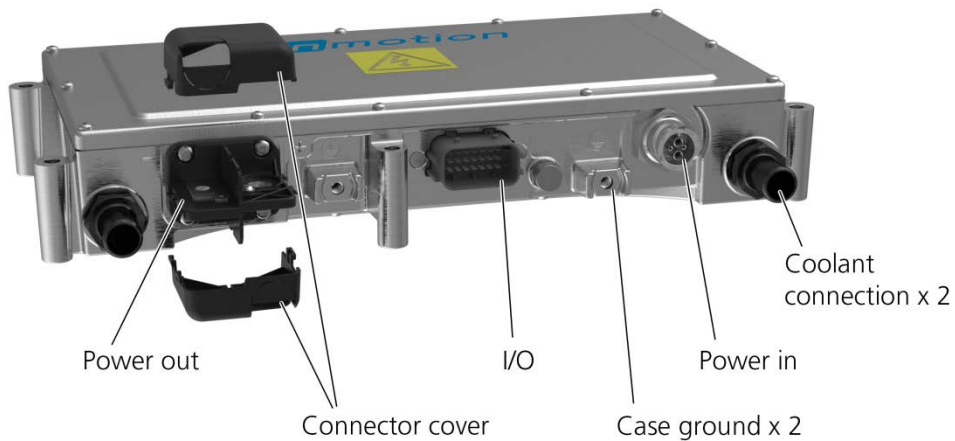
- **Best in class quality and reliability** achieved through superior design and manufacturing processes
- **Insulation** between primary and secondary voltage
- **Rugged IP6K9K design** suitable for the demanding environment of electric vehicles
- **Field proven control SW platform** used for both industrial and on-road vehicles
- **High efficiency (up to 95%)** using Silicon Carbide (SiC) technology
- Documentation in accordance with **AIAG PPAP** standard
- Extensive and powerful event handling and data logging simplifies troubleshooting and ensures **minimized vehicle down time**
- **Liquid (WEG) cooling** for minimized physical size
- **Adjustable output voltage** and **current output limitation**
- Possible to **parallel** multiple units to achieve **higher delivered power** at secondary voltage

GENERAL

Communication	CAN (CANOpen, J1939, UDS)
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

SAFETY AND PROTECTION

Protection class	IP6K9K (increased pressure to 140 bar), IP4X and IP67 Test ISO20653 (with mating connector 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

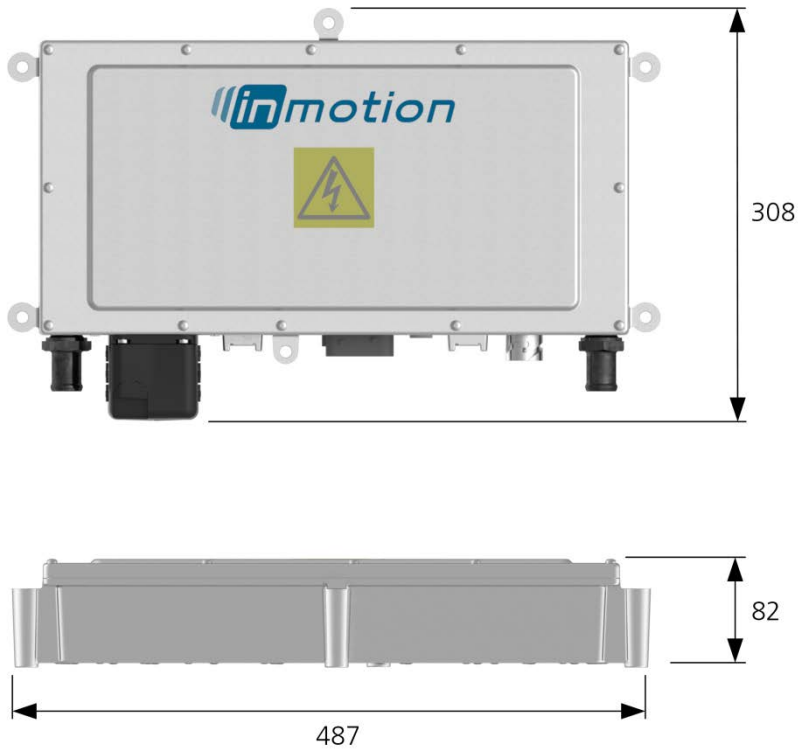
RATINGS

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	2.24	270-450
		28.3	160	4.50	
DCC65M24	350	14.1	270	3.75	270-750
		14.1	270	3.75	
	650	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]	

NOTES
