

Hybrid



Electric

# Explore our Technologies

## AC Motor Controller

### Gen5 Size 9

# AC Motor Controller Gen5 (Size 9)

The Gen5 range of products is well-matched to satisfy automotive, commercial and construction markets' electrification needs. The Gen5 Size 9 is specifically aimed at vehicle OEMs and system integrators to offer them a compact, lightweight, robust and cost-effective, class-leading suite of solutions covering traction, hybridisation, power generation and sub-system electrification.

## Key Parameters

- Operating voltage up to 450 Vdc (de-rating above 420 V)
- Output motor phase current
  - 450 Arms (1 min)
  - 200 Arms (1 hour+)
- Safety
  - Functional safety to EN1175 and EN13849/3
  - Electrical safety to ISO 6494, IEC 60664 and UL840
  - HVIL safety functionality
- Environmental
  - -40°C to +85°C operation, IP6k9k, ISO 16750
  - Water/Glycol coolant flow rate 10 l/minute (de-rating above 55°C)

**Note:** key parameters can vary, depending on controller set-up, environmental conditions and motor conditions.

## Features

- Advanced Field Orientated Control with support for Permanent Magnet Synchronous Motors and AC Induction Motors
- I/O and CAN are electrically isolated
- CAN communications bus allows for easy interconnection of controllers and devices such as Battery Management Systems, displays and VCUs
- CANopen and J1939 protocols
- Configurable as a vehicle control master or as a CAN motor torque slave
- 12 V or 24 V logic supply

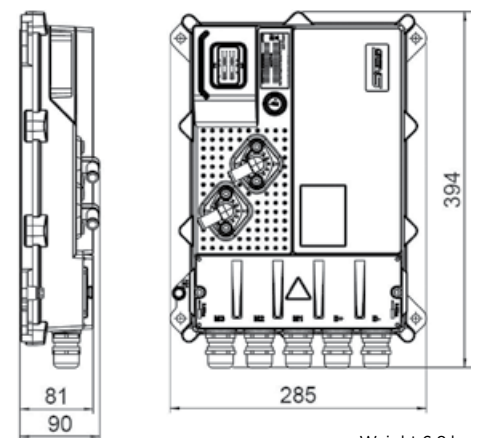


## Intelligent I/O

The Gen5-S9 includes a fully-integrated set of inputs and outputs designed to handle a wide range of vehicle functions. This eliminates the need for additional external I/O modules or vehicle controllers and connectors.

- All I/O protected to 40 V
- 4 analogue inputs 0 - 10 V allowing for easy configuration of dual throttle and dual brake applications
- 2 PT1000/KTY84 thermocouple input
- 4 digital inputs
- 4 digital outputs PWM 2A (2 high side 2 low side)
- 3 programmable encoder power supplies (1x200 mA 2x100 mA voltage configurable)
- Motor encoders supported include Resolver (programmable gain), UVW hall effect sensors, Sin/Cos sensors and incremental AB encoders

## Dimensions



Weight 6.8 kg

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