Gen5 Size9 Inverter

The Gen5-S9 motor inverter is well-matched to satisfy low volume prototype requirements for On and Off-highway Electric and Hybrid Vehicles. It is specifically aimed at vehicle OEMs and system integrators to offer them a compact, lightweight, robust and cost-effective product for traction, hybridization, power generation and sub-system electrification.



The inverter can be paired with Turntide's high power density Axial Flux Motors, ideal for applications with a limited space envelope. Our products are used by some of the world's leading automotive and industrial companies in several innovative and demanding applications. The same quality and reliability are designed into every Turntide product.

Features

- Supports AC Permanent Magnet synchronous motor and AC Induction motors
- Highly efficient advanced flux vector motor control
- Operates with a nominal 350VDC voltage
- Up to 400Arms peak current output
- Up to 200Arms continuous current output
- 12V or 24V logic supply

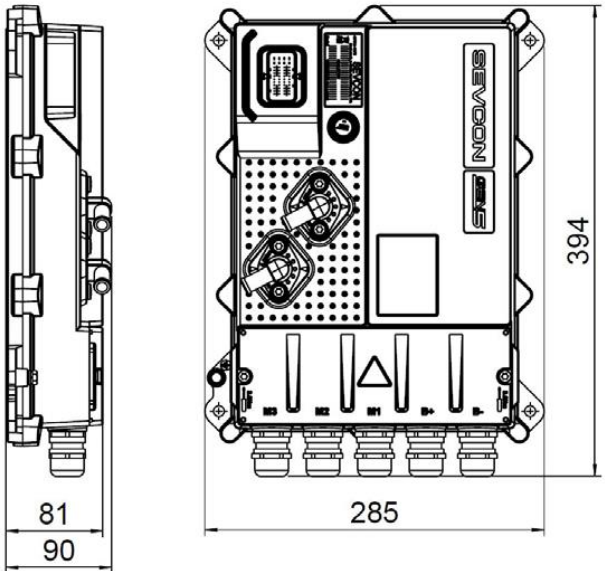
Applications



Specification

Key Features			
Nominal Voltage (V)	350		
Working Voltage Range (V)	128 - 420		
100% Derating voltage (V)	450		
1 minute Peak Current (Arms)	400		
60 minute Continuous Current (Arms)	200		
Control	• CAN slave • Electrical isolation of CAN port	**Communications Protocols**	• CAN 2.0B • CANOpen • J1939 – H-Protocol
Environmental			
IP rating	• IP67	**Ambient Temperature**	• -40°C to +85°C • Automatic derating above 65°C
Flow Rate (l/min)	• 10	**Coolant temperature**	• -40°C to +85°C (with 60:40 Water Glycol mix) • Automatic derating above 55°C
Mass, Dimensions and Drawings			
Mass (g)	6000†		
Length (mm)	394		
Width (mm)	285		
Height (mm)	81		

†Dry weight



IO			
IO	• All I/O protected to 40V operation with 12V or 24V • 4 analogue inputs 0-10V • 4 digital inputs • 3 power supplies 10V (2x100mA and 1x200mA) • 2 digital outputs PWM 2A (2 high side 2 low side) • 2 PT1000 / KTY84 thermocouple input	**Encoders**	• Absolute UVW encoder input • Absolute Sin/Cos encoder input • Incremental AB encoder input • Resolver automatic gain
Safety and Compliance			
Electrical Safety	• IEC60664 • UL840 • ISO6469 • HV interlock on the I/O connector		

Configuration

Turntide offers a Windows-based PC tool for the configuration of the inverter. The tool provides a simple yet powerful means of accessing the CANOpen bus for diagnostics or parameter adjustment. Communication is through CAN, an IXXAT CAN-to-USB dongle is required.

For more information on this product or Turntide's range of inverters, motors, batteries, pumps and fans, please visit our website or contact our team of experts at electrificationsales@turntide.com.