

## Gen6 Size9 Inverter

The Gen6-S9 motor inverter is well-matched to satisfy requirements for On and Off-highway Electric and Hybrid Vehicles. It is specifically aimed at vehicle OEMs and system integrators to offer a compact, lightweight, robust and cost-effective product for traction, hybridisation, 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 is designed into each and every Turntide product.



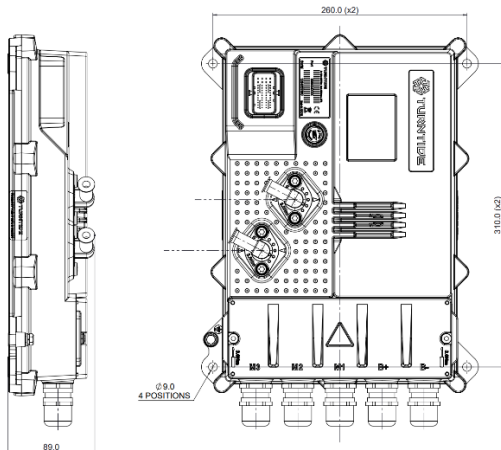
## Features

- Supports AC Permanent Magnet synchronous 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
- Compliant to ISO16750 (2018)
- Compliant to Reg10 (R6)
- Designed to comply with ISO26262 (2018) ASILC and ISO13849 Cat3 - PLc

## Applications



## Specification

Key Features			
Nominal Voltage (V)		350	
Working Voltage Range (V)		200 - 420	
100% Derating voltage (V)		450	
10 second Boost Current (Arms)		450	
1 minute Peak Current (Arms)		400	
60 minute Continuous Current (Arms)		200	
Control	<ul style="list-style-type: none"><li>CAN slave only</li></ul>	Communications Protocols	<ul style="list-style-type: none"><li>CAN 2.0B</li><li>UDS</li><li>J1939 – H-Protocol</li></ul>
Environmental			
IP rating	<ul style="list-style-type: none"><li>IP67 / IP6K9K</li></ul>	Ambient Temperature	<ul style="list-style-type: none"><li>-40°C to +85°C</li><li>Automatic derating above 50°C</li></ul>
Flow Rate (l/min)	<ul style="list-style-type: none"><li>10</li></ul>	Coolant Temperature	<ul style="list-style-type: none"><li>-40°C to +85°C (with 50:50 Water Glycol mix)</li><li>Automatic derating above 50°C</li></ul>
Mass, Dimensions and Drawings			
Mass(g)	7000†		
Length (mm)	400		
Width (mm)	283		
Height (mm)	81		
†Dry weight			
<div><div></div></div>			
IO			
IO	<ul style="list-style-type: none"><li>All I/O protected to 40V operation with 12V or 24V</li><li>4 analogue inputs 0-10V</li><li>4 digital inputs</li><li>3 power supplies 10V (2x100mA and 1x200mA)</li><li>2 digital outputs PWM 2A (2 high side 2 low side)</li><li>2 x PT1000 or 2 x PT100 inputs†</li></ul>	Encoders	<ul style="list-style-type: none"><li>Absolute UVW encoder input</li><li>Absolute Sin/ Cos encoder input</li><li>Incremental AB encoder input</li><li>Resolver automatic gain</li></ul>
†Two variants of hardware. One that supports PT1000, one that supports PT100			
Safety and Compliance			
Electrical Safety	<ul style="list-style-type: none"><li>IEC60664</li><li>ISO 16750 (2018)</li><li>ISO26262 (2018) ASIL C &amp; ISO13849 Cat3 – PLc</li></ul>	<ul style="list-style-type: none"><li>Reg 10 (R6)</li><li>HV interlock on the I/O connector</li></ul>	
Configuration			
Turntide offers a Windows-based PC tool for configuration of the inverter. The tool provides a simple yet powerful means of accessing the inverter for diagnostics or parameter adjustment. Communication is through CAN, IXAAT and Vector adaptors are supported, with support for others on request. Key features include:			
<ul style="list-style-type: none"><li>Online library of validated motor configs</li><li>Customizable login levels</li></ul>		<ul style="list-style-type: none"><li>Powerful guided vehicle setup process</li><li>Intuitive diagnostic processes</li></ul>	

For more information on this product or Turntide's range of inverters, motors, batteries, pumps and fans, please visit our web-site or contact our team of experts at [electrificationsales@turntide.com](mailto:electrificationsales@turntide.com).

### TURNTIDE TECHNOLOGIES

Details are correct at time of publishing

Turntide Technologies designs and manufactures breakthrough electric motors, power electronics and energy storage solutions that optimize performance, reliability, and efficiency in all things that move.

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