

DATASHEET

Gen5 Size9 Inverter (*Automotive*)



The Gen5-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. It can be paired with Turntide’s high power density Axial Flux motors, ideal for applications with a limited space envelope.

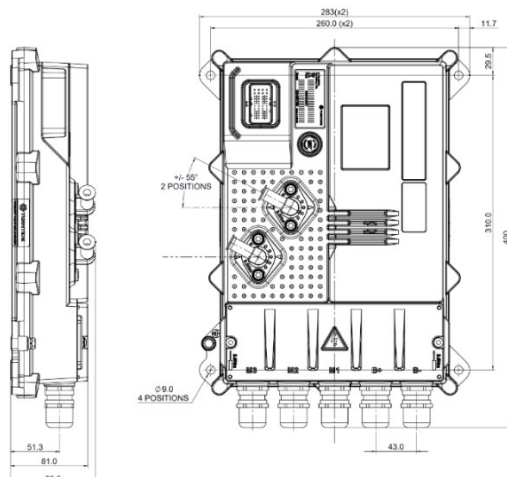


Features

- Supports AC Permanent Magnet synchronous and AC Induction motors
- Highly efficient advanced flux vector motor control
- Operates with a nominal 350VDC voltage
- Up to 400A<sub>rms</sub> peak power output
- Up to 200A<sub>rms</sub> continuous power output
- 12V or 24V logic supply
- Compliant to ISO16750
- Compliant to Reg10
- ISO26262 and ISO13849 capable to ASIL C

Specifications

Electrical			
Maximum Voltage (without derating)	420Vdc	Peak Current (1 min)	400A <sub>rms</sub>
Nominal Battery Voltage	350Vdc	Continuous Current (60m)	200A <sub>rms</sub>
Min Battery Voltage	128Vdc		
Communication			
Communications	CAN 2.0B	Control	CAN Slave Only
Communications Protocol	H-Protocol (J1939) and UDS		

I/O			
Encoders	<ul style="list-style-type: none"><li>Absolute sin/cos</li><li>UVW</li></ul>	<ul style="list-style-type: none"><li>AB</li><li>Resolver automatic gain</li></ul>	
Thermistors	2 x PT1000 or PT100 inputs*		
*Two variants of hardware. One that supports PT1000, one that supports PT100			
Environmental			
IP Rating	IP67 / IP6K9K	Ambient Temperature	-40°C to +85°C Automatic derating above 50°C
Flow Rate	10l/min	Coolant Temperature	-40°C to +85°C (with 50:50 Water Glycol mix) Automatic derating above 50°C
Safety			
Standards	<ul style="list-style-type: none"><li>IEC60664</li><li>ISO6469</li></ul>	<ul style="list-style-type: none"><li>ISO26262 &amp; ISO13849</li><li>Reg10</li></ul>	<ul style="list-style-type: none"><li>HVIL on I/O connector</li></ul>
Weight and Dimensions			
Dry Weight	7kg		
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For further information please contact our team of experts at [electrificationsales@turntide.com](mailto:electrificationsales@turntide.com)

#### TURNTIDE TECHNOLOGIES

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries

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