

# Gen4-S10

An AC motor controller designed to meet the high performance requirements of on-road and off-road Electric (EV) and Hybrid Electric Vehicles (HEV).

A compact, rugged and cost effective design, the Gen4-S10 HV is well suited for EV OEMs, EV conversions and EV drive train system integrators. Its high voltage range, up to 800VDC, is well matched to the needs of the automotive and commercial transport markets. The same hardware platform handles both AC Induction and Permanent Magnet AC motor technologies.



## Features

- AC Permanent Magnet synchronous motor
- AC Induction motor
- Up to 800VDC peak supply voltage
- Up to 300kW peak power output
- Up to 150kW continuous power output
- Integrated logic circuit
- Includes an additional dedicated safety I/O circuit
- 12V or 24V supply
- Safety interlock pulsed enable signal



Gen4-S10	
<b>Voltage and current range</b>	
<b>100% Derating (VDC)</b>	750
<b>Nominal (VDC)</b>	650
<b>Minimum (V)</b>	50
<b>Peak current (2 min)(A<sub>rms</sub>)</b>	400A <sub>rms</sub>
<b>Continuous (60 min)(A<sub>rms</sub>)</b>	200A <sub>rms</sub>
<b>Control Method</b>	CAN slave No electrical isolation of CAN port
<b>Communications</b>	CAN 2.0B
<b>Communications protocol</b>	CANOpen H-protocol
<b>I/O</b>	All I/O protected to 40V operation with 12V or 24V 4 analogue inputs 0-10V 4 digital inputs 3 power supplies 10V (100mA) 3 digital outputs PWM max 2A
<b>Encoders</b>	Absolute UVW encoder input Absolute Sin/Cos encoder input Incremental AB encoder input Resolver fixed gain 0.5 to work with Turntide AXM

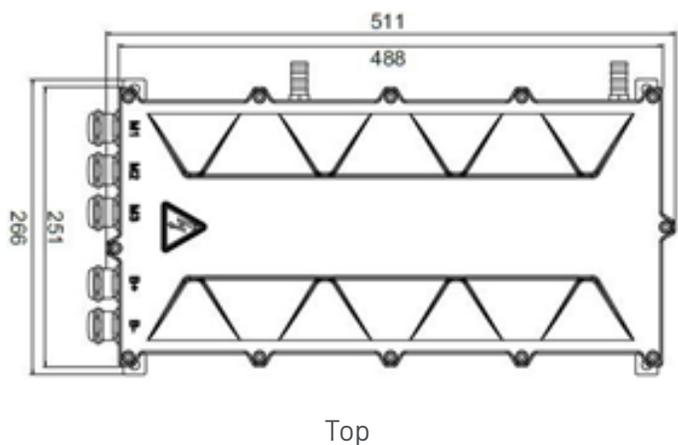
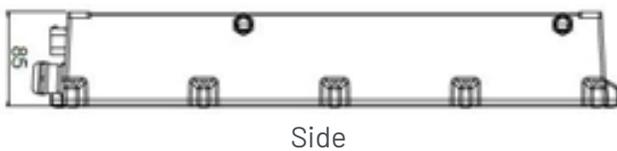


For further information please contact our team of experts at [electrificationsales@turntide.com](mailto:electrificationsales@turntide.com)

Environmental	
IP rating	IP67
Temperature	Ambient temperature -40°C to +45°C Automatic derating above 35°C
Coolant	Water Glycol mix
Flow Rate	10l/min
Coolant temperature	-40°C to +85°C (with 60:40 Glycol Water mix) Automatic derating above 35°C

Configuration	Turntide offer a range of configuration tools for Windows based PC's. These tools provide a simple yet powerful means of accessing the CANOpen bus for diagnostics or parameter adjustment. Communication is through CAN so a suitable CAN dongle is needed.
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Dimensions (all dimensions in millimeters)	
Dimensions	511x251x85mm (see drawing)
Weight	10.9kg



## TURNTIDE TECHNOLOGIES

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