

Dragon8

AC Motor Controller

The Dragon8 sets a new standard in AC motor controller performance and reliability. The Dragon8 is compatible with a wide range of motors - Asynchronous AC Induction and Synchronous Permanent Magnet AC (PMAC) or Brushless DC (BLDC). It can be configured to accurately drive the motor in current control mode, offering a real and precise torque control of the motor. Speed control is also available.

Dragon8 has electrical isolation between high voltage/high current battery/motor wiring and the lower voltage control signals and CANBus. This allows the IO to reference the 12V battery and vehicle chassis return path.



Features

- Integrated & isolated IO and logic circuit
- Supports AC Induction and PMAC/BLDC
- True torque control
- Vehicle VCU Master or Motor Slave
- Integrated Capacitor pre-charge function
- CANBus communication
- Power up auto-check system fault diagnostics
- Programmable battery current limit
- IP66 protection
- Integrated power fuse holder



For further information please contact our team of experts at electrificationsales@turntide.com

Key Parameters

Version	48/72V	96V
Nominal Battery Voltage	48/72V	96V
Maximum Battery Voltage	93V	139V
Minimum Battery Voltage	20V	36V
Peak Current (10 seconds)	500A	330A
Boost Current (2 minutes)	400A	300A
Continuous Current (1 hour)	150A	110A

The 48/72V continuous rating is with 25C, finned heat-sink and 1m/s air flow

Integrated I/O

Dragon8 includes a fully integrated set of inputs and outputs (I/O) with vehicle control functionality, designed to handle a wide range of system requirements and functions. This frequently eliminates the need for additional external I/O modules, vehicle control units and connectors.

- Up to 6 digital inputs (3 inputs dual use as UVW encoder input)
- Up to 4 analogue input (2 analogue inputs dual use as Sin/Cos encoder input)
- Up to 2 contactor drivers
- Dedicated 5V, 200mA output
- Dedicated 10V, 200mA output
- Motor temperature sensor input

Please reference the user manual for more detail if required.

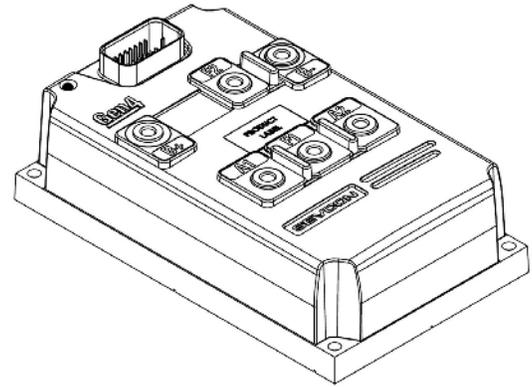
Motor Encoder

Dragon8 supports a range of motor position and speed feedback sensors:

- Resolver (programmable transformer ratio)
- UVW, 3 channel digital Hall sensors
- Sin/Cos
- AB, 2 channel for Induction motors

Dimensions (All dimensions shown in mm)

- Weight: 2kg



227mm (L) x 138mm (W) x 73mm (H)

Other Features

- Built in isolated CANBus allows easy interconnection of controllers and devices such as displays and driver controls. The isolated CANbus allows the user to wire the vehicle to best suit vehicle layout since inputs and outputs can be wired to any node on the vehicle and accessed from any controller over the CAN network.
- The Dragon8 controller can dynamically change the allowed battery current by exchanging CAN messages with a compatible Battery Management System.
- The Dragon8 is configurable as a vehicle control master controller or simply as a motor slave receiving torque or speed demand over the CANBus and can be used in conjunction with AC motor controllers on the vehicle if desired.

D8050716 Preliminary data and subject to change.

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