



Performance

| | |
|-------------------|----------------------|
| Voltage Range | 6 – 12 V |
| Peak Torque | 750 mN |
| Peak Current | 1.5 A |
| Peak Speed | 600 deg/sec (@ 12V) |
| Angular Range | ± 90 degrees |
| Temperature | -20 to +85 ° Celsius |
| Control Frequency | 1000 Hz |
| Length | 35 mm (1.38") |
| Width | 34 mm (1.34") |
| Height | 15 mm (0.59") |
| Weight | 45 g (1.6 oz) |

Description

The CBS-15 Gen 2 CAN servo (CE985B) is a fully digital servo motion control solution, with advanced control algorithms delivering a high level of performance and reliability.

The CBS-15 servo provides a complete closed-loop actuator system for use in unmanned aerial vehicles. It features a high-frequency current-limiting feedback system, with advanced motion control profiling, which is fully user-configurable.

Servo control is provided over a high-speed CAN connection, fully compatible with the Piccolo series of autopilots and tightly integrated with the Currawong range of products. With a fully documented command set, it is ready to be integrated into other platforms with a simple protocol specification.

In addition to high-speed control of servo position, the CAN connection provides real-time feedback of servo position, current, temperature and other data at user-configurable rates.

Each servo also features accelerometer-based vibration sensing, which provides a vibration analysis system distributed around the aircraft, with this data available via CAN. Accelerometer data can be sampled at up to 1 kHz for high-resolution vibration data.

A variety of user-configurable warning thresholds (such as current, vibration and position error) provide vital real-time diagnostic information for configuring and monitoring the health of the aircraft.

Benefits

- High-speed control over CAN
- Individually addressable servos with multicast and broadcast addressing supported
- Real-time feedback of multiple parameters
- Internal current measurement and limiting
- Low peak current
- Smooth operation due to high frequency control
- User-configurable input/output mapping for custom linearisation of control surfaces
- User-configurable motion control parameters: bandwidth, velocity limit, acceleration limit (soft start and soft stop)
- Accelerometer data with real-time vibration analysis
- High quality construction with all-metal body and gearing
- Seamless integration with Piccolo autopilot
- Fully documented ICD for integration with third party systems
- PC control software for servo control and configuration
- Full suite of graphing / logging / data analysis tools
- Fault monitoring and analysis
- Servo keeps track of run-time information

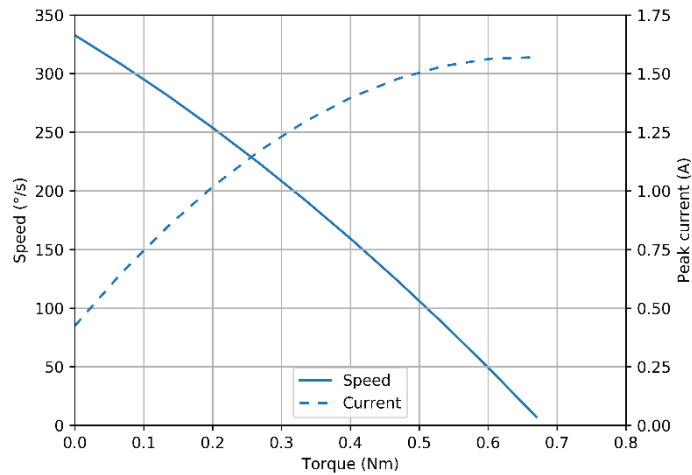
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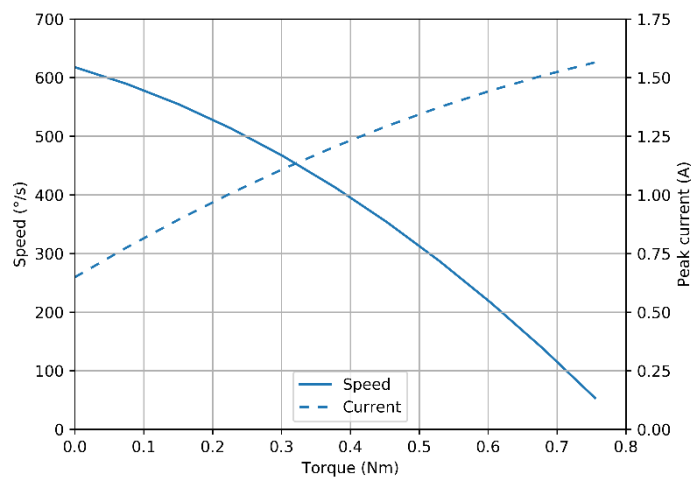
Performance Data

The following data are indicative of servo performance under nominal operating conditions.

Speed and current vs torque, 6V supply voltage



Speed and current vs torque, 12V supply voltage



Maximum continuous current vs ambient temperature

