CBS-15 CAN Servo

CE985

Datasheet

Description

The CBS-15 CAN instrumented servo provides a complete closed-loop actuator system for use in unmanned aerial vehicles. It features a high-frequency current-limiting feedback system, 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 CAN control of the servo position, real-time feedback of servo position, current, temperature and other data is available (at user configurable rates) over CAN.

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 1kHz for high-resolution vibration data.

In-built data logging is supported and can be controlled manually or driven by various internal trigger sources such as over-current or vibration events.

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.

Performance

Voltage Range:	6 - 8.2 V
Current Capability:	3 A per servo
Torque:	15.8 kgcm (1.55 Nm) @ 8.2 V
Speed:	0.11s @ 8.2 V
Angular Range:	±45°
Control Frequency:	Up to 333 Hz
Temperature Range:	-20°C to +60°C (-4F to +140F)
Dimensions:	48 mm x 39mm x 16mm
Weight:	45 grams (1.6 oz)

Features

- High speed control over CAN
- Individually addressable servos with broadcast addressing supported
- Real time feedback of multiple parameters
- Internal current measurement and limiting
- User-configurable input/output mapping for custom linearisation of control surfaces
- Accelerometer data with real-time vibration analysis
- High quality construction with all-metal body and gearing
- Seamless integration with Piccolo autopilot
- Compatible with Pixhawk/APM via UAVCAN
- Fully documented command set 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
- Gear-wear diagnostics for servo health monitoring
- Servo keeps track of run-time information
- Internal high-speed data logging

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