S-Series (S6PWM)
R/C Servo Motor Controller

Designed to Control our L16, W10 & W70 Actuators

Applications

R.O.V.s, U.A.Vs., R.P.Vs.

Industrial Motion

Special Effects

Aerospace/FAA

Robotics / A.I.

Animatronics

Features

Digital PID servo control

12 Bit A/D conversion

PCM R/C or 0-5V Inputs

Opto isolated R/C input

Soft Start

No Programming required

The S-series is a Precision high-performance, digitally controlled, H-bridge servo motor controller. The input signal may be either a PCM signal from a conventional radio-control receiver or from a potentiometer or a 0-5V source. The unique Bio-Motion digital signal processing may be utilized to produce smoother, more life-like movements. A built-in self-test mode and the 3 LED indicators simplify system testing and maintenance. Our PID CPU programs are precision tuned for each actuator specs and application type. These CPU Codes are marked on its PIC IC which match the Actuators label ref CPU Code. The PIC IC has a dip-socket so that PID CPU Codes are easy to change out for any actuator being used by the S6PWM.

See the S-Series User Manual on our Web Site for more information.

These controllers mate directly to our servo actuators as part of a modular system using "Plug and Play" *S-Cables.
They include all the plugs, mating connectors, and are factory tested. Just apply input signal then power and your good to go.

SUMMARY OF FEATURES:

High frequency (31.25 kHz) Pulse Width Modulation motor drive for smooth, quiet operation.

Soft Start-Up, slows actuator for 8sec at power up. Note: Actuator can stall at start-up if overloaded.

Bio-Motion Our own digital signal processing algorithms produce life-like motion.

Typically 10 to 20 times more accurate servo positioning than many existing products.

Ignores invalid input pulse widths using digital filtering techniques.

Stores last valid RC input signal when input signal is lost or corrupted.

Fault indicator LEDs:

Red LED Solid indicates loss of input or presence of invalid pulse width.

Yellow LED Solid, indicates over-temp shutdown. Blinking indicates in "Nap Mode".

Green LED Blinks to indicate normal operation of the control system processor.

Specifications:

Supply Voltage: 12-32Vdc. For best performance use: 14.7V for 12V Actuators and 28V for 24V Actuators.
Note: If supply voltage drops under 10vdc the output bridge will go in a safe non-op mode.

Current: Idle typically 25 mA. Current up to 6 amps with suitable heat-sinking. 10Amps peak.

Input Signal Types:

1. R/C Radio: PCM 1-2mS, Period 6- 22mS, B/W 45-165Hz, +3.3-5.5Vdc, source current 7mA minimum.
2. DC Input: 0-5V 2.5mA. Or use a 2- 20K potentiometer for manual control.

Resolution: 12 bits. Actuator stroke in inches x .0002" ± .001"

Dead-band: 0.001 msec

Temp. Range 0 to 70ºC

Size: 1.69"x 2.40" x 0.9 thick, without heat-sink

Weight: 1.25 oz.

Related Product: *S-Cable, Order separate. Plug & Play to actuator with Futaba RC & or DC Input Plugs, 12" Power Leads.

4525 Industrial St. # 4s, Simi Valley, CA 93063 805-522-3750 Fax 805-522-9379 www.ckdesigntech.com, sales@ckdesigntech.com
CK Design Tech. Inc. products are not authorized for life support devices or hazardous applications. All sales are final. Specification may change without notice.
CK Design Tech. Inc. does not assume any responsibility for their uses accept or agree to any other liabilities or terms beyond this printed statement. 6-23-14 pg. 6