Power HD Continuous Rotation Servo AR-3606HB

Overview

The AR-3606HB is a standard-sized servo that has been built by Power HD specifically for continuous rotation. At 6 V, it has a maximum rotation speed of 71 RPM (no-load) and can produce up to 93 oz-in (6.7 kg-cm) of torque. It features two ball bearings on the output shaft for reduced friction, and it offers easy access to the rest-point adjustment potentiometer. The servo can be controlled using a direct connection to a single microcontroller I/O line without any additional electronics, which makes it a great actuator for beginner robotics projects.

The AR-3606HB continuous rotation servo converts standard RC servo position pulses into continuous rotation speed. The default rest point is 1.5 ms, but this can be adjusted by using a small slotted screwdriver to turn the middle-point positioner. Pulse widths above the rest point result in counterclockwise rotation, with speed increasing as the pulse width increases; pulse widths below the rest point result in clockwise rotation, with speed increasing as the pulse width decreases.

The servo has a 12″ (300 mm) lead that is terminated with a JR-style connector and includes additional servo horns and mounting hardware. The following picture shows an example of the hardware that might be included (actual hardware could vary):

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This robotics servo, which also sometimes goes by the Power HD part number AR3606HB, is compatible with our servo controllers and has a Futaba-compatible output shaft, which means it works with our servo wheels and sprockets. If you are looking for a similar servo that is capable of limited-range position control as opposed to continuous rotation speed control, consider the Power HD standard servo 6001HB, which has almost the same size, weight, speed, and torque as the AR-3606HB.

Continuous rotation servo comparison

Continuous rotation servo size comparison. From left to right: SpringRC SM-S4303R, Power HD AR-3606HB, Parallax, and FEETECH FS90R.

	SpringRC SM-S4303R	PowerHD AR-3606HB	Parallax (Futaba S148)	FEETECH FS90R
Max Speed @ 6 V:	54 RPM	71 RPM	50 RPM	130 RPM
Stall torque @ 6 V:	71 oz-in	93 oz-in	42 oz-in	21 oz-in
Max Speed @ 4.8 V:	43 RPM	62 RPM	39 RPM	100 RPM
Stall torque@ 4.8 V:	46 oz-in	83 oz-in	33 oz-in	18 oz-in
Weight:	41 g	40 g	43 g	9 g
Size (mm):	41.3×20.7×40.2	40.5×20.0×38.0	40.5×20.0×38.0	23.2×12.5×22
Price:	$12.95	$14.95	$13.95	$4.95

Documentation on producer website.

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