



# 01™ Hitec HS-422 15bit SMS V3.0

The Super Sport - Supermodified Servo

No DEAD ZONE – Continuous Rotation – Full PID Control

15 bit ABSOLUTE ENCODER



## Overview

Our Hitec Super sport - supermodified servos are based on a version of HS422 Supersport servo and are modified for continuous rotation of the output shaft (by removing in our lab the mechanical stop from the output servo gear) offering innovative PID position/speed control, rendering appropriate solutions for most robotics applications. And don't worry we offer you also a legacy PPM interface.

The **HS-422** servos are powered by **Hitec** technology. The gears and the motor of this specific servo are manufactured by **Hitec** and their torque rating is 56.93 oz-in (4.1 kgcm) @ 6V. The equipped ferrite motor can operate also up to 6.0 Volts.

The HS-422 has been around for a while offering durability and the ability to be easily Supermodified. For inexpensive robotic applications this the perfect servo. It can easily be modified for wheeled applications since the output shaft is supported on the bottom and top with BALL BEARINGS.

**... and don't worry we are offering a warranty of 2 years .**





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### Supersport

<b>Weight (gr)</b>	45.5	<b>Actuator Mode</b>	Yes
<b>Dimensions (mm)</b>	40.39 x 19.56 x 36.58	<b>Wheel Mode</b>	Yes
<b>Resolution</b>	0.011 degs	<b>Communication without additional electronics</b>	RS-485/I2C/LEGACY PPM
<b>Rotation Measurement</b>	Continuous ( <b>64bit position counter</b> )	<b>Position Feedback</b>	Yes
<b>Encoder Type</b>	Absolute Magnetic Encoder	<b>Load Voltage Feedback</b>	Yes
<b>Ticks/rev</b>	<b>32768</b>	<b>Input Voltage Feedback</b>	Yes
<b>Torque (oz-in)</b>	<b>45.82 @ 4.8V / 56.93 @ 6V</b>	<b>Compliance/PID</b>	Yes
<b>Torque (kg-cm)</b>	<b>3.3 @ 4.8V / 4.1 @ 6V</b>	<b>Current Measurement</b>	Yes
<b>Speed (No Load) RPM</b>	62.5	<b>Overload Protection</b>	See our manual commands 11.2.6 & 11.2.7 (pp28,29)
<b>Maximum Current</b>	4900 mA	<b>Velocity</b>	Can be provided as ticks/sec
<b>Motor Type</b>	3 Pole Ferrite	<b>Realtime tick</b>	YES
<b>Standby</b>	30 mA	<b>Joint Torque Sensing</b>	Via command getcurrent (11.2.6)
<b>Gear</b>	<b>NYLON</b>	<b>Setpoints</b>	YES – (velocity & Position)

### Also keep in mind ...

- Modified for continuous rotation (360 degrees) with 32768 ticks/rev!
- Highly responsive & accurate for the price!
- Continuous Rotation WITHOUT DEAD BAND and 4.1 kgcm torque (@6V)
- Selection of communication bus: I2C, RS485 and Legacy PPM offered.
- Absolute Position measurement (repeatability up to 20 ticks).
- Nylon Gears.
- Dual Ball Bearings-Not oilite bushings!
- 64 bit position measurement.

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