



01™ CRIUS 14bit SMS V3.0

The Strongest and most Versatile continuous servos
No DEAD ZONE – Continuous Rotation – Full PID Control
14bit ABSOLUTE ENCODER



Overview

Our **CRIUS** supermodified servos are based on 360deg version of SAVOX SV-1270 TG (Titanium & aluminum gearbox) servo and are manufactured for continuous rotation of the output shaft (by removing in the factory 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 **CRIUS** servos are powered by **SAVOX** technology. The gears are of titanium alloy and the motor of this specific servo are manufactured by SAVOX while their torque rating is 361ozin (26kgcm) @ 6V. The equipped coreless motor can operate also up to 7 Volts. The stray field of the coreless motors are so strong that the GMR sensor array of infineon's TLE 5012B of our 15bit Magenc-LowRev cannot operate reliably.

So we are offering to our customers the robust and stray field immune 14bit (16384 ticks/rev) Magenc 14bit SFI (Stray Field Immune). Based on a very sophisticated implementation of HALL effect MEMS sensors ams chip 5047D give us the opportunity to bring to the market a set of VERY EFFICIENT and ROBUST servos.

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





Specifications



CRIUS 14bit SMS V3.0

Weight (gr)	56	Actuator Mode	Yes
Dimension (mm)	40.3 x 20.2 x 37.2	Wheel Mode	Yes
Resolution	0.022 degs	Communication without additional electronics	RS-485/Uart/I2C/TTL standard/TTL 1kHz
Rotation Measurement	Continuous (64bit position counter)	Position Feedback	Yes
Encoder Type	Absolute Magnetic Encoder	Load Voltage Feedback	Yes
Ticks/rev	16384	Input Voltage Feedback	Yes
Torque (oz-in)	361 @ 6V / 487 @ 7V	Compliance/PID	Yes
Torque (kg-cm)	26 @ 6V / 35 @ 7V	Current Measurement	Yes
Speed (No Load) RPM	80	Overload Protection	See our manual commands 11.2.6 & 11.2.7 (pp28,29)
Maximum Current	4900 mA	Velocity	Can be provided as ticks/sec
Motor Type	Coreless	Realtime tick	YES
Standby	28 mA	Joint Torque Sensing	Via command getcurrent (11.2.6)
Gear	Titanium & Aluminum	Setpoints	YES – (velocity & Position)
		Actual Motor	Savox SV-1270TG

Also keep in mind ...

- Modified for continuous rotation (360 degrees) with 16384 ticks/rev (14BIT) ams IC !
- Magnetic stray field immuned
- Highly responsive & accurate
- Continuous Rotation WITHOUT DEAD BAND and 35 kgcm torque (@7V)
- Absolute Position measurement (repeatability up to 5 ticks).
- Dual Ball Bearings-Not oilite bushings! aluminium /plastic casing
- 64 bit position measurement.
- coreless motors (stronger than ferrite ones)
- 25T spline
- premium quality by Savox specially made for 01™ Mechatronics

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