DRS - 0101 HerkuleX Smart Servo

Product Code: SER0032
Supplier: DFRobot

Introduction

Herkulex DRS-0101 is state of the art modular smart servos incorporating motor, gear reducer, control circutry and communications capability in one single package, which can provide up to 12kg.cm at 7.4v.

It carries different Control Algorithms like PID, Feedforward, Trapezoidal Velocity Profile so on and so forth, which makes the movement smoothly and precisely. By Using UART Serial communications ,we can lightly change the speed, position, LED, operational compliance, stop and operational status of up to 254 servos simultaneoulsy at once. Meanwhile we can get the feedback such as internal temperature, position, and overload sensors.

Servos are capable of diagnosing seven different types of errors which are then indicated by the LED. And we can directly control the RGB of the LED for diagnostics and decorative purposes. It's especially suitable to mechanical arms, robots, joints and etc.

Mechanical specification

- Carbon Brush Cored DC Motor
- A lot of adapting pieces
- Rotation angle range: 320° Continuous Rotation
- Resolution: 0.325°
- Stall torque: 12kg.cm (7.4v)
- Maximum Speed: 0.166s/60° (7.4v)
- Gear: 1:266, Super Engineering Plastic
- Size: 45mm(W) x 24.0mm(D) x 31mm(H)
- Weight: 45g

Electrical specification

- Working Voltage: 7~12VDC(Optimized 7.4V)
- Rated Current: 450mA @ 7.4V : 1.7kgf.cm
- Communication Link: Full Duplex Asynchronous Serial(TTL Level), Binary Packet, Multi Drop
- Multi control through Servo ID: 0 ~ 253, 254(Broadcast only)
- Maximum Baud Rate: 0.67Mbps
- Feedback: Position, Speed, Temperature, Load, Voltage etc.
- Various Control Algorithm: PID, Feedforward, Trapezoidal Velocity Profile, Velocity Override, Torque Saturator & Offset, Overload Protection, Neutral Calibration, Dead Zone